SUMMARY REPORT

Town Hall and Food Pantry Renovation

Falmouth, Maine

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Table of Contents

EXECUTIVE SUMMARY Page 1

INTRODUCTION Page 5

FACILITY CONDITIONS ASSESSMENT Page 6

- Site
- Architectural
- Structural
- Mechanical
- Electrical

FACILITY RECOMMENDATIONS Page 17

- Site
- Architectural
- Structural
- Mechanical
- Electrical

SPACE PLANNING Page 23

- Existing Conditions
- Falmouth Food Pantry
- Recommendations

DISCUSSION OF COST Page 27

APPENDICES

- Appendix A - Photographs
- Appendix B - Drawings
- Appendix C - Project Scope and Meeting Minutes
- Appendix D - Hazardous Materials Report
- Appendix E - Cost Estimates

Executive Summary

In 2012, the Town of Falmouth determined that it was in the best long-term interest of the Town to develop a short and long-range plan to renovate, and possibly expand, the Town Hall and Falmouth Food Pantry. Oak Point Associates was tasked with developing solutions for improving the spatial efficiency, interior appearance, energy efficiency, structural integrity, and indoor air quality of the Town Hall building. The recommendations are intended to build on recent renovations that were conducted, and Oak Point was asked to prioritize improvements so that they provide the greatest cost-benefit to Town stakeholders.

To summarize the results of Oak Point's analysis, there are four prime areas of deficiency that currently exist at Town Hall and some additional considerations:

1. the crawl space below the original building and a portion of the 1990's addition,
2. the exterior building envelope,
3. the building mechanical and electrical systems,
4. space use inefficiencies, and
5. additional site-related considerations.

Each is addressed individually below.

1. Crawl space – approximate costs: $141,900

The crawl space, which contains two abandoned air handling units that used to serve the Town Clerk's office area, is a low-ceilinged space with moisture infiltration issues. As part of the project, Northeast Test Consultants was contracted to do a Limited Indoor Air Quality Assessment of the first floor spaces of the building, during which elevated mold spore activity was detected. A follow-up Indoor Air Quality Assessment was conducted, where it was found that airborne mold spores from the crawl space were being passively vented through the floor register in the first floor Clerk's office area. The floor registers were temporarily sealed up, but the mold and moisture issues in the crawl space need to be more permanently addressed. The recommendations for this area are:

- Install a drainage and lining system to control soil moisture conditions
- Remove crawl space ceiling insulation and floor debris, and re-insulate ceiling with spray foam
- Clean and sanitize areas of surface mold within the crawl space
- Remove floor registers at first floor office space and infill with floor decking
- Replace basement windows with new units
- Remove the existing (abandoned) air handling units within the crawl space as part of the remediation work in that area
- Install a dehumidification system in the crawl space to keep humidity below 60 percent

2. Exterior building envelope - approximate costs: $350,200

The exterior building siding is a combination of asbestos siding over wood clapboards, vinyl siding over concrete block, and vinyl siding on sheathing. Asbestos is considered a hazardous material. Exterior walls at the original building and 1960's addition do not appear to be insulated. Windows are vinyl replacement units with snap-in muntins, which cause air and moisture infiltration. Exterior doors are flush hollow metal, embossed hollow metal (with sidelites) and aluminum storefront. Many exterior doors do not have a proper seal. The performance of these combined components of the exterior building envelope, from an energy efficiency and aesthetic standpoint, is poor. The following improvements to the building exterior envelope are recommended:

- Remove existing building siding, abate the asbestos siding, and replace with fiber cement board smooth bevel siding
- Install poured urethane expanded foam insulation at the original (1900's) building walls, rigid insulation at the 1960's addition, and no additional insulation at the 1990's addition
- Replace all windows with clad wood units with insulating glass
- Replace existing exterior doors with new insulated hollow metal doors
- Remove and reinstall glass fiber batts at attic level roof insulation
- Provide roof hold down anchors at existing rafter connections to increase the wind uplift resistance of the roof

3. Building mechanical and electrical system upgrades – approximate costs: $262,200

The building mechanical system components vary in age and performance. The building recently received a new propane gas-fired boiler. The building HVAC controls are old and the system is made up of proprietary equipment. There are various air handlers, ductless split systems and condensing units that service different parts of the building. The air handling units in the crawl space that used to serve the Clerk's office area are abandoned due to indoor air quality issues. This space currently receives no mechanical ventilation, and is cooled by a window air conditioning unit. The condensing unit serving the ductless split system in the server room is inoperable due to damage from falling snow and ice. Each of the building cooling systems use R-22 refrigerant, which is a greenhouse gas and being phased out. The systems are not made to accept any other type of refrigerant.

The building electrical systems are generally in good condition, but a few deficiencies were noted that would require a minor amount of work, and which should be addressed.

Recommendations for upgrading the building mechanical and electrical systems are as follows:

- Install a new HVAC system within the attic space to serve the general/Clerk's office area on the first floor
- Phase in new HVAC units and controls to replace the existing units that are 20 years old, and which utilize R-22 refrigerant

- Replace the inoperable, ductless split system for the server room
- Replace existing electric water cooler in the Lobby with a dual-height unit
- Reinforce floor framing at floor penetrations and locations of new mechanical equipment
- Provide a fire alarm pull station at the exterior door within the Council Chambers
- Install ceiling-mounted occupancy sensors throughout the building
- Repair faulty electrical devices in the food pantry area
- Test emergency egress lighting and exit signs, and replace non-functioning units
- Provide additional coverage for emergency egress lighting and additional exit signs at building egress points
- Replace lamps of different color temperatures
- Label horizontal cabling in the second floor copy/data room
- Provide signage indicating when the elevator is operating on standby generator power
- Support antenna wiring in the fenced area (rear of building) and provide clearance beneath condensing units for maintenance access

4. Space use inefficiencies / space planning – approximate costs: $120,000

The Falmouth Town Hall building was last renovated in the 1990's, and over the course of the past several years departments, programs and staff have changed, and there are many noted inefficiencies with interior space. Some of these include:

- The Falmouth Food Pantry occupies space in the former police station, and has insufficient space for food storage, waiting space, intake space, and counseling space
- The Land Use Group (Planning, Assessing, and Codes) is spread out over the 2nd floor, not contiguous, but the various departments within this group work together regularly and share files
- The Finance Department is spread out in various locations on the 1st floor
- Council Chambers often requires overflow into the Lobby, and the existing furniture doesn't fit well within the existing space

Three layout options for reconfiguring space within town hall were developed and reviewed. The consensus was that some to-be-determined version of Option 1 is preferred because it requires the least disruption of existing walls, does not trigger significant life-safety and fire code-mandated updates, would adequately address the majority of the space inefficiencies within the building, and was also the least expensive option. The following summarizes the space planning strategies contained within Option 1:

- Space on the second floor can be reallocated to the Land Use Group, allowing them to be located together in one area of the building.
- Property Records file storage is increased from 335 square feet to 420 square feet
- Town Clerk's office is consolidated allowing the vault to be relocated and doubled in size. The existing vault area will be converted to a conference room

- The Finance Department staff members are located together on the first floor. Two of the three offices are currently in undesirable locations in the building, with little natural light and near distractions from the Food Pantry.
- Size of Food Pantry is increased from 550 square feet to 880 square feet
- Reinforce floor framing in areas where proposed renovations would increase the live load (2nd floor file storage area)
- Provide posted live load signage for the attic area in the original building

5. Site-related work items – approximate cost: $55,100

There are a few additional site-related work items that would be desirable if a significant renovation of the Falmouth Town Hall is undertaken, although these could be conducted at a separate time from building work. They are as follows:

- Install new landscaping at the perimeter of the building
- Replace the wall-mounted flagpole with a ground-mounted flagpole
- Install flagpole lighting compatible with the ground-mounted flagpole
- Install parking area lighting that meets IES-recommended illumination levels

Introduction

The Falmouth Town Hall, located at 271 Falmouth Road, is a two story (plus attic) structure which was originally constructed around 1900 and expanded in the 1960's and 1990's. It is wood-framed and sits atop a crawl space and slab-on-grade foundation. The building is sited on a parcel of land that is 1.03 acres in size (according to Town of Falmouth property records), and is within the Farm and Forest District on the Zoning Map. Town Hall has very little on-site parking for a building of its size, but has a shared parking arrangement with the adjacent Falmouth Congregational Church that provides adequate parking.

Town Hall provides office and meeting space for many municipal departments (Assessing, Cable TV, Code Enforcement, Finance, Planning, Community Programs, Town Clerk, Town Manager/Council), and currently provides office space for the Falmouth Land Trust as well as houses the Falmouth Food Pantry. Although the building has been well maintained over its lifetime, incremental growth and piecemeal renovations have resulted in some inefficiencies that could be resolved by undertaking a comprehensive look at the building space and systems. If Town Hall is going to remain in this location for the foreseeable future, an investment in more efficient and durable building systems would most likely result in a positive return on investment.

The Falmouth Food Pantry relocated to the Town Hall when the new Police Station was built. It has seen a ten-fold growth over the past four years and currently serves approximately 350 families. The food pantry lacks a freezer and refrigerator, has inadequate storage and is not accessible to disabled individuals. For these reasons and others, it is looking to expand. There is a possibility that the Community Programs Department may be moving to the former Motz School building, in order to be closer to the spaces where some of its programs are held. Oak Point was asked to consider the potential of both of these factors on the space planning part of the project.

Oak Point conducted fieldwork in February 2013, as well as visited Cumberland Town Hall and the Freeport Community Services Food Pantry. Recommendations were developed during March and April 2013.

This report summarizes the facilities assessment, facility improvement recommendations, and space planning concepts that were developed over the course of the project, from January to April 2013, and describes the estimated probable construction cost of these measures. With this information, it is hoped that the Town will be able to implement improvements that will result in a more efficient and healthier working environment and that crawl space, building envelope, mechanical/electrical, and space reconfiguration improvements will result in a long-term savings for the Town.

Facility Conditions Assessment

This assessment is limited to the scope of work items identified in the Request for Proposals, as refined through subsequent meetings with Town staff, as well as Oak Point Associates' field investigations, and review of available historical documentation.

Site

The Falmouth Town Hall is located at 271 Falmouth Road, adjacent to the Falmouth Congregational Church, with the remainder of the site abutting a residential lot. The front and church side of the Town Hall building is surfaced by landscaping/lawn and paved parking areas, the remainder of the surface area around the building is landscape/lawn and wooded areas.

The building is served by an on-site septic system (not evaluated as part of this report), municipal water, overhead electric from pole mounted transformer and underground communications from the utility pole to the building. Two propane tanks serve as the building heating fuel source and are located in the rear of the building. (See Mechanical and Electrical sections for additional utility information.)

Stormwater runoff from the landscaped and paved areas at the front and church sides of the building appears to run toward Falmouth Road via surface flow, where it is collected and conveyed away from the site by culverts. The stormwater runoff at the rear and remaining sides of the building appear to run into the wooded areas via surface flow. It should be noted that roof runoff from the Town Hall building is collected by a gutter system and conveyed to the ground immediately adjacent to the building foundation by downspouts, with some downspout outfalls discharging below the grade into the mulch. During the assessment of the crawl space mold and evidence of water intrusion were found (see Appendix D).

The flag is currently flown on a wall-mounted bracket and pole. The Town would like to have a ground-mounted flagpole installed. Town Staff also expressed a desire to replace the foundation plantings at the perimeter of the building.

Architectural

The scope of work for architectural elements and building component analysis is focused on the exterior envelope, building structure (in relation to potential space allocation modifications), and existing overall construction. Code compliance review outside the scope of work is excluded as the intent is not a comprehensive facility assessment. Architectural components which may be affected within the proposed space planning layouts will be evaluated. Any new work proposed will be completed to current MUBEC (Maine Uniform Building and Energy Code).

Falmouth Town Hall is a two story (plus attic) structure which was originally constructed circa 1900 and expanded in the 1960's and again in the 1990's (see Appendix B). It is wood framed and sits atop a crawl space and slab-on-grade foundation. The style of the building is New England barn, similar to Grange Halls and Lyceums of the era.

Exterior Envelope

Siding is currently a mix of asbestos over wood clapboards at the original 1900's portion, vinyl over concrete block at the 1960's addition, and vinyl on sheathing at the 1990's addition. Windows are builder's quality vinyl replacement units with snap-in muntins as part of the 1990's renovation. They have reached the end of their usable life and cause air and moisture infiltration. Many units leak during storms/wind-driven rain events. Doors are flush hollow metal, embossed hollow metal with sidelites, or aluminum storefront and are poorly sealed, resulting in air and moisture infiltration. Wood shutters with shutter dogs are located at each window of the original (main) building but are absent elsewhere. Soffits are aluminum and/or vinyl wrapped. The roof was replaced within the past two years and is architectural grade asphalt shingle with metal eave ice dam strips. Insulation within the wall cavity is unknown, though previous reports indicate that there is none (it is assumed that the 1990's addition is insulated). The attic is insulated at the ceiling level with glass fiber blankets above the suspended acoustical tile. Extent of infiltration barrier and vapor barrier is unknown, though a portion of siding has been removed down to the original wood board sheathing on the original building and none was visible at that location (see photos - Appendix A). The foundation is granite slabs atop rubble stone at the main wing, concrete elsewhere. The first floor is insulated with glass fiber batts between the wood joists and is in varying states of disrepair, due to crawl space conditions.

The overall condition of the exterior envelope is poor to fair (except the roof). Asbestos siding is a hazardous material which should be abated and the vinyl siding isn't an appropriate choice for a civic building - not only aesthetically but in terms of life-cycle costs. The same is true for the vinyl windows. An overall building envelope replacement is warranted.

Crawl Space

The crawl space extends beneath the original 1900's portion of the building and part of the 1990's addition. It is accessed via a floor hatch in the storage room off of council chambers as well as through a cellar window opening on the west side of the 1900's section. The crawl space varies in clear height from 18 inches +/- to 3 feet 6 inches +/-. The floor surface is sand over poly vapor barrier. Mechanical equipment; domestic water, sprinkler and sanitary sewer piping; and ductwork fill portions of the space. The perimeter foundation walls have rigid insulation set against them, and the first floor joists contain fiberglass batts.

Two air handling units that used to provide fresh air to the first floor Town Clerk's office area were abandoned due to suspected air quality issues. Air was ducted from these units to floor registers which are still in place and open to the ductwork (although recently sealed off from the 1st floor).

In February 2013 Northeast Test Consultants (NTC) evaluated and prepared two reports: a "Limited Indoor Air Quality Assessment" dated February 12, 2013 and an "Indoor Air Quality Assessment" dated February 21, 2013 (See Appendix D). Mold was found in the first floor crawl space area along with evidence of water intrusion, with standing water noted around the elevator. Although the units were not running, air and mold spores from within the crawl space were being passively vented into the first floor office space through the floor registers. The town subsequently sealed off the floor registers with poly sheeting and duct tape as an interim measure until the crawl space issues can be permanently addressed. Rodent activity was evident in the crawl space and above ceiling tiles at the first floor. The ceiling tiles have been damaged by pipe condensation and rodent feces and urine.

Structural

The existing structural system consists of a two-story wood-framed structure that includes an attic space and a crawl space beneath the first floor. Existing structural plans were not available and the descriptions below are based on visual observations by Oak Point Associates personnel.

Calculations and analysis that were performed are in accordance with IBC 2009 and the National Design Specification for Wood Construction of the American Forest and Paper Association (NDS). Analysis was limited to areas where a change in loading was considered, primarily in the attic area that is currently used for light storage.

Roof Structure

Roof framing for the original (c.1900) construction and 1960's addition consists of wood rafters generally spaced 24 inches on center with a wood deck spanning over the rafters. The rafters are supported by wood girders along the eave and mid height of the roof. Girders are supported by wood columns that extend down to the floors below.

In the attic used for light storage a structural analysis of the roof structure was performed, since additional insulation may be provided. Any increase in insulation will increase the likelihood of the roof structure being subjected to higher snow loads then may have previously been seen. Rafters were found to have sufficient strength but the supporting girders at mid height did not have sufficient strength to support the full design loads. As this is a Level 2 alteration, there is no code-required trigger for strengthening the structure, nor is there any issue continuing use provided that the loading, insulation, and space allocation remains as is. Our analysis took into account un-balanced snow loads that occur when the wind blows the snow from the windward to the leeward side of the roof. Connection of the rafters to supporting members was by toe-nailed connections which have insufficient capacity to resist the code required wind uplift forces.

Framing for the 1990's addition consists of metal-plated connected wood trusses with plywood sheathing spanning over the trusses. The trusses are supported by perimeter load bearing walls.

Floor Structure

Floor framing for all levels of the original construction generally consist of 2x framing of various sizes that are supported by wood girders. Typical girder sizes range from 6x8 to 7 1/2 x 9 sections. Wood decking is used to span over the joists. Wood columns are used to support the girders as well as supporting roof dead and snow loads.

An analysis of the attic framing currently used for light storage was performed. The purpose was to determine if the area could be used for offices. The required live load for offices is 50 pounds per square foot (psf). Our analysis indicates that this area has a live load capacity of 34 psf. Both joists and girders were found to be inadequate. Since the framing at other levels is similar the current offices do most likely not comply with current building code requirements.

Framing for the 1960's and 1990's additions are believed to be of similar construction of the original section with the except that perimeter load bearing walls were used.

Lateral Force Resisting System

There is no well defined system to resist lateral forces, wind and seismic, that act on the structure, which is typical of structures of this age and construction type. Therefore existing structural elements must be counted on to provide resistance both horizontally and vertically.

Horizontal elements would consist of the wood sheathing acting as a diaphragm. The straight board sheathing has limited strength and stiffness. Vertical elements would consist of the exterior wood wall sheathing which would also have limited strength. The effectiveness of any system would depend on the connections between the horizontal and vertical elements.

Compliance with current code requirements would not be required unless one of the following occurred;

1. Change in occupancy to a more hazardous occupancy.
2. Increase in the design forces, such as increase in mass of the building.
3. Modification to the existing system such as removing a section of floor framing or exterior walls.
4. An addition that is not structurally isolated from the existing structure.

Foundation System

The foundations for the original construction consist of granite foundation walls around the perimeter and a loose stone footing under the interior wood columns. There is no evidence of failure or differential settlement of these foundations. Based on the results of the floor structure analysis the interior footings would not be adequate to support the full code mandated design loads and forces.

Foundations for the remaining sections consist of concrete foundation walls and footings. There is no evidence of failure or differential settlement of these foundations.

Mechanical

Heating System

The heating fuel source is propane. Two above grade propane tanks are located behind the building. Gas piping runs below grade from the tanks to the 1960's building addition with piping entering the building above the first floor north-east office ceiling. Gas piping above grade is steel, and piping below grade is polyethylene tubing.

The heating system is a forced hot water heating system. A single Lochinvar Knight XL propane gas-fired boiler is located in the boiler room on the lower level with access from the exterior of the building. The boiler has an output capacity of 451,000 Btu/hr. The boiler was recently installed and replaced an oil-fired boiler. The boiler runs year round since it is also used for heating domestic water.

The boiler is vented through concentric venting (exhaust vent and combustion air ventilation) through a direct sidewall vent through the exterior wall of the boiler room.

There are two inline hot water circulating pumps in the boiler room. Hot water heating piping throughout the building is either steel or copper and is insulated with fiberglass insulation.

The building's heating system consists of finned tube radiation in the office spaces, hot water coils in the air handling systems, and cabinet unit heaters in the entryways. Most of the office spaces are individually controlled by a thermostat.

Building Control System

The HVAC controls system in the building is old. The air handling units have Barber Colman Network 8000 Microzone II controllers. The system is made up of proprietary equipment. Any changes to the system must be done by Maine Controls.

Control schedules for the air handling unit systems coincide with the town hall hours and are shut-down on Fridays to coincide with the town offices being closed to save energy.

Air Conditioning & Ventilation

The first floor general office space in the original portion of the building is currently cooled by window air conditioning units during the summer months. The space was served by two York air handling units that are located in the crawl space below. Air was ducted from the units to floor registers. These units have been abandoned because the units and ductwork have been compromised by mold growth in the unit and in the insulation (See Appendix D). In addition, maintenance access to these units is difficult, being either through a small access panel from the exterior of the building or from a floor hatch in a storeroom off the Council Chambers.

Four air handling units are located in the large attic space that runs above the long section of the building, combining the original building and the 1990's addition. Two York air handling units serve the second floor of the original building. These units were installed sometime around 1990. They are rated for 1400 cfm and provide approximately 3 to 3.5 tons of cooling. Two Trane air handling units, each with a return fan assembly serve the 1990's building addition. These units were installed around 1996. One of the units (HVAC-1) serves the Council Chambers on the first floor and the other unit (HVAC-2) serves the office spaces on the first and second floor of the 1990's addition. HVAC-1 that serves the council Chambers is rated for approximately 2,000 cfm and provides approximately 7.5 tons of cooling. This unit has override controls in the storage room in the Council Chambers that allows the users to turn the unit on when there is a function scheduled in this room. Otherwise the unit remains off. HVAC-2 is approximately 1,500 cfm and provides 5 tons of cooling.

An additional Trane air handling unit (HVAC-3) and blower coil is located in the 1960's attic, accessed from the stairwell at the north end of the building. This unit serves the first and second floor of the 1960's building addition and provides approximately 1,500 cfm and 5 tons of cooling.

The associated condensing units for the air handling units are located behind the building. Refrigerant piping is copper with flexible elastomeric insulation. Each of the cooling systems still use R-22 refrigerant. R-22 is a greenhouse gas as defined by the Montreal Protocol. Production of R-22 is limited and obtaining this refrigerant for service or replacement will only get harder over time, and by 2020 may likely no longer be available.

In addition, there are two ductless split systems to provide cooling to the CATV and server room that require 24 hour cooling. The ductless split system that provides cooling to the CATV room is a Mitsubishi MR Slim unit. The condensing unit for this system is located adjacent to the Lobby entrance at the side of the building. A second ductless split system is located in a server room across the hall from the CATV room. This system is not currently working because the condensing unit, which is located with the other units at the back of the building, was damaged by falling snow and ice from the roof.

Various ceiling type exhaust fans are located throughout the building to exhaust the toilet rooms. Exhaust is discharged through exterior wall grilles.

The Break Room on the second floor has a small kitchen with a residential hood over the stove. The hood is a non-ducted recirculation unit and does not have fire suppression. The installation does not meet the current requirements of NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. NFPA 96 shall not apply to facilities where all of the following are met:

(1) Only residential equipment is being used.

(2) Fire extinguishers are located in all kitchen areas in accordance with NFPA 10, Standard for Portable Fire Extinguishers.

(3) Facility is not assembly occupancy.

(4) The authority having jurisdiction has approved the installation

This facility has assembly occupancy so the current code would require compliance with NFPA 96 at such time as a renovation was done to this area.

Mechanical building plans were not available for this study. As a result the amount of ventilation air could not be evaluated to verify that sufficient ASHRAE 62.1 code compliant ventilation air is provided to each space.

Plumbing

The building is supplied with municipal water. The domestic water meter was reported to be down in the crawl space. Domestic water piping is copper and sanitary piping is PVC.

Domestic hot water is provided to the building by an indirect water heater in the boiler room. The indirect water heater is a 45 gallon Superstor Ultra and is in relatively new condition. The main demand for hot water is for the restrooms and break rooms. The boiler has to run year round in order to provide domestic hot water to the building.

There are several individual toilet rooms on each floor of the building and at least one on each floor is ADA accessible. The water closets are tank type, floor mounted vitreous china fixtures. The lavatories are wall hung vitreous china fixtures. There is a single electric water cooler in the lobby. This is not an ADA compliant installation, which requires at least one dual height installation in a facility. The kitchen sinks in the Break Room and pantry kitchen are stainless steel and are not ADA accessible. There are mop sinks in the janitor's rooms on each floor. Plumbing fixtures appear to be in good condition.

The quantity of plumbing fixtures is not sufficient to comply with the current 2009 Maine State Plumbing Code. Currently there are three single toilet rooms on the first floor and two on the second floor consisting of a water closet and lavatory. There is an additional toilet room in the food pantry area, but it is in a private area and cannot be counted. For business and assembly occupancies the current Maine plumbing code requires the following minimum plumbing fixtures:

Business Occupancy	Male	Female
Water Closets	1	2
Urinals	1	0
Lavatories	2	2
Drinking Fountains	1	

Assembly Occupancy	Male	Female
Water Closets	1	4
Urinals	1	0
Lavatories	1	1
Drinking Fountains	2	

These minimum quantities only apply to new buildings, additions, and changes to occupancy or type in an existing building resulting in an increased occupant load. If building renovations do not result in a change in occupancy or type, they would not apply, although separate toilet facilities should be provided for each sex.

Automatic sprinkler system

The building is provided with an automatic wet pipe sprinkler system. A six inch sprinkler entrance is located in the 1960's stairwell. The six inch immediately transitions down to a four inch with a four inch shut off valve, four inch double check backflow preventer and a four inch alarm check valve. The sprinkler system was hydraulically designed. Data at the sprinkler riser stated that the sprinkler system has 299 sprinklers and was designed for 0.15 gpm/SF and an area of 1500 SF. The design flow is 240.27 gpm at 47.27 psi. A fire department connection is located at the exterior wall of the stairwell.

The sprinkler system serves the entire building, including the attic and crawl space.

Electrical

Power

The building is fed from a 75-kVA, 3-phase, 4-wire, 120/208-volt pole mounted transformer located on Falmouth Road. Electrical information from Central Maine Power for the analysis of the electrical service was not available at the time of this report. It is assumed that the electrical service is sized appropriately and that the service does not need to be upgraded. If significant electrical loads are added to the building a service upgrade could be required. The electric service travels overhead from the transformer pole, and then down a utility pole off the south west corner of the building and underground to a pedestal mounted main service disconnect switch and an automatic transfer switch. The service then travels underground to the main electrical room inside the building. The building is also served by a 100-kW standby generator located behind the building and supplies all electrical loads in the building. The main electrical room is located in the hallway between the original building and the old police station.

The main distribution panelboard (MDP) is GE Spectra series, has a 600-amp main circuit breaker and is located in the main electrical room. The MDP serves branch circuit panelboards and HVAC loads located throughout the building. Branch circuit panelboards located throughout the building serve convenience receptacles and lighting circuits. Branch circuit wiring in the building appears to be mostly type NM (nonmetallic). NM wiring above suspended ceilings is not permitted in the current National Electric

Code, however when the building was renovated use of NM wire above suspended ceilings was permitted.

Lighting

Lighting in the building is primarily 2x4, recessed, 3-lamp T8, parabolic type fixtures. The front portion of the second floor is equipped with 2x4, recessed, 3-lamp, lensed type fixtures. The attic contains surface mounted fluorescent strip lighting. The lobby has 2x4, recessed, 3-lamp T8, parabolic fixtures, recessed down lights and pendant mounted decorative fixtures. Occupancy sensors for lighting control are found in various spaces but are not widely utilized.

Lighting in the food pantry area is not fully functional. According to building staff, certain switches in the food pantry are not used because of "sparking."

The building is equipped with emergency egress lighting in the form of remote heads and battery packs. Battery units were tested and only some were operational.

Self illuminated exit signs can be found at most egress doors. A majority of the units appeared to be operational under power and emergency operation.

Exterior building mount lighting is a mixture of residential grade incandescent fixtures, fixtures with metal halide lamps, and flood lights with halogen lamps. The building does not appear to have exterior emergency lighting at building egress points. Three pole-mounted fixtures with metal halide lamps are located outside the food pantry to illuminate the walkway area. The parking areas for the building are not illuminated to IES recommended levels.

Communications

The building communications services enter via underground conduit to the main electric room. Telephone punchdown blocks and surge protection are located on a backboard in the main electric room. The CATV service entrance and splitter is also found in the main electric room. Internet service and town network cabling are routed up to the second floor communications room. The communications room is equipped with a plywood backboard, wall mounted data racks, patch panels and horizontal cabling.

Flush-mounted voice and data jacks are located throughout the building. Wireless access points can be found in second floor spaces. Horizontal cabling is routed above ceilings and down through wall cavities to jacks.

The Council Chambers on the first floor has the capability to broadcast community television. The room is outfitted with ceiling-mounted PTZ (pan tilt zoom) cameras, a ceiling-mounted projector and screen- and table-mounted microphones. Equipment for community broadcasting is located in the second floor in the CATV room. Equipment includes monitors, computers, racks and cabling.

Security

The building is equipped with wall- and ceiling-mounted CCTV cameras located inside only. A Bosch digital video recorder is located in the main electric room.

An intrusion detection system was found in the building. The system consists of a keypad located at the building entrance outside the Council Chambers, card readers, electric door strikes, passive infrared motion detectors and magnetic door contacts. Electric door strikes are found at the front and rear entrance to the building while magnetic door contacts were found at most exterior doors. An iStar Pro control panel is located in the main electric room.

Fire Alarm

The building is equipped with an addressable fire alarm system manufactured by DMD. A fire alarm annunciator is located inside the back entrance to the building. Horn/strobes are found throughout the building while manual pull stations are found by most exterior doors. Magnetic door holders are located on the double doors on the first floor separating the Lobby of the town hall from the Council Chambers.

In summary, the following deficiencies are noted to exist at Falmouth Town Hall:

Site

- Downspouts convey roof runoff to the ground adjacent to the building foundation wall adjacent to the crawl space, where known water infiltration issues are present
- Landscaping at the building's perimeter and the wall-mounted flagpole are desired to be replaced with more attractive plantings and a ground-set flagpole

Architectural

- Exterior siding is a mix of asbestos over wood clapboard and vinyl. Asbestos is a hazardous material
- The original and 1960's exterior walls of the building do not appear to be insulated
- First floor glass fiber batt insulation (at roof of crawl space) is in disrepair due to crawl space moisture and rodent activity
- Windows are builder's quality vinyl replacement units installed in the 1990's, which have reached the end of their usable life and cause air and moisture infiltration
- Exterior doors do not have a tight seal, which causes heat loss and moisture infiltration
- Crawl space has seasonal and storm-related water intrusion, which has resulted in growth of mold spores, as well as rodent infestation
- A number of suspended ceiling tiles at the first floor Town Clerk's office area are stained by pipe condensation and/or rodent urine and feces

Structural

- If insulation is added at the roof level to convert attic storage space into office space, supporting roof girders will not structurally support the full design loads

- Roof rafter connections to supporting members has insufficient capacity to resist code-required wind uplift forces
- Floor joists and girders at current office spaces (estimated to have a live load capacity of 34 psf) do most likely not comply with current building code requirements (live load capacity of 50 psf)

Mechanical/Fire Protection

- Due to crawl space mold issues and the abandonment of the mechanical equipment located in that space, there is currently no ventilation in the first floor general office space, and window air conditioning units are used in that space for cooling
- The building's air handling and condensing units are approximately 20 years old and rely on R-22 refrigerant, which is being phased out
- The condensing unit for the server room was damaged by falling snow and ice, and is inoperable
- The break room stove hood does not meet current fire protection standards. If this space is renovated, code compliance would be mandated
- The quantity of plumbing fixtures is not sufficient to comply with the current Maine State Plumbing Code, nor do the toilet rooms comply with accessibility requirements. This is only an issue if the building occupancy or type of use changes, or if the building is enlarged

Electrical

- Branch circuit NM wiring above suspended ceiling is not compliant with the current National Electric Code, however its use was permitted at the time the spaces were renovated
- Food Pantry lighting is not fully functional
- Emergency egress lighting was only partly operational
- The building does not appear to have exterior emergency lighting at building exit points

Facility Recommendations

Site

Site recommendations are limited to support the building facility recommendations and a request from the Town of Falmouth to estimate the cost of connecting the Town Hall to the municipal sewer system. Additionally, the Town of Falmouth wastewater facility and the Portland Water District were not contacted at this stage, but would need to be consulted if further development is requested.

Connection to Municipal Sewer

A new sanitary sewer line from the Town Hall building and a sewer manhole would be required to connect to the first sewer manhole on the municipal sewer system described below. The on-site existing septic system would be removed and the pavement patched, along with landscape restoration.

Connecting to municipal sewer would require approximately 1,400 linear feet of sanitary sewer line and manholes along Falmouth Road, along with removing and patching one lane of pavement from the Town Hall site down the hill to the nearest sewer manhole on Falmouth Road. A shorter, less direct route of approximately 1,100 feet to a sewer manhole at the intersection of Ladyslipper Lane and Trillium Lane could also be a possible route.

It was assumed in the absence of geotechnical data, that ledge removal would be required along the entire length of the sanitary sewer line and at least 1/3 of the excavation being ledge removal. Geotechnical exploration would be required, if this project is desired in the future, to determine the extent of the ledge removal. After discussing the cost and scope of this work with town staff, it was decided that connecting Town Hall to municipal sewer is not recommended at this time. (The cost was estimated to be roughly $450,000.)

Crawl Space Drainage

In their "Indoor Air Quality Assessment" report (see Appendix D), NTC recommends a crawl space drainage and lining system to control soil moisture conditions. A shallow under-drain system along the inside perimeter and down the center crawl space is proposed (which could outfall near Falmouth Road). A vapor barrier would be installed, along with protection board, over the existing soil in the crawl space. A dehumidifier in the crawl space is also recommended in conjunction with the above drainage work (see Mechanical recommendations).

Site Improvements

A ground-mounted flagpole, with concrete flagpole base, should replace the existing wall-mounted flagpole and bracket. The flagpole could be located between Falmouth Road and the parking area, or to the left of the original building, in the landscaped area to the front of the 1960's addition. A 16- to-20 foot tall, aluminum flagpole is recommended.

Existing foundation plantings should be removed and new landscaping installed, including the area in front of the 1960's building addition. A combination of ornamental grasses, deciduous flowering shrubs and evergreen shrubs (broadleaf or needled) would give a range of textures and seasonality. Plants that are drought- and salt-tolerant, as well as pest-resistant, should be selected. If plants are not to be pruned as part of regular maintenance, varieties with a mature height that does not exceed the height of first floor windows should be selected.

Site Lighting

Site lighting is proposed (see Electrical recommendations). Related site work would include trenching in paved and landscape/lawn areas, along with restoration of those areas.

Architectural

Remedial abatement of the asbestos siding should be undertaken as part of an overall façade improvements project. Removing all siding, building paper, and wrap (if any) down to the sheathing is recommended. A November, 2010 report by Conestco ("*Falmouth Town Hall Renovations and Additions*") suggested exterior rigid insulation, however, we would recommend poured urethane expanded foam insulation at the 1900's portion for several reasons: greatest thermal improvement per unit thickness of application; integral infiltration/vapor barrier provided; minimal disruption to interior finishes at windows & doors; and superior air sealing at myriad cracks & voids present in a building of this vintage. The insulation would be installed from the exterior, thereby minimizing disruption to the interior finishes (and occupants during application). Should insulation be encountered, we have proposed alternatives for addressing the thermal improvements which can be implemented. These include exterior application of rigid board. At the 1960's addition, because the walls are constructed of concrete masonry units, rigid insulation is proposed. No additional insulation is proposed at the 1990's addition.

Siding and trim is recommended to be fiber cement board smooth bevel, which is compatible with the style of the building.

Windows are proposed to be clad wood with insulating glass. (In order to leave some flexibility during bidding, the base bid could have applied grids on both sides with a shadow bar between the lites, and a bid option could call for authentic divided lites.) The existing shutters are recommended to be removed and replaced in-kind, using the existing shutter dogs, where possible, and replacing where too damaged.

Per the 2010 Conestco report, the roof was scheduled to be replaced, and that work was completed in the past two years. Therefore no roof work, beyond ventilation, is recommended in this project.

Roof insulation at the attic level is at the ceiling line; we recommend continuing this arrangement, while improving the depth and quality of the installation, by removing and reinstalling the batts (replacing damaged batts with new).

First floor crawl space insulation is more difficult to effect because of access limitations. That space should have mold remediated, be cleaned, and be abandoned to any use for mechanical equipment beyond dehumidification. The floor registers should be removed and infilled with decking and finished floor material to match adjacent areas. For thermal improvements, batts should be removed and spray foam insulation applied from below. This will be difficult but achievable and will result in a superior air seal. The existing original basement windows will be replaced. Additionally, an under-drain system is proposed which would direct groundwater out of the crawl space (see Site recommendations).

Structural

The following is recommended to correct deficiencies noted and to accommodate proposed renovations.

1. Provide roof hold down anchors at existing rafter connections to increase the wind uplift resistance of the roof.
2. Reinforce floor framing in areas where proposed renovations increase the live load (2nd floor file storage area where partitions are being moved - see Space Planning Recommendations). Reinforcement of joists can be accomplished by nailing 2x framing to the sides of the joists. Girders can be reinforced by attaching steel plates or channels to the sides of the girders. It is recommended minimizing any increase in live loads since reinforcement of columns and footing would be required. The cost included in this report only includes small areas of floor, less than 100 square feet.
3. Miscellaneous framing such as floor penetrations and support of new mechanical equipment.
4. Provide posted live load signage for the attic area in the original part of the building.

Mechanical

We recommend that a ventilation and air conditioning system be provided for the general office area on the first floor. A new air handling system should be installed in the attic space, as the crawl space is not an accessible space for mechanical equipment and air testing has showed high levels of mold spores.

The first floor offices should be sealed off from the crawl space by removing the existing floor grilles and sealing the floor penetrations (see Architectural recommendations). The existing air handling units in the crawl space should be removed as recommended by the evaluation done by Northeast Test Consultants (see Appendix D). A dehumidifier system should be installed in the crawl space to keep the humidity below 60 percent.

The remaining, existing ventilation and air conditioning units are approximately 20 years old and near the end of their estimated service life. ASHRAE published service life for split systems is approximately 15 years. These units have been well taken care of but could be replaced with more up-to-date and

efficient equipment. When the units are replaced, the controls should be upgraded to a newer, non-proprietary, system.

We also recommend replacing the existing ductless split system for the server room.

The residential exhaust hood in the Break Room does not meet the current requirements of NFPA 96: *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*. If renovations are done to this space, the current exhaust hood will need to be upgraded to a commercial kitchen hood with fire suppression according to NFPA 96.

Plumbing

We recommend replacing the kitchen sinks in the Break Room and food pantry kitchen with ADA-accessible sinks if these spaces are renovated or relocated in the future.

The existing electric water cooler in the Lobby is not ADA-compliant. We recommend providing a dual-height unit.

Electrical

We recommend providing a fire alarm pull station at the exterior door within the Council Chambers.

Ceiling-mounted occupancy sensors are also recommended, for lighting control throughout the building that will potentially result in energy savings.

We recommend the repair of electric devices in the food pantry area to eliminate the "sparking" that has been noted by building maintenance staff.

Emergency egress lighting and exit signs should be tested. Non-functioning emergency egress lighting and exit signs should be replaced. Additional coverage for emergency egress lighting and additional exit signs should be provided.

Lamps of different color temperatures should be replaced.

Horizontal cabling in the second floor copy room/data room should be labeled.

Signage should be provided indicating when the elevator is operating on standby generator power.

Antenna wiring in the fenced area (to the rear of the building) should be supported, and clearance should be provided underneath condensing units for easier maintenance.

Emergency lighting on the exterior of the building should be provided at egress points.

Parking area lighting that meets IES recommended illumination levels should be installed.

If a ground-mounted flagpole is installed, flagpole lighting should be provided. A flagpole top beacon-type light or ground uplight, with LED fixture, is recommended.

The following is a summary of Oak Point Associates' recommendations:

Site

- Install a drainage and lining system (along with other measures) to control soil moisture conditions in the crawl space
- Replace the wall-mounted flagpole with a ground-mounted flagpole
- Install new landscaping at the perimeter of the building

Architectural

- Remove existing building siding, abate the asbestos siding, and replace with cement board smooth bevel siding
- Install poured urethane expanded foam insulation at the original (1900's) building walls, rigid insulation at the 1960's addition, and no additional insulation at the 1990's addition
- Replace all windows with clad wood units with insulating glass
- Replace existing exterior doors with new insulated hollow metal doors
- Remove and reinstall batts at attic level roof insulation
- Remove crawl space ceiling insulation and floor debris, and re-insulate ceiling with spray foam
- Clean and sanitize areas of surface mold within the crawl space
- Remove floor registers at first floor Town Clerk's office space and infill with floor decking
- Replace basement windows with new units

Structural

- Provide roof hold down anchors at existing rafter connections to increase the wind uplift resistance of the roof
- Reinforce floor framing in areas where proposed renovations increase the live load, as well as at floor penetrations and locations of new mechanical equipment
- Provide posted live load signage for the attic area in the original building

Mechanical

- Install a new HVAC system within the attic space to serve the general office area on the first floor
- Remove the existing (abandoned) air handling units within the crawl space as part of the remediation work in that area
- Install a dehumidification system in the crawl space to keep humidity below 60 percent
- Phase in new HVAC units and controls to replace the existing units that are 20 years old, and which utilize R-22 refrigerant

- Replace the inoperable, ductless split system for the server room
- Replace existing electric water cooler in the Lobby with a dual-height unit

Electrical

- Provide a fire alarm pull station at the exterior door within the Council Chambers
- Install ceiling-mounted occupancy sensors throughout the building
- Repair faulty electrical devices in the food pantry area
- Test emergency egress lighting and exit signs, and replace non-functioning units
- Provide additional coverage for emergency egress lighting and additional exit signs at building egress points
- Replace lamps of different color temperatures
- Label horizontal cabling in the second floor copy/data room
- Provide signage indicating when the elevator is operating on standby generator power
- Support antenna wiring in the fenced area (rear of building) and provide clearance beneath condensing units for maintenance access
- Install parking area lighting that meets IES recommended illumination levels
- Flagpole lighting should be installed with the ground-mounted flagpole

Space Planning

Existing Conditions

A space planning exercise was undertaken to explore the possibility of improving adjacencies within the various departments contained within Town Hall. The goal was not to completely gut and renovate the building, but instead to look at the existing floor plan objectively and efficiently and develop a plan that would not be overly expensive or intrusive. The last renovation was in the 1990's and although most everyone is pleased with the overall appearance, over the course of time programs and staff have changed, so the Town Manager felt it important to include this exercise within the study. Some of the more significant deficiencies requiring investigation include:

- The Land Use Group (Planning, Assessing and Codes) is spread out over the 2nd floor when ideally the group should be collocated, along with their various files (which are currently in need of expansion).
- The Finance Department is also spread out over the 1st floor when collocation would prove more efficient.
- The square footage allotted to the Town Hall function could be more efficiently used allowing for more room for other departments within the building.
- The Town Hall vault is undersized.
- Council Chambers can be too small at times with spillover of attendees out and into the lobby. The Council furniture doesn't fit well in the existing space, and it's difficult to get to the A/V storage room when meetings are in session.
- An item that is not a deficiency but rather an unknown that could impact the floor plan is the absence or inclusion of the Community Programs department at the Town Hall (see Introduction). Oak Point Associates was asked to provide layouts with this department in and out of the building.

Falmouth Food Pantry

The Falmouth Food Pantry is a volunteer organization serving about 350 families from Falmouth and surrounding communities. It is maintained and run entirely by volunteers. The Food Pantry is an independent 501(C)(3) and is supported one third by local donations and an annual fund raiser, one third by grants, and one third by USDA Food Programs. The volunteers supply needed food as well as other non food items, transportation, organize heating oil assistance, medical support, organize volunteer work crews for home repairs, assist with electric bills and also deliver to those who aren't able to get to the Pantry. The Food Pantry works closely with all seven Falmouth Churches, the Falmouth Lions Club and the Falmouth Rotary. The Town supports the Food Pantry by providing them with space and electricity.

Currently the Food Pantry is located in the northwest corner of the Town Hall where the police station used to be. It has its own separate entrance and parking is directly in front. It is almost freestanding in that it can be occupied while the remainder of the building is locked and secured. The pantry is open eight times a month, three of which are Thursday evenings, so maintaining accessibility during non Town Hall hours is important. In addition to the hours when clients visit, the Pantry staff cleans, stocks shelves, and delivers donations seven days a week. The pantry currently occupies 550 square feet with some storage of goods spilling out into the non Food Pantry zone. It is agreed that locating the Food Pantry within town hall is ideal because of the items listed above, as well as the fact that the General Assistance program is also within Town Hall, two programs which often overlap. The largest handicap to the program however, is its lack of space. After receipt of shipments, either locally or from the federal government, there is no space to house the swell of goods. In addition to the lack of space, other deficiencies include:

- A portion of the entrance vestibule is currently not ADA compliant. The two inner most doors do not meet the clear floor space requirements for wheel chair clearances. There are three other doors within the Food Pantry that do not have the required wheelchair clearances. Storage shelving kept in the corridor impede upon the required width of the corridor.
- There is no desk space and/or counter for client sign-in and collection of information.
- There is currently no area for counseling clients in private.
- A vault space/locked cabinet should be provided for confidential files and employee belongings.
- There is need for an additional freezer and refrigerator, but currently no space to house them.
- A waiting space should be provided for clients, approximately 12-18, to wait before being serviced. Currently they wait outside in their cars until called in as space doesn't allow for multiple clients at the same time.
- Carpet should be replaced with resilient flooring.
- Lighting is faulty, resulting in poor illumination.

According to Dorothy Blanchette, the director of the program, a two to three fold increase in size would benefit the program a great deal. This would increase the current 550 square feet to between 1,100 and 1,650 square feet.

To better understand the workings and flow of a Food Pantry, a visit was made to the recently constructed Freeport Community Services, as well as the Cumberland Food Pantry. Paid coordinator, Sue Mack, gave us a tour of the Freeport space. The Freeport Community Services building is much larger in scale, housing other community based programs such as a teen center, thrift shop, rentable meeting spaces, a commercial kitchen, as well as other community services. The Food Pantry itself serves about 150 families from Freeport and Pownal and is open Mondays and Wednesdays. There is plenty of waiting space within the facility. There is a bakery/produce room which is self serve and another room with canned goods, refrigerated items and non food items behind a counter manned by staff. They have a walk in freezer and a walk in refrigerator. They have lots of storage in the basement, however it is rather difficult to bring goods to and from down the narrow flight of stairs. Also like

Falmouth, they rely on local retailers and farms to provide food and other supplies. Freeport has a program where local high school students plant gardens, harvest the goods and deliver to the pantry. Falmouth Food Pantry also has a permanent garden space maintained by a combination of high school students, Pantry volunteers, and clients. This year the Falmouth Food Pantry added raised beds and in the fall will build 2 cold frames using materials donated by two local companies.

At the Cumberland Food Pantry, we were given a tour by Cumberland Town Manager Bill Shane who also manages the Food Pantry. Their Pantry space is currently located in a former patrol car garage bay in the town hall. It serves about 85 families and is open every Friday. The layout is open, one room, approximately 23'x 23'. They have a commercial cooler and freezer. They do not have a sink, so washing of produce is done elsewhere. There is a small space directly outside of the Pantry where clients wait to be called in. Building a freestanding Food Pantry on the site of the Town Hall is on the Cumberland agenda.

Because of the similarity in size, the Falmouth Food Pantry is far more comparable to Cumberland's. (In fact the square footages of each are almost identical. The layouts are markedly different, though. Cumberland is open and well lit. Everything and everyone is visible, whereas in Falmouth, the space is split up into small rooms, poorly lit and difficult to manage multiple clients.)

The Freeport facility is more of a destination in which people go not necessarily for the Food Pantry but other reasons as well; community talks, senior center, even birthday parties in one of the rentable gathering spaces. If the town of Falmouth wanted to create their own Community Center, the Freeport facility would be something to consider modeling as it appears to be working well for the towns of Freeport and Pownal.

Recommendations

Interviews with staff, as well as field trips to the Cumberland Town Hall and the Food Pantry in Freeport, informed the development of new floor plans.

Three options were explored, ranging from minimal work to alterations approaching 50% of the area of the building. Option 3 was contingent upon the Community Programs Department relocating from Town Hall, which at this date is uncertain. Options 2 and 3 would require more reconstruction of the building and, as a result, would trigger various code-mandated upgrades. The largest mandated upgrade would be the reconstruction of the front stairwell, which is currently non-code-compliant. It would need to be rebuilt and enclosed in order to provide a fire-resistance rating of not less than 1 hour. The other two stairwells would need some enhancements as well, but not nearly as extensive.

Enlarging the Council chambers by a new addition would require the addition of toilet room fixtures, as once that space increases in size, the occupant load does as well. The current fixture count in the building is inadequate (see the Mechanical Facility Conditions Assessment section of this report for more detail). Once the occupant load increases, any existing deficiencies would need to be corrected as well

as the required new fixtures installed as a result of an increased load. Devoting so much square footage and finances to increase the fixture count was determined not to be a priority at this time.

Option 1 (the least intrusive and ultimately the one decided upon) rearranged staff without impeding on the existing architecture. Minimal demolition and new construction would be required in this option. Option 1 calls for some minor relocation of staff and ancillary functions (i.e., conference rooms, IT rooms). Because this option keeps the renovation at a Level 2 Alteration (as defined by the International Existing Building Code), compliance with life safety and accessibility codes would not be mandated at this time.

With specific regard to the Food Pantry, Options 1 and 3 provided the most additional square footage, adding 330 square feet and 545 square feet respectively. The additional 330 square feet doesn't meet the Food Pantry leadership's stated ideal size, but is welcome. They have gained three more rooms. One of the rooms will be opened up to another to allow for a large storage room. Refrigerated storage and produce will stay where it currently is, next to the washing room area. There will be a large waiting room down in the northeast corner away from the goods, to further separate the two functions and have more control if there is limited staff. A separate room will be used for private counseling and checking in.

Ceilings in the existing Food Pantry space will be replaced as they are currently in poor condition. Dated and worn carpet will be changed to resilient flooring for ease of maintenance, and painting will be done throughout. It is anticipated that fundraising will be done for an additional freezer and refrigerator, but a line item is included in the estimate for bench seating, shelving and cabinets.

Discussion of Cost

The Cost Estimate contained in Appendix E is Oak Point Associates' opinion of probable construction cost based on the limited scope of investigation performed, existing documentation provided, and understanding of the scope and quality of construction desired by the Town of Falmouth.

After a preliminary review of the facility assessment, Oak Point Associates met with the Town Manager and Director of Long-Range Planning to discuss prioritization of recommendations. It became clear that the deficiencies noted, and the recommended action, fell into several broad categories that could be stand-alone projects. These categories are: crawl space, exterior building envelope, building mechanical and electrical upgrades, space use inefficiencies, and site-related work items.

The estimate of probable construction cost was configured so that detailed cost estimate pages are listed by discipline, but further broken down within the categories above. The summary sheets outline estimates for each category/project, which include a location factor of (-8%) based on RS Means City Cost Indices, Construction Contingency (10%), General Conditions (10%), General Contractor Overhead and Profit (10%), Escalation (7.8%), and Design Fees (8%).

The estimated construction costs for each category are as follows:

Crawl space	$141,900
Exterior building envelope	$350,243
Building mechanical and electrical upgrades	$262,221
Space use inefficiencies	$119,971
Site-related work items	$ 55,122

Appendix A – Photographs

Photo 1 - Town Hall in 1924

Photo 2 - Exposed sheathing at 1900's section

Photo 3 - Crawl space

Photo 4 - Town Clerk's office

Photo 5 - Food Pantry

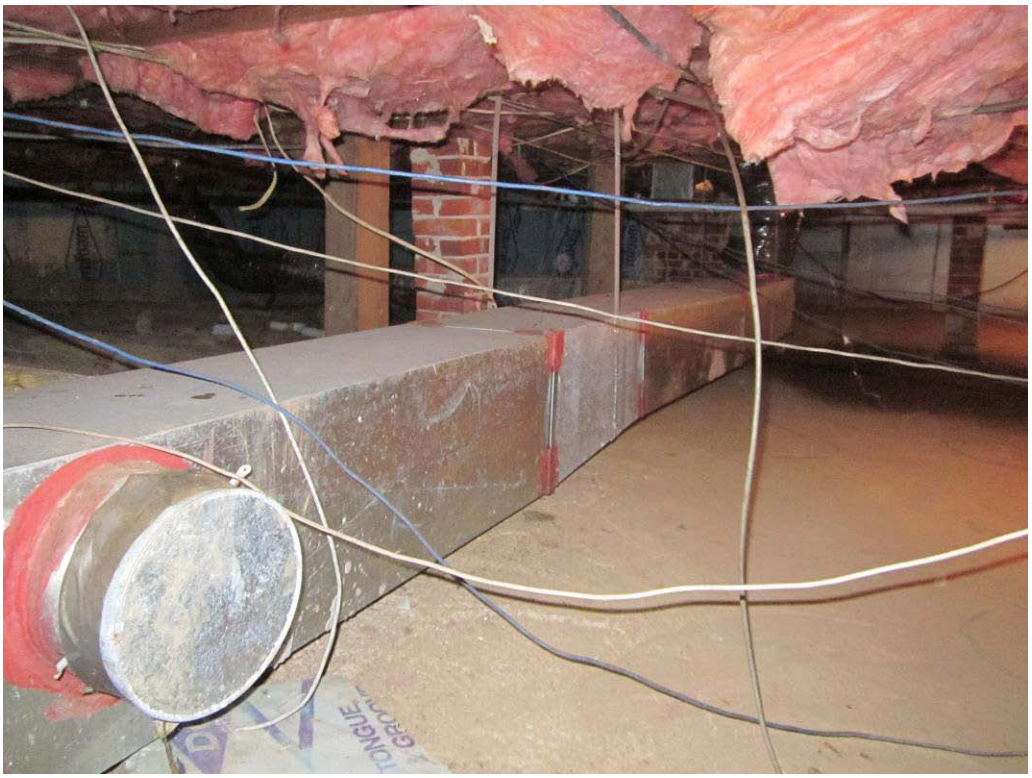


Photo 6 - Crawl space abandoned mechanical equipment

Photo 7 - Crawl space abandoned mechanical equipment

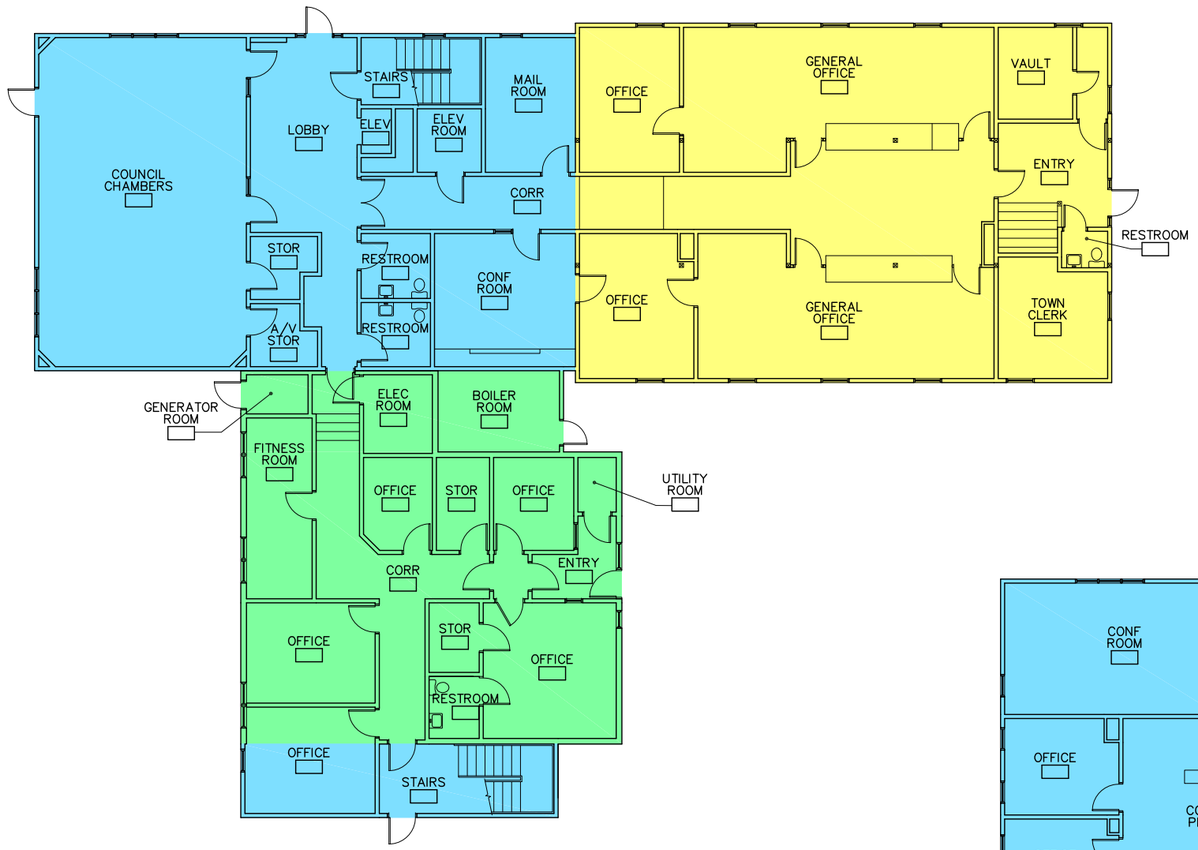
Photo 8 - Attic 1900's section

Photo 9 - Council chambers dais

Photo 10 - Town Hall - current asbestos siding

Photo 11 - Food Pantry entrance - 1960's wing

Appendix B – Drawings



1 EXISTING FIRST FLOOR PLAN
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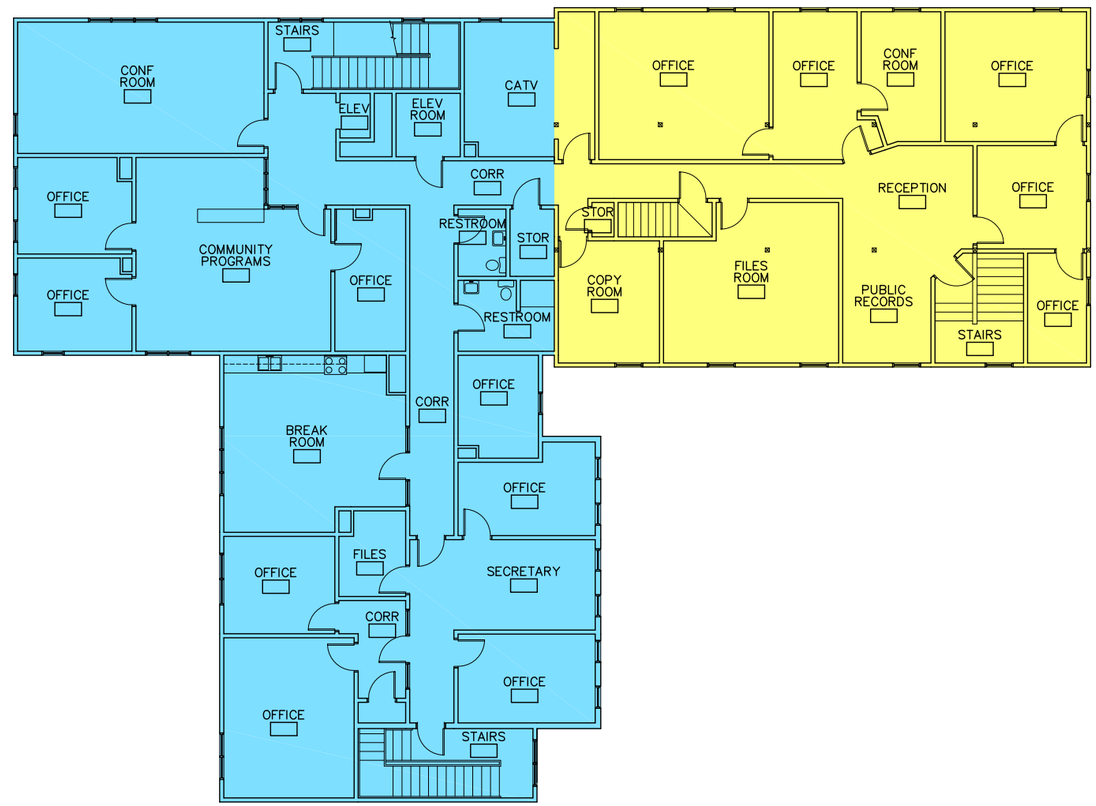

2 EXISTING SECOND FLOOR PLAN
AD001 SCALE: 1/8"=1'-0"

LEGEND

- ORIGINAL 1900'S CONSTRUCTION
- 1960'S ADDITION
- 1990'S ADDITION

GRAPHIC SCALE
8' 4' 0 8' 16'
1/8"=1'-0"
CHECK GRAPHIC SCALE BEFORE USING

15 Jul, 2013 - 2:01pm
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CONCEPT DESIGN

DESIGNED BY: GLH
DRAWN BY: CRR
CHECKED BY: GLH
PROJECT: 21304.01

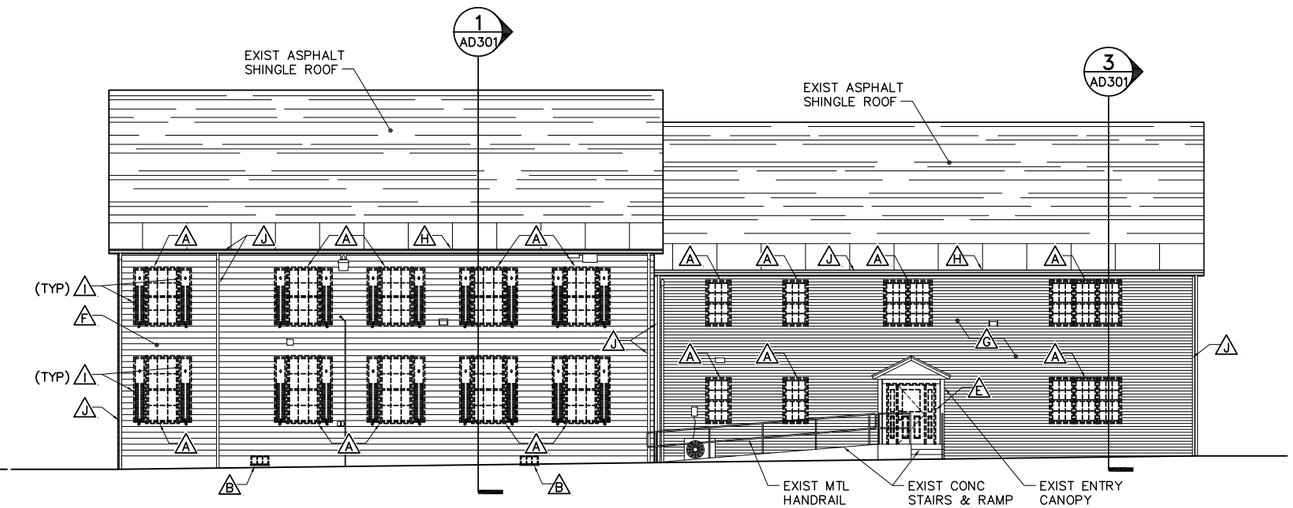
TOWN OF FALMOUTH
.
.
271 Falmouth Road
Falmouth, ME 04105

TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

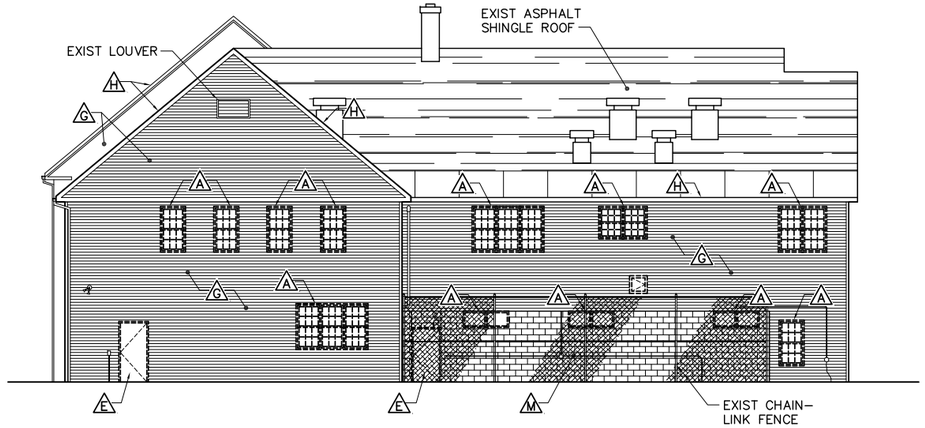
EXISTING FLOOR PLANS

SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AD001
SHEET: X OF .

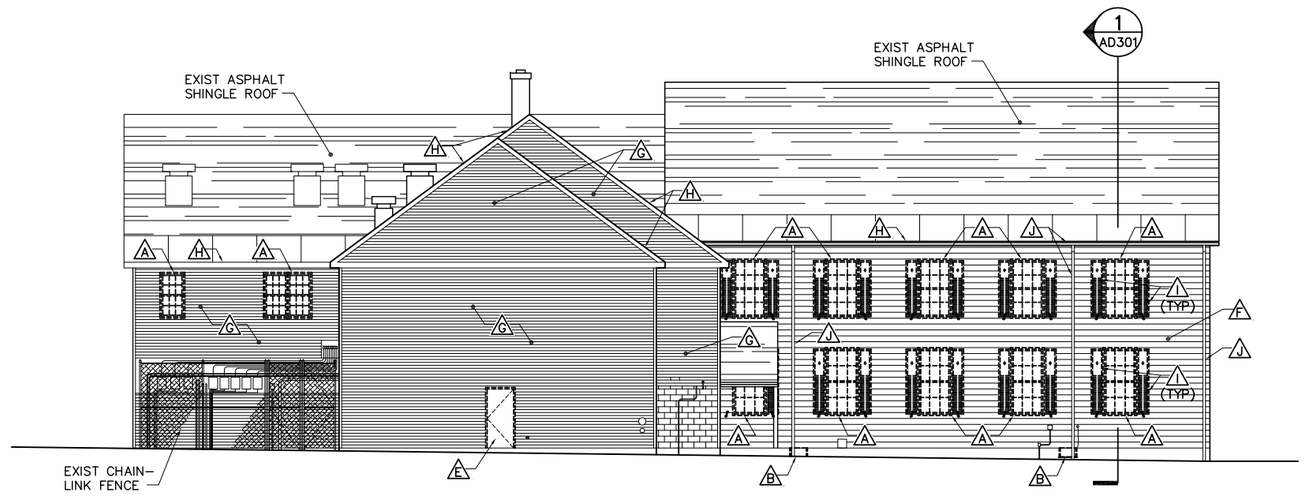
1 SOUTH ELEVATION REMOVALS
AD201 SCALE: 1/8"=1'-0"



2 EAST ELEVATION REMOVALS
AD201 SCALE: 1/8"=1'-0"



3 NORTH ELEVATION REMOVALS
AD201 SCALE: 1/8"=1'-0"



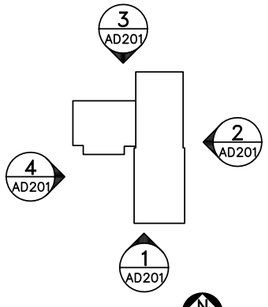
4 WEST ELEVATION REMOVALS
AD201 SCALE: 1/8"=1'-0"

GENERAL NOTES

1. REMOVE, DISCONNECT AND STORE EXISTING WALL MOUNTED LIGHT FIXTURE, ELECTRICAL CONDUIT, ELECTRICAL PANELS, FIRE ALARM BELL, ETC. FOR REINSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS.
2. REMOVE AND STORE EXISTING DRYER VENTS AND LOUVERS AS REQUIRED FOR SIDING INSTALLATION. COORDINATE WITH MECHANICAL DRAWINGS.
3. REMOVE BUILDING WRAP IF ANY DOWN TO EXISTING SHEATHING.

REMOVAL KEYNOTES

- A REMOVE VINYL WINDOW, INSECT SCREEN AND ASSOCIATED WINDOW HARDWARE.
- B REMOVE WOOD BASEMENT WINDOW.
- C REMOVE ALUMINUM FIXED WINDOW.
- D REMOVE ALUMINUM STOREFRONT, DOOR AND DOOR HARDWARE.
- E REMOVE HOLLOW METAL DOOR, FRAME AND HARDWARE.
- F REMOVE ASBESTOS SIDING.
- G REMOVE VINYL SIDING.
- H REMOVE WOOD FASCIA AND SOFFIT BOARDS.
- I REMOVE WOOD SHUTTERS. REMOVE AND STORE SHUTTER DOGS (1 PER SHUTTER) FOR REINSTALLATION.
- J REMOVE AND STORE EXISTING GUTTER AND DOWNSPOUT SYSTEM FOR REINSTALLATION.
- K REMOVE AND STORE EXISTING WALL MOUNTED SIGN FOR REINSTALLATION.
- L REMOVE AND STORE EXISTING WOOD WINDOW PLANTER FOR REINSTALLATION.
- M REMOVE MOLD/MOSS FROM SURFACE OF EXISTING MASONRY SURFACES.



KEYPLAN
NOT TO SCALE

PLAN NORTH

GRAPHIC SCALE
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1/8"=1'-0"
CHECK GRAPHIC SCALE BEFORE USING

15 Jul, 2013 - 11:19am
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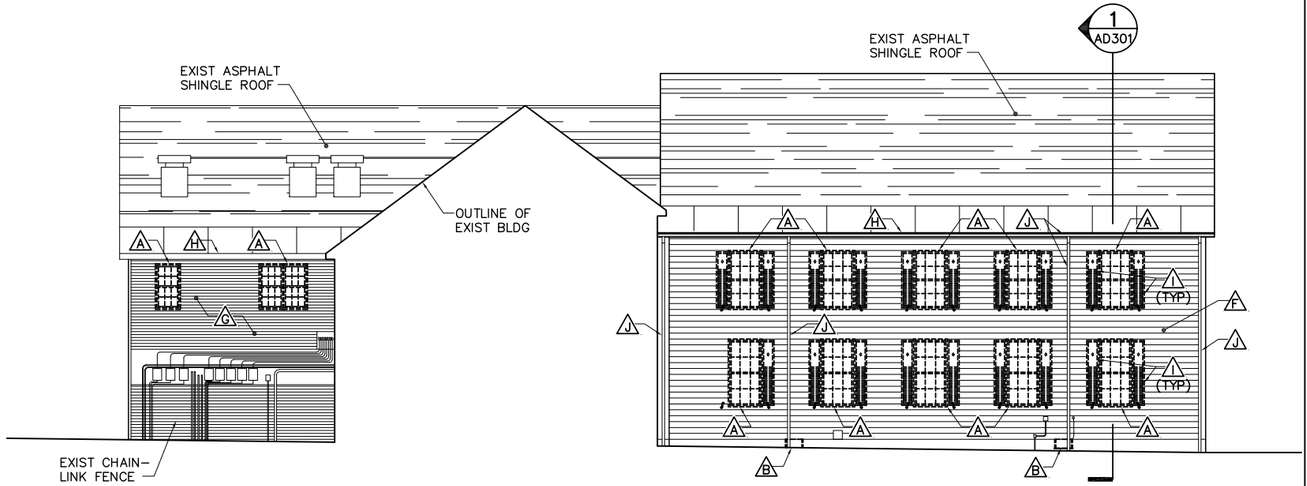
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

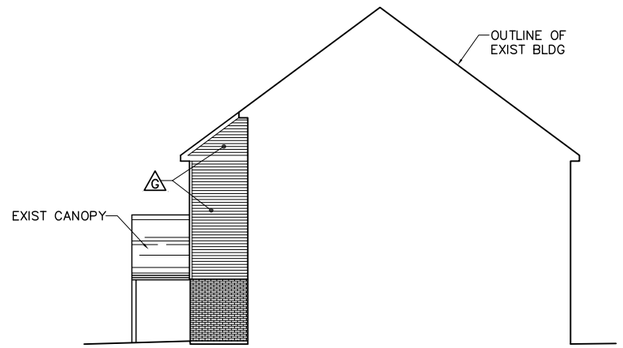
TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

REMOVALS ELEVATIONS

SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AD201
SHEET: . OF .



1 AD202 WEST REMOVALS ELEVATION
SCALE: 1/8"=1'-0"



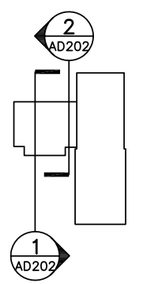
2 AD202 PARTIAL EAST REMOVALS ELEVATION
SCALE: 1/8"=1'-0"

GENERAL NOTES

1. REMOVE, DISCONNECT AND STORE EXISTING WALL MOUNTED LIGHT FIXTURE, ELECTRICAL CONDUIT, ELECTRICAL PANELS, FIRE ALARM BELL, ETC. FOR REINSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS.
2. REMOVE AND STORE EXISTING DRYER VENTS AND LOUVERS AS REQUIRED FOR SIDING INSTALLATION. COORDINATE WITH MECHANICAL DRAWINGS.
3. REMOVE BUILDING WRAP IF ANY DOWN TO EXISTING SHEATHING.

REMOVAL KEYNOTES

A. REMOVE VINYL WINDOW, INSECT SCREEN AND ASSOCIATED WINDOW HARDWARE.
B. REMOVE WOOD BASEMENT WINDOW.
C. REMOVE ALUMINUM FIXED WINDOW.
D. REMOVE ALUMINUM STOREFRONT, DOOR AND DOOR HARDWARE.
E. REMOVE HOLLOW METAL DOOR, FRAME AND HARDWARE.
F. REMOVE ASBESTOS SIDING.
G. REMOVE VINYL SIDING.
H. REMOVE WOOD FASCIA AND SOFFIT BOARDS.
I. REMOVE WOOD SHUTTERS. REMOVE AND STORE SHUTTER DOGS (1 PER SHUTTER) FOR REINSTALLATION.
J. REMOVE AND STORE EXISTING GUTTER AND DOWNSPOUT SYSTEM FOR REINSTALLATION.
K. REMOVE AND STORE EXISTING WALL MOUNTED SIGN FOR REINSTALLATION.
L. REMOVE AND STORE EXISTING WOOD WINDOW PLANTER FOR REINSTALLATION.
M. REMOVE MOLD/MOSS FROM SURFACE OF EXISTING MASONRY SURFACES.



KEYPLAN
NOT TO SCALE
PLAN NORTH

GRAPHIC SCALE
8' 4' 0 8' 16'
1/8"=1'-0"
CHECK GRAPHIC SCALE BEFORE USING

15 Jul, 2013 - 11:20am
C:\dfile\21304.01-AD202.dwg

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231 Main Street, Biddeford, Maine 04005 (T) 207.283.0193 (F) 207.283.4283
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CONCEPT DESIGN

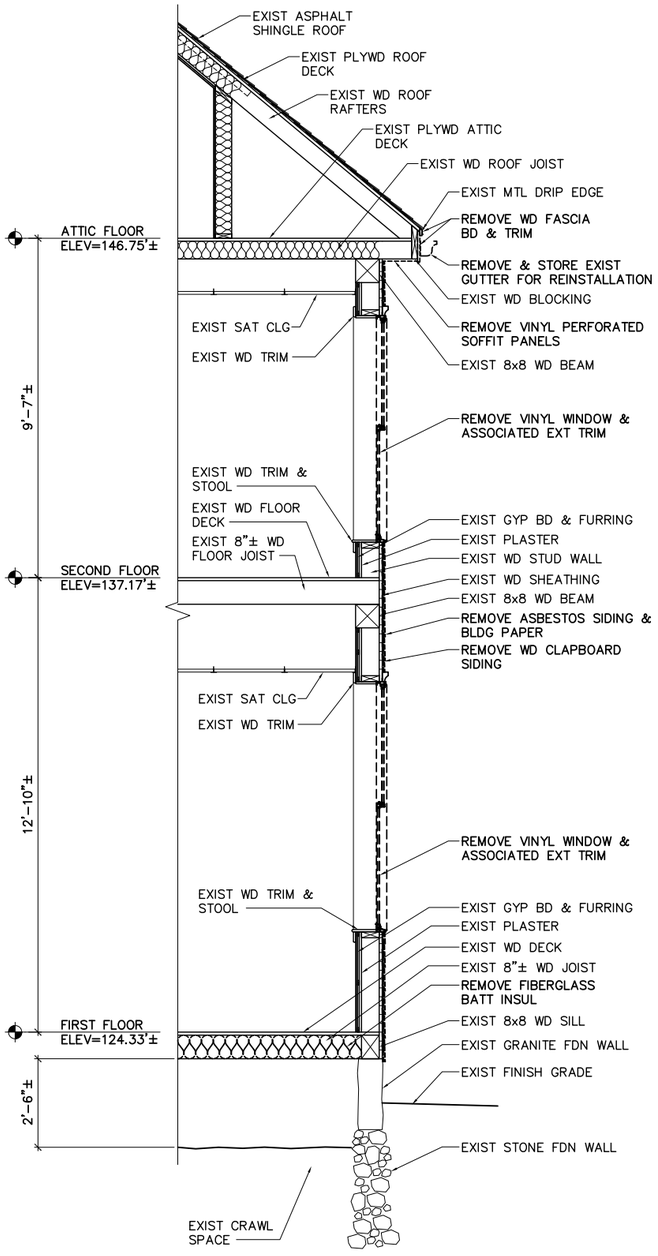
DESIGNED BY: GLH
DRAWN BY: CRR
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

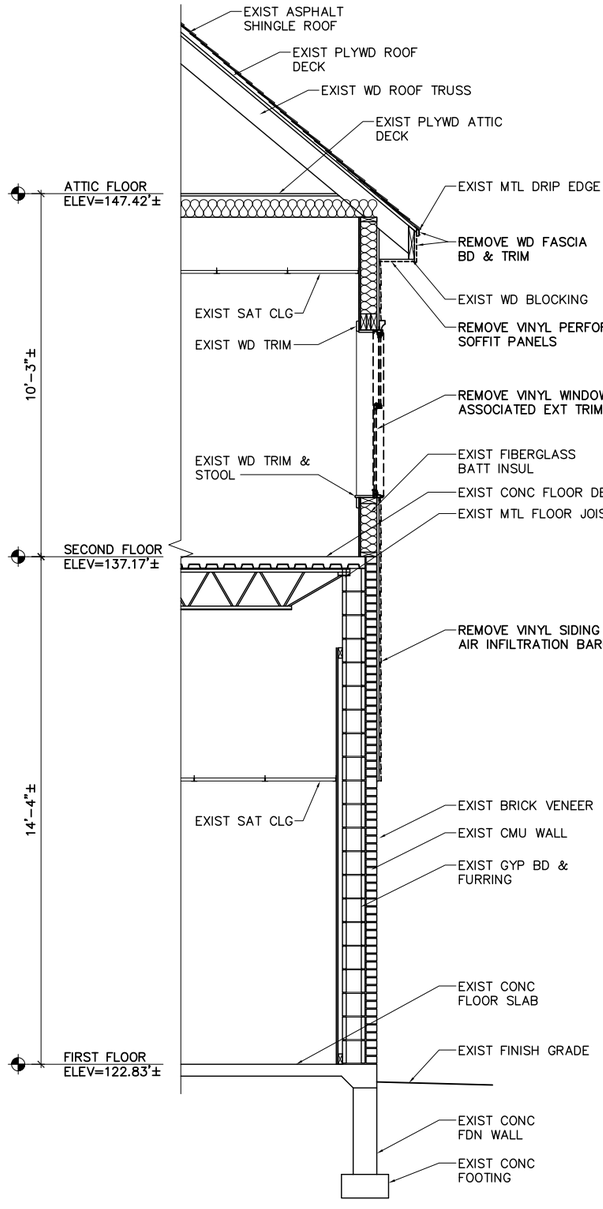
TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

REMOVALS ELEVATIONS

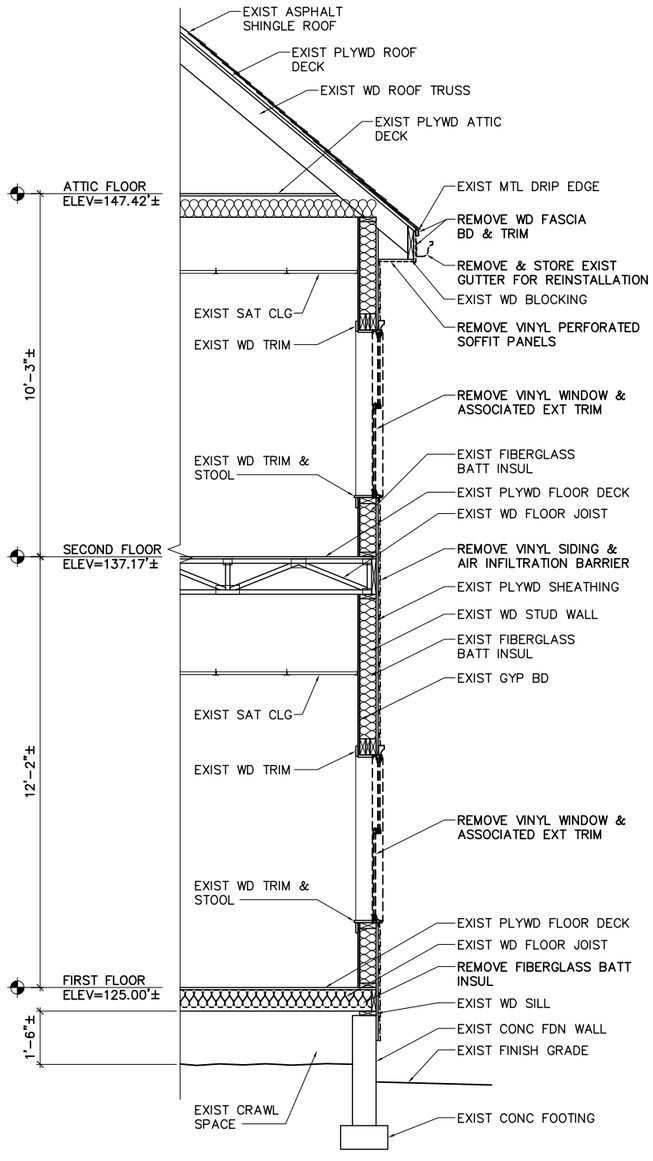
SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AD202
SHEET: . OF .



1 WALL SECTION (ORIGINAL BLDG)
AD201, AD202 AD301 SCALE: 1/2"=1'-0"



2 WALL SECTION (1965 ADDITION)
AD201 AD301 SCALE: 1/2"=1'-0"



3 WALL SECTION (1995 ADDITION)
AD201 AD301 SCALE: 1/2"=1'-0"

GRAPHIC SCALE
1/2"=1'-0" 2' 1' 0 2' 4'
CHECK GRAPHIC SCALE BEFORE USING

15 Jul, 2013 - 11:27am
C:\dfile\21304.01-AD301.dwg

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CONCEPT DESIGN

DESIGNED BY: GLH
DRAWN BY: CRR
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

REMOVAL WALL SECTIONS

SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AD301
SHEET: . OF .

1ST FLOOR PLAN
SCALE: 1/8"=1'-0"

TOWN CLERK
1,470 SF

FOOD PANTRY
880 SF

FINANCE DEPARTMENT
565 SF

15 Jul, 2013 – 1:53pm
C:\dfile\21304.01–FINAL–1FPBLK.dwg

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CONCEPT DESIGN

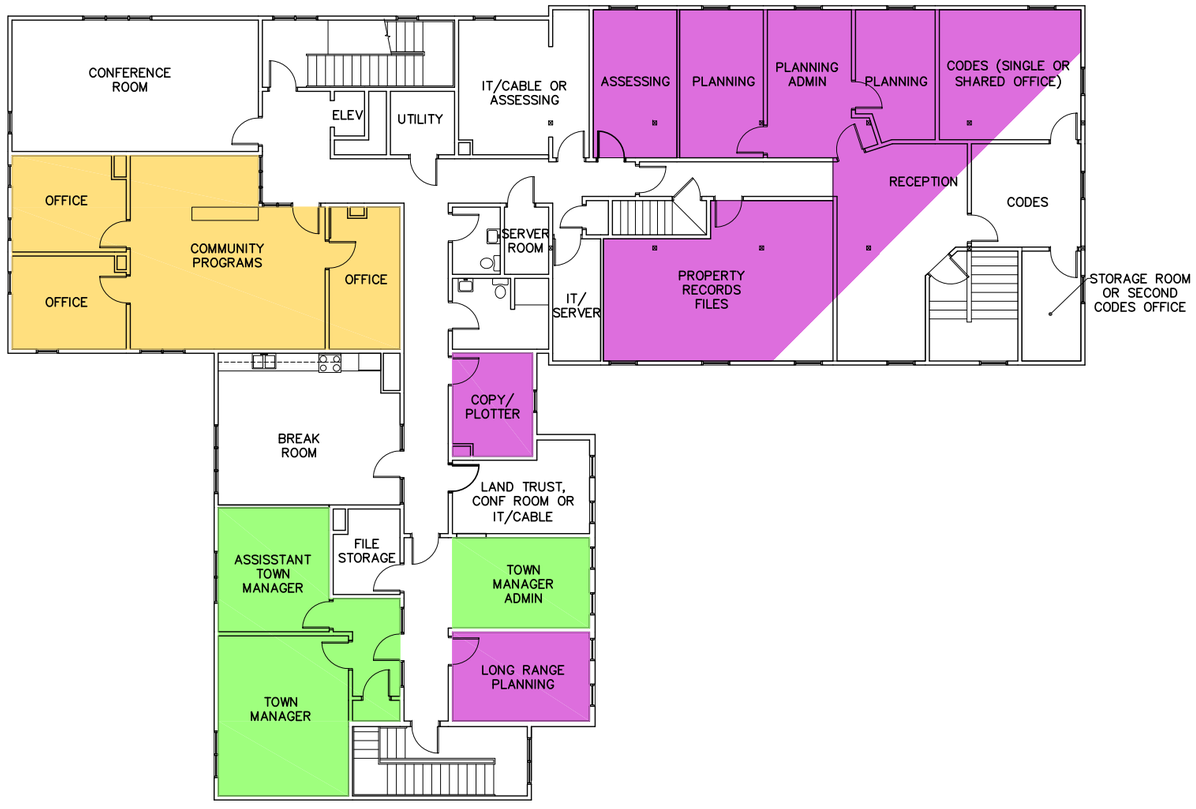
DESIGNED BY: KLG
DRAWN BY: KLG
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

FIRST FLOOR PLAN

SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AE101A
SHEET: . OF .



2ND FLOOR PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

LAND USE GROUP
2,105 SF

TOWN MANAGER
695 SF

COMMUNITY PROGRAMS
865 SF

15 Jul, 2013 - 11:42am
C:\dfile\21304.01-FINAL-2FPBLK.dwg

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CONCEPT DESIGN

DESIGNED BY: KLG
DRAWN BY: KLG
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

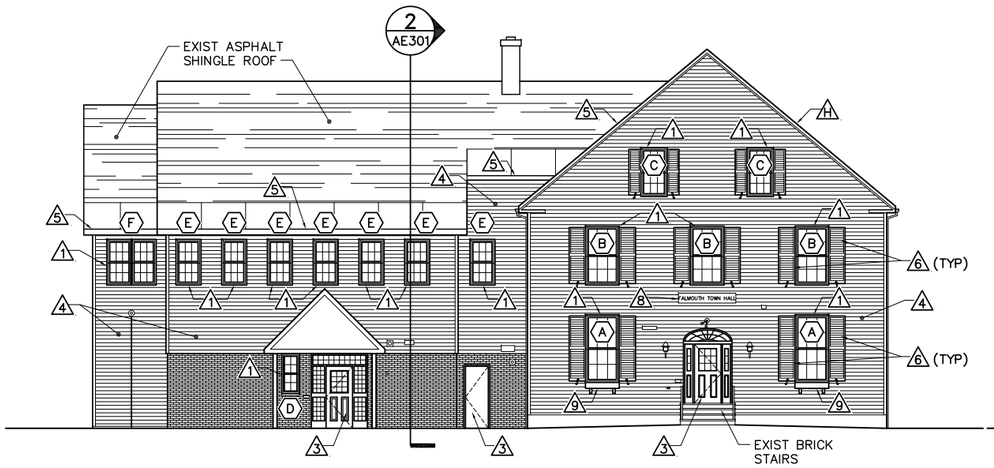
TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

SECOND FLOOR PLAN

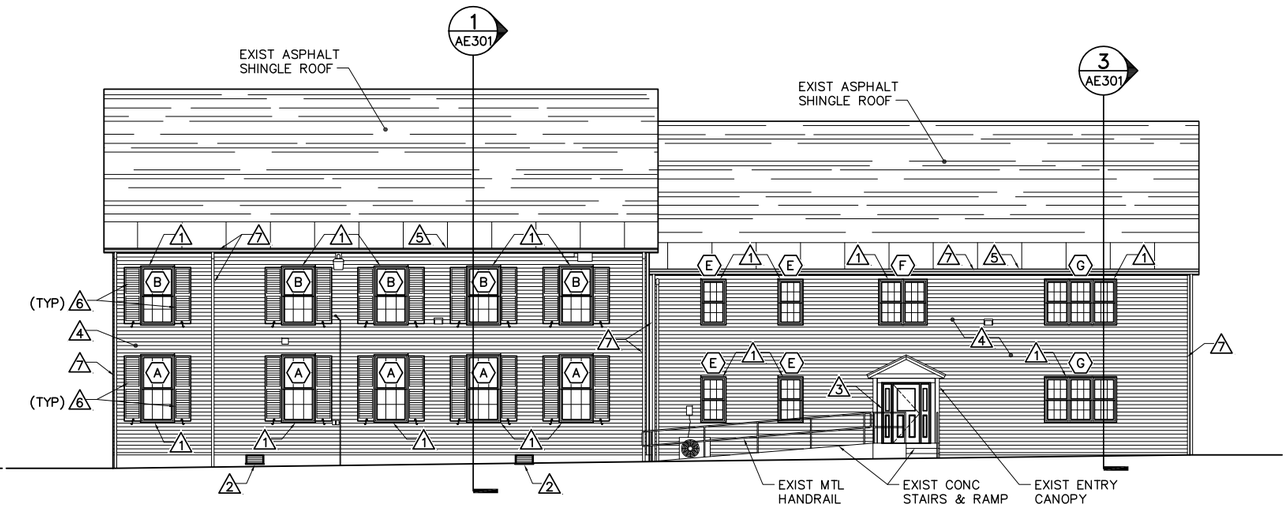
SCALE: AS NOTED
DATE: 07-12-2013

DWG.: **AE102A**

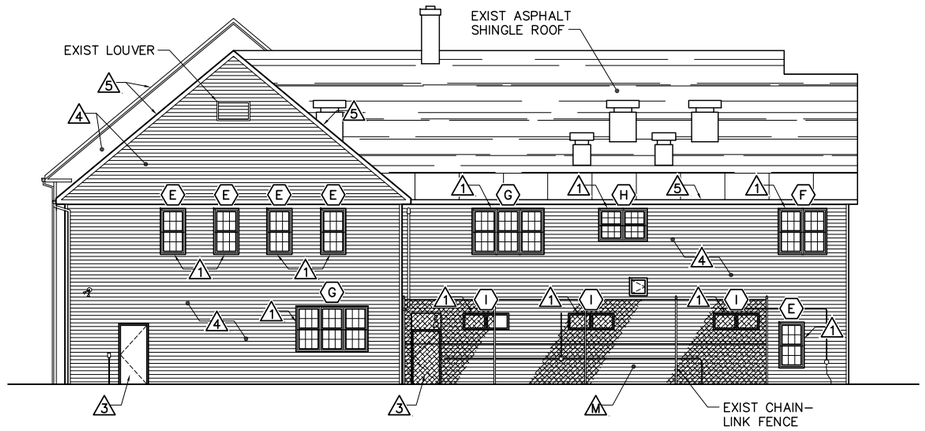
SHEET: . OF .



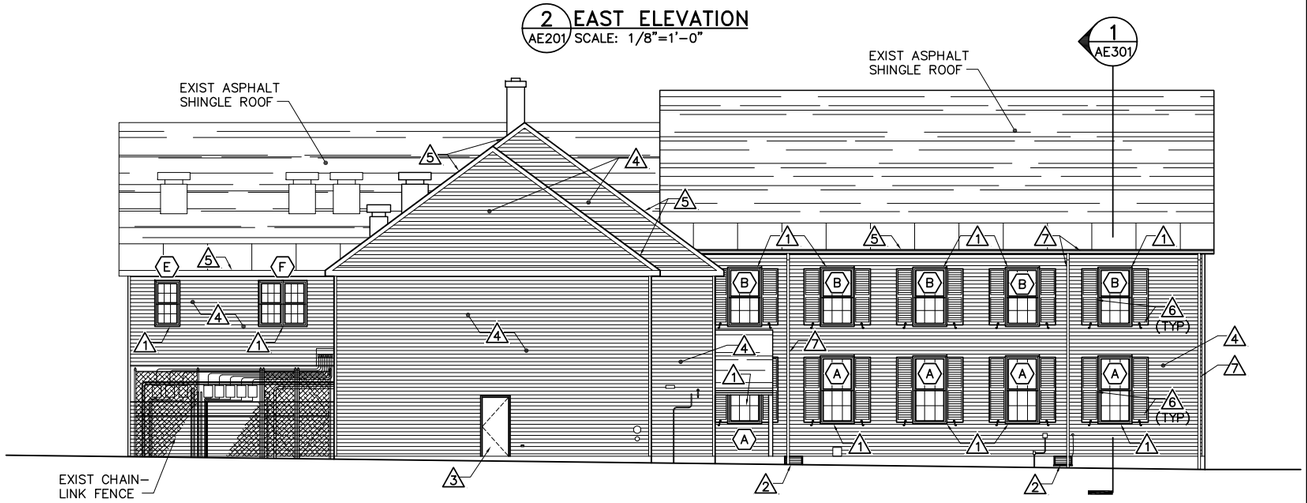
1 SOUTH ELEVATION
AE201 SCALE: 1/8"=1'-0"



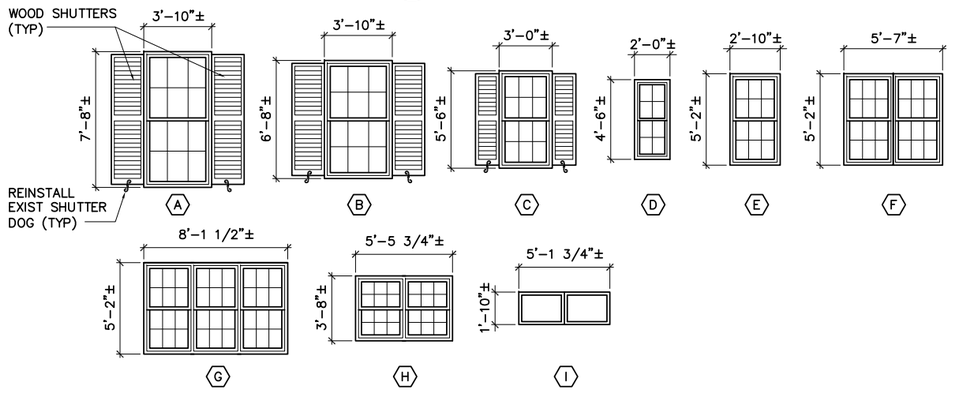
2 EAST ELEVATION
AE201 SCALE: 1/8"=1'-0"



3 NORTH ELEVATION
AE201 SCALE: 1/8"=1'-0"



4 WEST ELEVATION
AE201 SCALE: 1/8"=1'-0"



2 WINDOW TYPES
AE201 SCALE: 1/4"=1'-0"

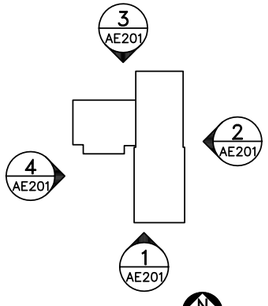
NOTE
VERIFY IN FIELD EXISTING ROUGH OPENING AND MASONRY OPENING.

GENERAL NOTES

1. VERIFY IN FIELD EXISTING ROUGH OPENING AND MASONRY OPENING PRIOR TO INSTALLATION OF REPLACEMENT WINDOWS AND DOORS.
2. REINSTALL AND RECONNECT SALVAGED EXISTING WALL MOUNTED LIGHT FIXTURE, ELECTRICAL CONDUIT, ELECTRICAL PANELS, FIRE ALARM BELL, ETC. FOR REINSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS.
3. REINSTALL SALVAGED EXISTING DRYER VENTS AND LOUVERS AS REQUIRED FOR SIDING INSTALLATION. COORDINATE WITH MECHANICAL DRAWINGS.
4. PROVIDE SPRAY FOAM INSULATION. EXTERIOR CAVITY APPLICATION AT UNINSULATED WALLS.
5. PROVIDE AIR INFILTRATION BARRIER.

KEYNOTES

1. PROVIDE WOOD CLAD WINDOW WITH DIVIDED LITES WITH INSULATED GLAZING, INSECT SCREEN AND ASSOCIATED WINDOW HARDWARE. VERIFY IN FIELD EXISTING ROUGH OPENING. BASIS OF DESIGN IS "MARVIN CLAD ULTIMATE DOUBLE-HUNG WITH 7/8" SIMULATED DIVIDED LITE AND SPACER BAR.
2. PROVIDE LOUVER AT BASEMENT WINDOW LOCATION. VERIFY IN FIELD EXISTING WINDOW OPENING.
3. PROVIDE HOLLOW METAL DOOR, FRAME AND HARDWARE. VERIFY IN FIELD EXISTING ROUGH OPENING.
4. PROVIDE FIBER-CEMENT CLAPBOARD SIDING (5" EXPOSURE) AND 6" CORNER BOARDS.
5. PROVIDE FIBER-CEMENT FASCIA AND SOFFIT BOARD.
6. PROVIDE WOOD SHUTTERS AND REINSTALL EXISTING SHUTTER DOGS (1 PER SHUTTER). PREP AND PAINT EXISTING SHUTTER DOGS PRIOR TO REINSTALLATION.
7. REINSTALL EXISTING GUTTER AND DOWNSPOUT SYSTEM.
8. REINSTALL EXISTING WALL MOUNTED SIGN.
9. REINSTALL EXISTING WOOD WINDOW PLANTER.



KEYPLAN
NOT TO SCALE

PLAN NORTH

GRAPHIC SCALES

1/8"=1'-0" 8' 4' 0 8' 16'

1/4"=1'-0" 4' 2' 0 4' 8'

CHECK GRAPHIC SCALES BEFORE USING

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C:\dfile\21304.01-AE201.dwg

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CONCEPT DESIGN

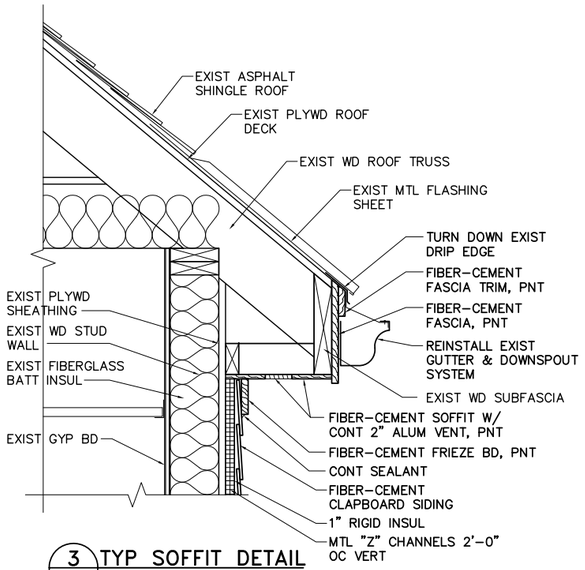
DESIGNED BY: GLH
DRAWN BY: CRR
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

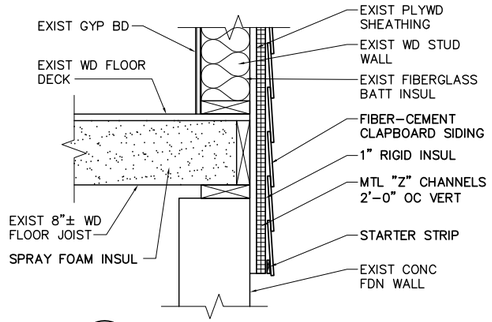
TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

ELEVATIONS

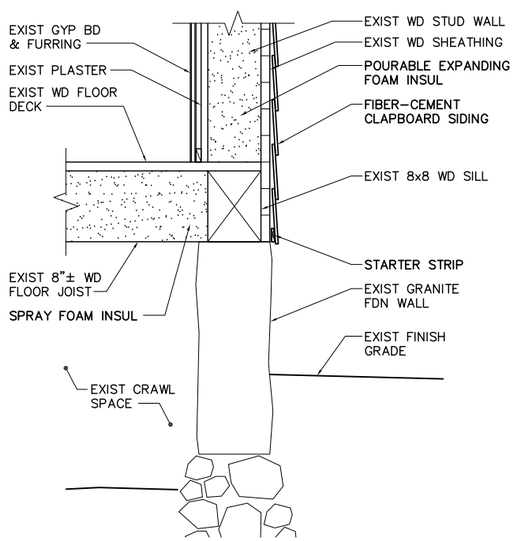
SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AE201
SHEET: . OF .



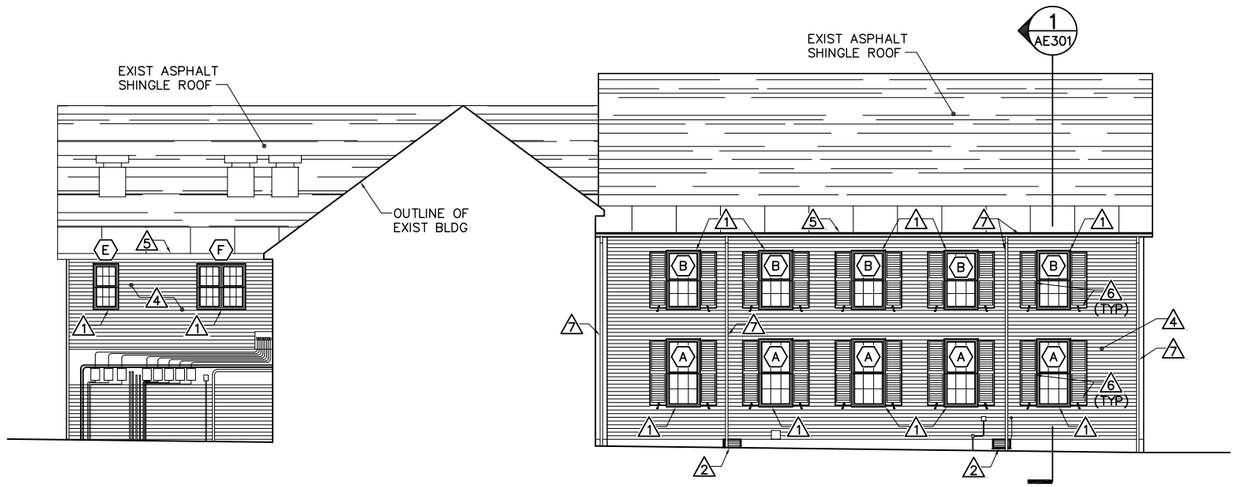
3 TYP SOFFIT DETAIL
AE301 / AE202 SCALE: 1-1/2"=1'-0"



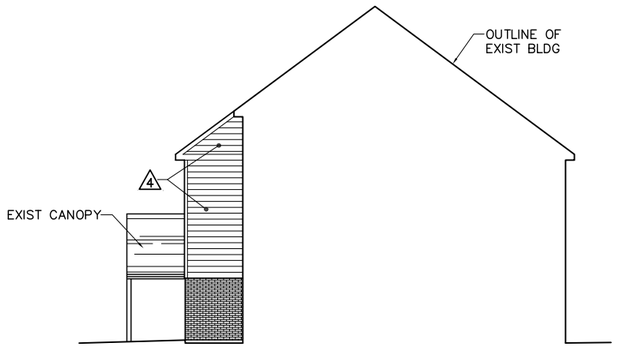
4 TYP WALL BASE DETAIL
AE301 / AE202 SCALE: 1-1/2"=1'-0"



5 TYP WALL BASE DETAIL
AE301 / AE202 SCALE: 1-1/2"=1'-0"



1 WEST ELEVATION
AE202 SCALE: 1/8"=1'-0"



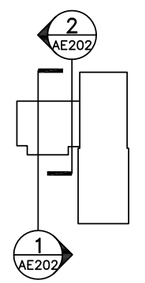
2 PARTIAL EAST ELEVATION
AE202 SCALE: 1/8"=1'-0"

GENERAL NOTES

1. VERIFY IN FIELD EXISTING ROUGH OPENING AND MASONRY OPENING PRIOR TO INSTALLATION OF REPLACEMENT WINDOWS AND DOORS.
2. REINSTALL AND RECONNECT SALVAGED EXISTING WALL MOUNTED LIGHT FIXTURE, ELECTRICAL CONDUIT, ELECTRICAL PANELS, FIRE ALARM BELL, ETC. FOR REINSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS.
3. REINSTALL SALVAGED EXISTING DRYER VENTS AND LOUVERS AS REQUIRED FOR SIDING INSTALLATION. COORDINATE WITH MECHANICAL DRAWINGS.
4. PROVIDE SPRAY FOAM INSULATION. EXTERIOR CAVITY APPLICATION AT UNINSULATED WALLS.
5. PROVIDE AIR INFILTRATION BARRIER.

KEYNOTES

1. PROVIDE WOOD CLAD WINDOW WITH DIVIDED LITES WITH INSULATED GLAZING, INSECT SCREEN AND ASSOCIATED WINDOW HARDWARE. VERIFY IN FIELD EXISTING ROUGH OPENING. BASIS OF DESIGN IS "MARVIN CLAD ULTIMATE DOUBLE-HUNG WITH 7/8" SIMULATED DIVIDED LITE AND SPACER BAR.
2. PROVIDE LOUVER AT BASEMENT WINDOW LOCATION. VERIFY IN FIELD EXISTING WINDOW OPENING.
3. PROVIDE HOLLOW METAL DOOR, FRAME AND HARDWARE. VERIFY IN FIELD EXISTING ROUGH OPENING.
4. PROVIDE FIBER-CEMENT CLAPBOARD SIDING (5" EXPOSURE) AND 6" CORNER BOARDS.
5. PROVIDE FIBER-CEMENT FASCIA AND SOFFIT BOARD.
6. PROVIDE WOOD SHUTTERS AND REINSTALL EXISTING SHUTTER DOGS (1 PER SHUTTER). PREP AND PAINT EXISTING SHUTTER DOGS PRIOR TO REINSTALLATION.
7. REINSTALL EXISTING GUTTER AND DOWNSPOUT SYSTEM.
8. REINSTALL EXISTING WALL MOUNTED SIGN.
9. REINSTALL EXISTING WOOD WINDOW PLANTER.



KEYPLAN
NOT TO SCALE

PLAN NORTH

GRAPHIC SCALES

1/8"=1'-0" 8' 4' 0 8' 16'

1/4"=1'-0" 4' 2' 0 4' 8'

CHECK GRAPHIC SCALES BEFORE USING

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CONCEPT DESIGN

DESIGNED BY: GLH
DRAWN BY: CRR
CHECKED BY: GLH

PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

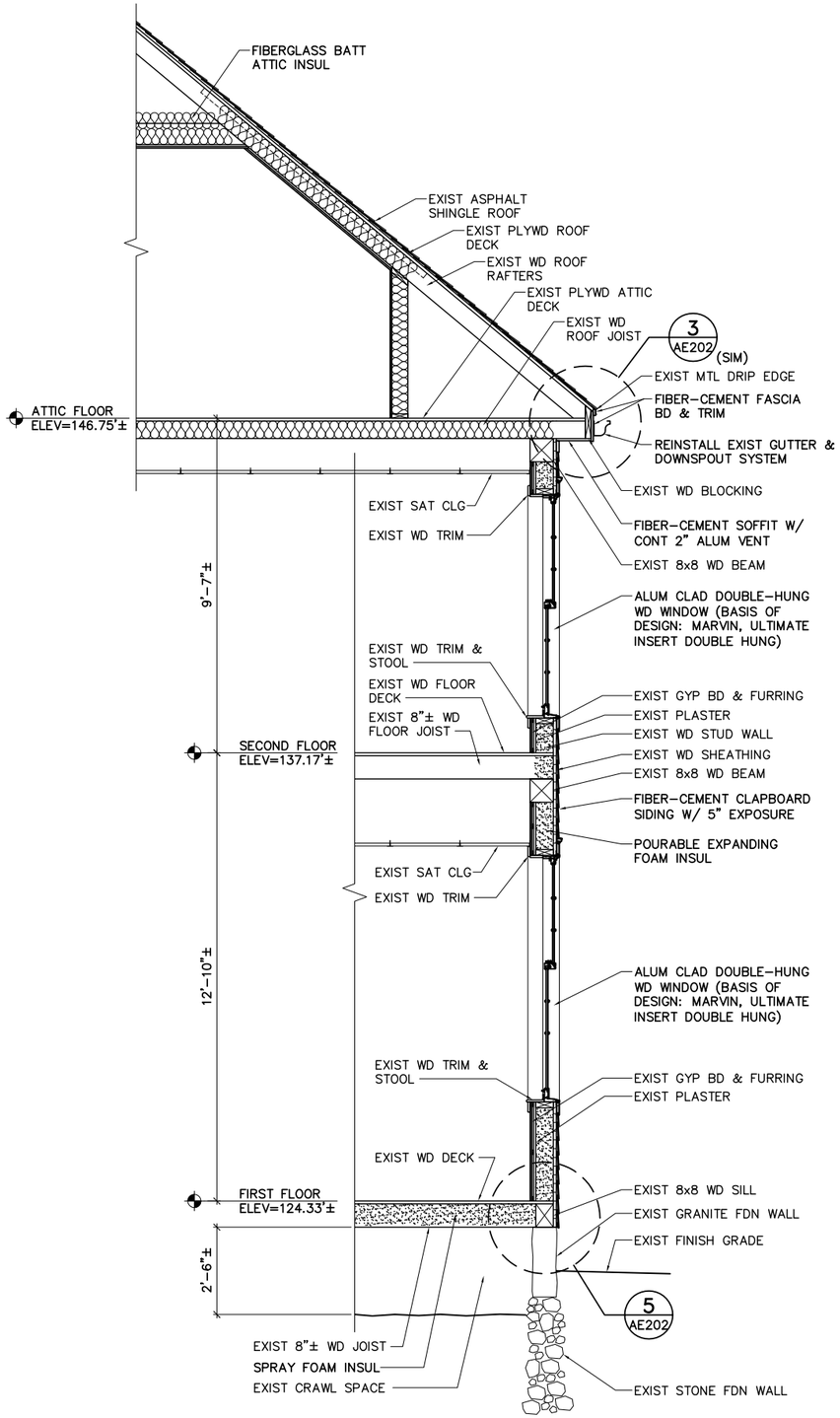
ELEVATIONS AND WALL DETAILS

SCALE: AS NOTED

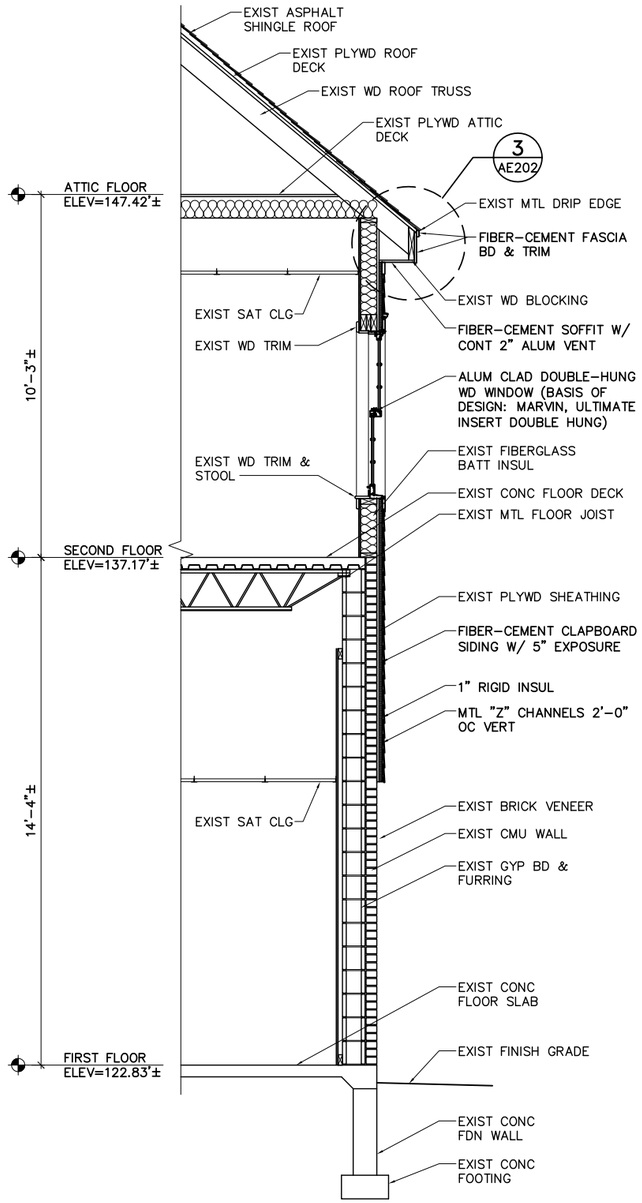
DATE: 07-12-2013

DWG.: AE202

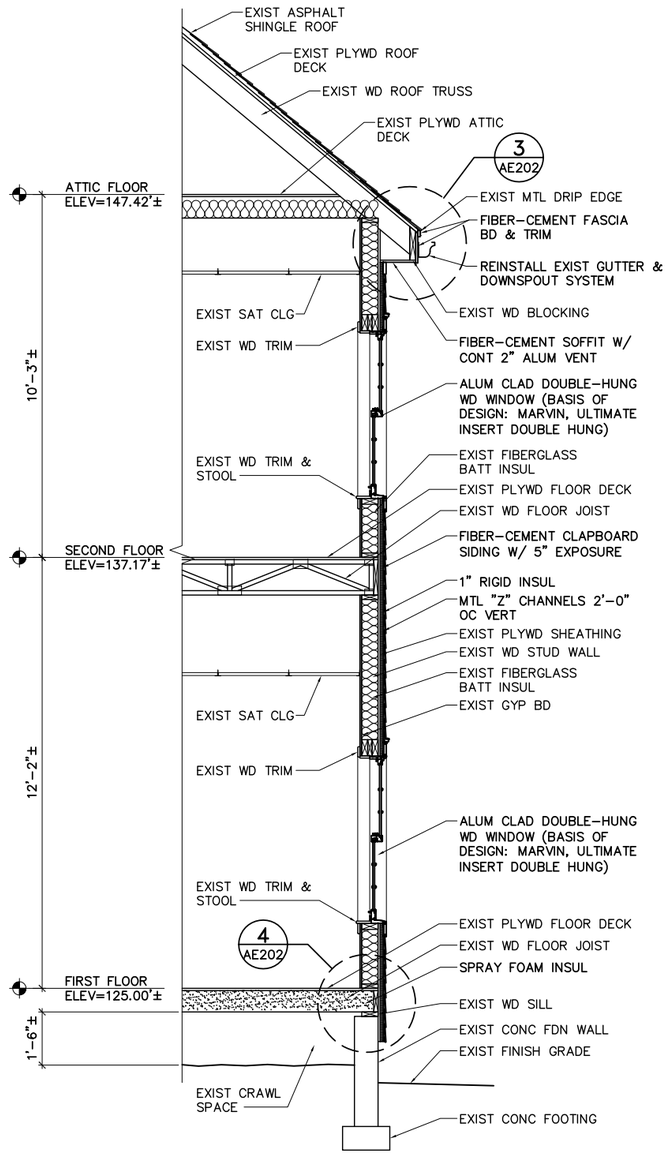
SHEET: . OF .



1 AE301 **WALL SECTION (ORIGINAL BLDG)**
AE201, AE202 SCALE: 1/2"=1'-0"



2 AE301 **WALL SECTION (1965 ADDITION)**
AE201 SCALE: 1/2"=1'-0"



3 AE301 **WALL SECTION (1995 ADDITION)**
AE201 SCALE: 1/2"=1'-0"

GRAPHIC SCALE
1/2"=1'-0"
2' 1' 0 2' 4'
CHECK GRAPHIC SCALE BEFORE USING

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CONCEPT DESIGN

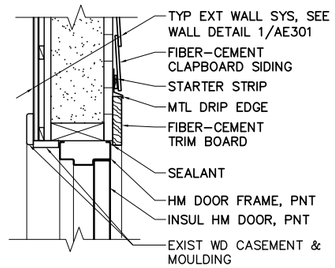
DESIGNED BY: GLH
DRAWN BY: CRR
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

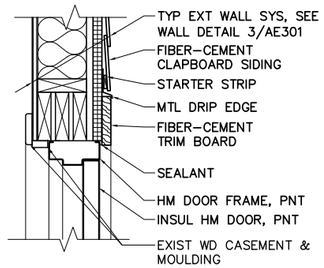
TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

WALL SECTIONS

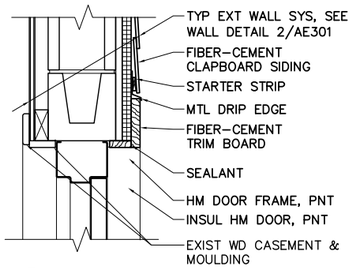
SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AE301
SHEET: . OF .



1 AE602 DOOR HEAD DETAIL
SCALE: 1–1/2"=1'–0"



3 AE602 DOOR HEAD DETAIL
SCALE: 1–1/2"=1'–0"



5 AE602 DOOR HEAD DETAIL
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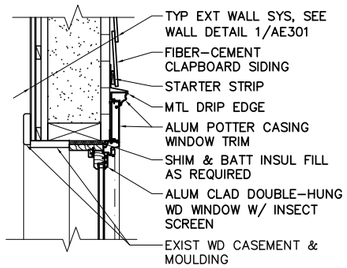
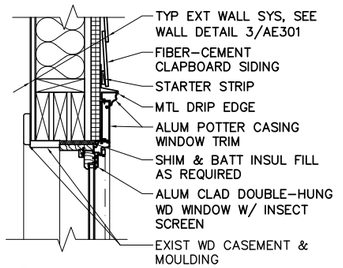
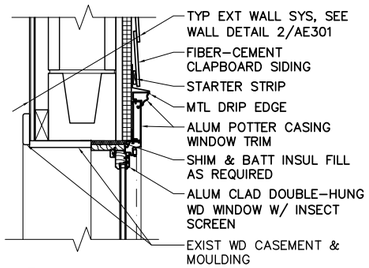


11 AE602 WINDOW HEAD DETAIL
SCALE: 1–1/2"=1'–0"



14 AE602 WINDOW HEAD DETAIL
SCALE: 1–1/2"=1'–0"



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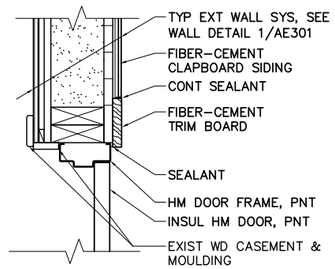

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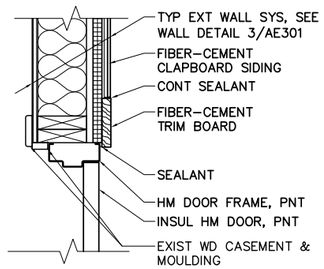

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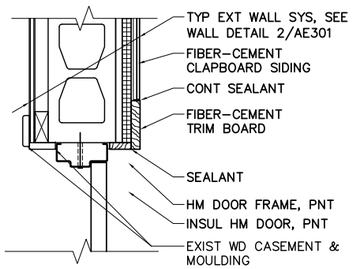

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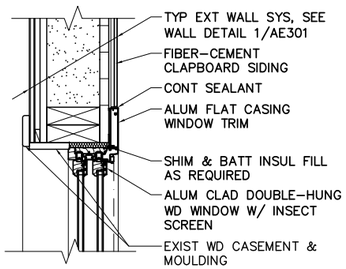

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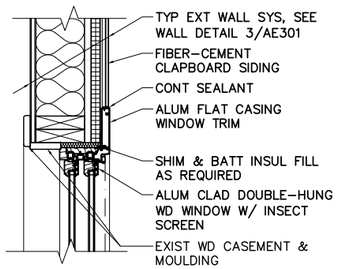

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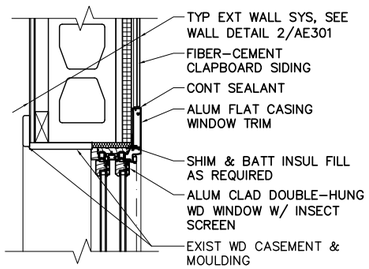

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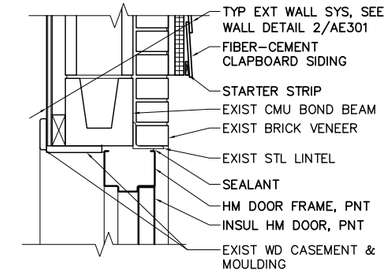

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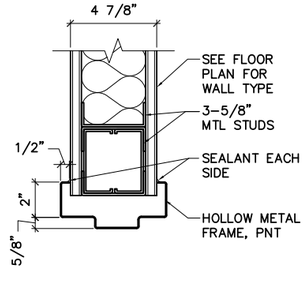

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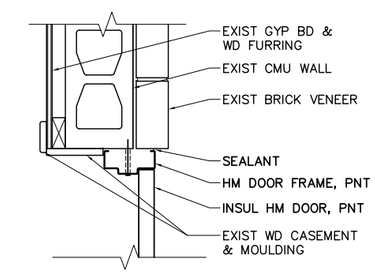

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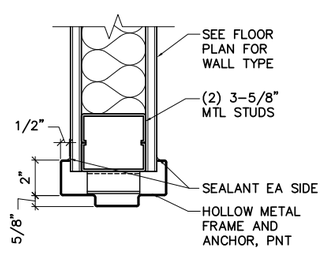

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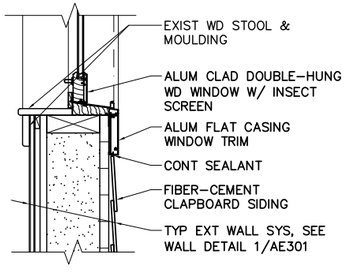

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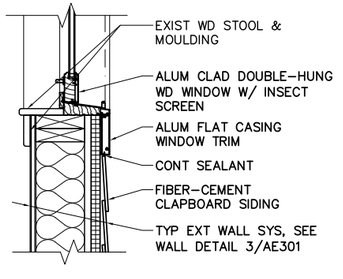

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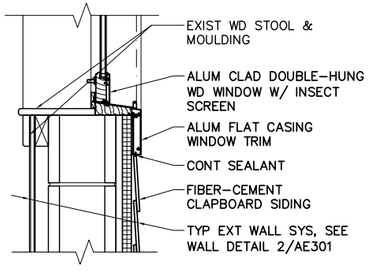

19 AE602 WINDOW SILL DETAIL
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GRAPHIC SCALES

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3"=1'–0" 6" 4" 2" 0 6"

CHECK GRAPHIC SCALES BEFORE USING

15 Jul, 2013 – 11:29am
C:\dfile\21304.01–AE602.dwg

OAK POINT ASSOCIATES
ARCHITECTURE • PLANNING • INTERIORS
231 Main Street, Biddeford, Maine 04005 (T) 207.283.0193 (F) 207.283.4283
www.oakpoint.com

CONCEPT DESIGN

DESIGNED BY: GLH
DRAWN BY: CRR
CHECKED BY: GLH
PROJECT: 21304.01

TOWN OF FALMOUTH
271 Falmouth Road
Falmouth, ME 04105

TOWN HALL RENOVATION AND FOOD PANTRY RENOVATION
Falmouth, Maine

DOOR AND WINDOW DETAILS

SCALE: AS NOTED
DATE: 07-12-2013
DWG.: AE602
SHEET: . OF .

Appendix C – Project Scope and Meeting Minutes

Request for Professional Services
Town of Falmouth
Town Hall Renovation and Food Pantry Renovation

271 Falmouth Road,Falmouth, ME 04105

October 2012

The Town of Falmouth invites you to submit a proposal for professional services to evaluate the future needs of the Town Hall building located at 271 Falmouth Road including, but not limited to, space design, supporting mechanical systems, energy efficiency, air quality, structural integrity, and interior finishes.

Proposals must be submitted to Nathan Poore, Falmouth Town Manager, no later than **4:00 p.m. on November 27, 2012 EST.** Proposals shall be submitted in sealed packages labeled "Town Hall and Food Pantry Renovation, Attn: Town Manager."

Introduction and Background to the Falmouth Proposal

The Town of Falmouth has determined that it is in the best interest of the Town to develop a short and long range plan to renovate, and possibly expand, the Town Hall and Food Pantry.

The Town has recently renovated the interior of the second floor, installed a new heating system and new roof. The Town expects that there are several aspects of the building condition that must be considered such as air handling, air conditioning, insulation, windows, siding, and optimum use of space.

Scope of Services

The Town has identified the following minimum requirements for the project:

Phase I. Concept Design and Cost Estimating

1. Meet with Town officials to determine current and future space needs.

2. Complete a Condition Assessment based on an inventory of all available information/studies and observations related to building features and condition. All collected information must be incorporated into any conceptual plans.

3. Review existing and past work associated with the structural integrity and condition of Town Hall. Perform additional work as deemed necessary.

4. Develop short and long range concept space designs and site plans (as required) based on the needs analysis performed in item #1 and limitations found in items #3 and 4. Proposals should consider a certain number of revisions to these designs

5. Develop professional estimates including present value costs for all options.

6. Attendance at all necessary meetings with Town representatives to complete the tasks. Proposal should include six (6) meetings and unit cost for additional meetings, if deemed necessary.

7. Prepare a final report of findings detailing the results of the work and recommendations, including graphics and plans. (Ten copies shall be provided to the Town along with 3 CD ROM copies of all finished products.)

Phase IA. Falmouth Food Pantry

Since 2008 the Falmouth Food Pantry has occupied 475 sq.ft. of Town Hall space vacated by Falmouth Police Department (which relocated to a new police station). The move into the former police dispatch area and storage areas was accomplished with minimal renovations. Due to increased user demand, a renovation of this space and approximately 325 sq.ft of additional space is projected to meet the Food Pantry's current needs. In November 2010 the Falmouth Town Council indicated a preference to have the Town Hall offices remain in their current location. This has cleared the way for the Food Pantry to start long-term future planning and become a more formal "tenant" in Town Hall. The Food Pantry Board determined that the Town Hall location is preferred in the community, in part due to the proximity to General Assistance clients who already come to Town Hall.

The Town received a 2011 CDBG Planning Grant for work associated with the Food Pantry. A copy of the grant application is attached.

Tasks included in this grant include:

- Review existing Town Hall floor and site plans,
- Visit other Food Pantry locations, e.g. Freeport Community Services,
- Determine program requirements for Falmouth Food Pantry,
- Develop concept plan options,
- Select preferred concept plan,
- Conduct soil test to verify construction feasibility (as required) and

Note: Preparing a schematic floor plan and elevations and specifications that can be used for cost take off and/or construction purposes is not allowed to be part of the CDBG-funded project, but should be incorporated as part of Phase I item 5 above.

The Town's original thinking in the CDBG grant was to explore a new addition for the Food Pantry (due to internal space limitations at Town Hall). This may still be the preferred option,

however relocation of certain Town offices to locations outside Town Hall is under consideration and may free up sufficient space for an internal reorganization of space use.

The above components in phase I and IA are intended as minimum requirements outlining the Town of Falmouth's intent and objective for this project. Proposals should expand upon these minimum requirements to develop a scope of services responsive to the intent and objective of the Town. Each proposal will be evaluated on the content of the RFP submittal, approach, qualifications, and responsiveness to the Town's goals and objectives.

Phase II and III are described below for informational purposes only and are anticipated by the Town upon completion of Phase I and IA. They do not need to be addressed in this proposal.

Phase II. Full Design and/or Design Build Management

This Phase includes two options:

1) Cost for providing full design services and construction bidding services, and
2) Costs for providing management of design-build process and construction bidding services.

Phase III. Construction Management

This Phase includes costs associated with providing construction management and inspection services.

Minimum RFP Submittal Requirements for a Complete Proposal

1. General Qualifications of Firm

- Profile of similar projects
- Firm introduction and background
- QA/QC
- Representative client listing
- References for similar projects
- Subconsultants and project team

2. Personnel and Resources

- Resumes of project manager and other key personnel
- Assignments of personnel.

3. Project Approach and Scope of Services

Provide a detailed explanation of the project approach and scope of services demonstrating responsiveness to the Town's RFP requirements and overall project goals and objectives. Include a description of the approach and ability to meet the project schedule.

4. Fee Schedule

- Include a schedule of fees keyed to each component of the Phase I and IA scope of services. The fees for this project shall be lump sum for each component of the project. Proposals shall include a narrative describing cost control measures, ability to meet project budget, and past performance on cost control.

- Include hourly rate schedule for all personnel who will work on this project.

5. Mandatory Pre-Bid Meeting

There will be a mandatory pre-bid meeting for any interested party at the Falmouth Town Office on Tuesday, November 6, 2012 at 2 PM. This meeting will include a tour of the Town Office.

Questions and Inquiries

All questions should be directed to Town staff at the pre-bid meeting.

Selection Criteria

Selection criteria will be the based upon the following:

- Project approach, responsiveness to the RFP, qualifications of the Project Team, and ability to meet the project schedule.
- Past experience on similar or related projects.
- Lump sum cost to complete project.

The Town of Falmouth reserves the right to accept or reject any or all proposals for any reason, to negotiate with any individual or firm and to select one or more of the proposals.

Project Schedule

- Mandatory pre-bid meeting November 6, 2012, 2:00 PM EST
- **Proposals Due** **November 27, 2012, 4:00 PM EST**
- Interviews: December 3-6, 2012
- Firm Selected December 17, 2012
- Notice to proceed: December 24, 2012
- Final Report: March 31, 2013

Project Approach and Scope of Services

Oak Point Associates proposes the following scope of work and project approach to complete the work outlined in the RFP.

Phase I. Concept Design and Cost Estimating

Task 1: Interviews/Space Planning

An initial meeting will be held with Town officials to review the scope of work, project schedule, and project communication. Initial thoughts on current and future space needs will be discussed at that time, and a schedule for interviews with department heads, town officials, and other key individuals will be developed so that key stakeholder input at a more detailed level is ensured, and so that expectations to be addressed by the design solution are established early in the project. Through this collaborative process, overlapping needs and opportunities for space and program efficiencies can be identified, helping set priorities for the design development.

In addition to interviewing the staff and departments, Oak Point Associates will conduct field visits to verify dimensions and spaces indicated on existing floor plans, and to take additional measurement of existing spaces and their adjacencies in order to document the existing building. We will then compare the existing space configurations to desired space needs expressed by the Town to analyze the opportunities and constraints that exist at the current Town Hall. A space program will be developed that compares existing space areas to desired space needs, and forms the basis for schematic design.

Upon completion of the interview process, a detailed space program matrix will be developed and used to develop floor plans as described below in Task 4. The information gathered to date, as well as the space program matrix, will be reviewed with Town staff before proceeding with schematic design.

Task 2: Condition Assessment

Architects, landscape architects and engineers will conduct field investigations to determine the condition of the facility and associated systems. These investigations will review existing systems, documentation, and as-built conditions to establish a background for design and increase the accuracy of estimates of probable cost. In addition to field investigations, Oak Point Associates will review previous studies and reports. Recommendations will be developed to correct any deficiencies noted during the review.

The intent of this task is to develop a comprehensive Facility Condition summary, which will be included in the Final Report. The findings will also be incorporated into the schematic design.

Task 3: Structural Integrity

The structural systems of the existing building will be evaluated as part of the Condition Assessment (Task 2). Additionally, the structural integrity of the building will be evaluated for the effect that any proposed renovations would have on it. Recommendations will be developed to correct any deficiencies noted during review.

Task 4: Schematic Design

The purpose of the project is to develop short- and long-term solutions for improving the spatial efficiency, interior appearance, energy efficiency, structural integrity, and indoor air quality of the Town Hall building. The work should build on the recent renovations that have been conducted, and prioritize improvements so that they provide the greatest cost-benefit to Town stakeholders. Oak Point Associates' in-house architecture and engineering disciplines will work together to deliver an integrated design that meets project goals, is in compliance with applicable codes and regulations, and meets budget requirements. Our architects and interior designers will assist the Town in creating an environment that communicates a dedication to the community. Space plans will be generated to determine maximal utility and cost effectiveness. Our engineers will strive to provide energy efficient structural, mechanical and electrical systems that provide long-term value.

Utilizing the space program developed, Oak Point Associates will develop "bubble diagrams" that organize the proposed spaces into a color-coded diagram that indicates adjacency relationships and relative sizes of all spaces. This is a precursor to floor plans, and is a method of confirming spatial sizes and relationships with our clients prior to moving to the more detailed exercise of developing floor plans.

Following refinement and approval of the space program and bubble diagrams by the Town, schematic floor plans will be developed. Town staff will be involved in the development and refinement of the proposed plans. Revisions will be made as needed until a final plan is developed. If the schematic design requires, elevations will also be developed during this process.

Schematic site plans will be developed as needed based on the schematic building plans developed, and will illustrate the building location, proposed building additions and land acquisition (if applicable), parking and vehicular circulation modifications, site utilities, and other site improvements deemed desirable.

Task 5: Estimates of Probable Cost

Utilizing all information obtained during the work mentioned above, Oak Point Associates will develop estimates of probable cost for the various improvements that are proposed, including work associated with the Food Pantry. Cost estimates will be presented in spreadsheet format, with line item sub-contractor costs by discipline (i.e. Architecture, Structural, Civil, Electrical, Mechanical, Fire Protection, etc.), and with a summary page that incorporates Contractor O&P, general conditions, construction contingency, escalation and any other mark-ups that are determined to be appropriate for the project. If project phasing is discussed, separate estimates will be developed for each phase that reflect the re-mobilization and escalation costs that would be required by a phased project.

Task 6: Meetings

Based on the RFP, a presentation and attendance at six Town Hall workshop meetings and presentations has been planned for.

Task 7: Final Report

Oak Point Associates will assemble a report that incorporates all work products to date, including:

- Space program
- Bubble diagrams
- Conceptual floor plans and building elevations
- Illustrative perspective rendering of building (if needed)
- Conceptual site plans
- Illustrative site plans (if needed)
- Facilities condition assessment
- Budget estimate of probable construction cost

Phase IA. Falmouth Food Pantry

The Town has received a CDBG Planning Grant to pursue expansion of the Falmouth Food Pantry, based on increased demand for its services. The expansion may be able to be accommodated within the existing building footprint, or may require an addition to the building. This will be determined as part of the design phase of the project.

The work for this phase will parallel the work conducted in Phase I, including interviewing stakeholders, measuring existing space, conditions assessment, visiting other food pantries, program development and space planning, and concept design. Any cost estimating or schematic design that evolves out of this work is included within Tasks 4 and 5 of Phase I.

Soil tests can be conducted to assess the capacity of the existing soil to accommodate a building addition, if the desired design solution includes such an addition. Getting an accurate estimate for geotechnical investigations will depend on the location of the building addition, and the degree of mobilization and repair required to conduct soil borings and/or test pits. Therefore, this cost has not been included in the fee proposal at this time, but if parameters for the work can be identified, we would be happy to solicit a fee for that work.

Timeline

The Oak Point Associates team is prepared to start work immediately upon award. Our team members are committed to design excellence and will provide the necessary amount of time and attention to ensure a successful project.

OAK POINT ASSOCIATES architecture engineering planning

MEETING MINUTES - Kick-Off Meeting

Date: January 22, 2013

Project: Falmouth Town Hall and Food Pantry Renovations
Falmouth, Maine

Attendees:

Name	**Representing**
Rick Mackie	Falmouth Facilities Manager
Dorothy Blanchette	Falmouth Food Pantry Director
Nathan Poore	Falmouth Town Manager
Theo H.B.M. Holtwijk	Falmouth Director of Long Range Planning
Robert Boschen	Falmouth Finance Director
Glenn Harmon	Architect, Oak Point Associates
Kristy Gauthier	Interior Designer, Oak Point Associates
Allison Towne DiMatteo	Project Manager, Oak Point Associates

Items Discussed:

1. Introductions were made, and points of contact, roles and responsibilities were discussed. Theo will be the main Point of Contact for the Town; Allison will be the main Point of Contact for Oak Point Associates (OPA). Theo and Nathan will have joint involvement in the project.
2. The scope of work was reviewed. The project cost must be under $1 Million, so a minimalist approach to improvements must be taken.
3. Priorities include 'must do' maintenance items which include: siding, insulation, windows, moisture infiltration, tel/data, HVAC, and air quality improvements.
4. The space planning goals (second priority to 'must do' maintenance above) include:

    - Keeping the Land Use Group together (Code Enforcement, Planning and Assessing). They have the greatest filing requirements.
    - Keeping the Land Trust somewhere in the building.
    - Consolidating/relocating the Finance Department and improving acoustic separation between the Food Pantry and Finance.
    - Expanding the Council Chambers (or reconfigure dais layout).
    - The Town Clerk intake counter area will remain, however, it is graciously sized and could be reconfigured to allow for other tenants nearby if strategically placed. Four service windows are more than adequate as increasingly services are online.
    - Community Programs (5 staff/1 customer window) may be moving to Mason-Motz. Study options should be included with and without them leaving.

5. Consider utilizing the attic space (currently storage). Elevator and egress issues to resolve.
6. Food Pantry experienced 10-fold growth in past the 4 years, and currently serves approximately 350 families. It is an all-volunteer organization which maintains service adjacencies with the general assistance program. Issues include inadequate storage, lack of freezer or refrigerator, lack of handicap accessibility, lack of seating space, and potential regionalization. Dorothy distributed a list of Food Pantry needs (attached).

7. Additional cosmetic improvements may be privately funded by the Food Pantry.
8. Structural integrity of the building has not been evaluated; OPA will look to validate the issues that were raised in the Conestco report. Rick will provide construction documents of building additions showing structural elements, if available.
9. Fridays are the best day of the week for field work, to verify plans, and have engineers walk through.
10. Interview schedule TBD (Monday-Wednesdays work best), Nathan & Theo to write preparatory staff memo to frame the scope of the project. OPA will prepare interview questions, and should include a question on staff's perception of air quality.
11. The current boiler appears to be adequately sized, and no major expansion is envisioned.
12. Portions of the building's siding contain asbestos. The Town would like to maintain a traditional look for new siding. OPA will attempt to determine what type of siding was original to the building and be sensitive to historic considerations.
13. Alternative energy ideas should be entertained. The Town will provide OPA with utility bills/costs (post meeting note: a minimum of 2 years of costs is desired).
14. Construction is desired during the summer of 2013, if possible.
15. Food Pantry is Phase 1A, a separate scope of work from remainder of study.
16. Total staff in Town Hall is 23.
17. Freeport was indicated as model for food pantry setup, consider site visit to see operation. Dorothy and Theo will discuss sites/schedules for off-site tours. Dorothy suggested that OPA visit the Falmouth Food Pantry on a Tuesday afternoon to see how it operates.
18. Sewer connection should be revisited.
19. Town Clerk vault is to be relocated and/or enlarged if possible.
20. The final report is due at the end of March.

The above items are true to the best of the writer's knowledge. If there are any errors or omissions, please notify *Allison Towne DiMatteo* of Oak Point Associates at the next scheduled meeting. If no corrections or additions are noted at that time, these minutes will become a permanent record of the proceedings. If corrections or additions are made, these changes will be noted in the minutes of the next scheduled meeting.

Falmouth Food Pantry Space Needs

- 1.Wheelchair accessible spaces: Although we have an accessible entrance our hallway is too narrow due to need to locate shelves in halls. Currently we must deliver supplies to the clients who require oversized wheelchairs.
-
- 2.Desk space and counter for client sign-in and information
-
- 3.-a private area where manager can meet with clients in acute situations; this space can also be used for some storage as long as there is room for a minimum of 2 chairs.
-
  4.locked cabinet space for client files

- 5.increased easy to access storage space
-
- 6. increased space for 1 additional chest freezer and 1 additional refrigerator
-
- 7.improved flooring in main client space
-
- -8.improved lighting in main client space
-
- -9.an area where clients waiting to be served can be seated inside. This area should accommodate at least 12-18 clients. This space is needed especially for chronically ill, handicapped, elderly, and pregnant clients.

The overall increase in space must provide 2-3X the current storage area and a bit more space for clients to make selections.

Appendix D – Hazardous Materials Report

NORTHEAST TEST CONSULTANTS

LIMITED INDOOR AIR QUALITY ASSESSMENT

at

FALMOUTH TOWN HALL
271 FALMOUTH ROAD
FALMOUTH, MAINE

NTC JOB #13458-2013

Prepared by:

NORTHEAST TEST CONSULTANTS
587 SPRING STREET
WESTBROOK, ME 04092

Prepared for:

Glenn Harmon
Oak Point Associates
P.O. Box 1259
231 Main Street
Biddeford, ME 04005

February 12, 2013

NORTHEAST TEST CONSULTANTS

February 12, 2013

Glenn Harmon
Oak Point Associates
P.O. Box 1259
231 Main Street
Biddeford, ME 04005

RE: Limited Indoor Air Quality Assessment
Falmouth Town Hall
271 Falmouth Road; Falmouth, ME
NTC Job #13458-2013

Mr. Harmon:

Please find enclosed the documentation for the Limited Indoor Air Quality Assessment conducted by ***Northeast Test Consultants*** on February 7, 2013 at the Town of Falmouth Town Hall situated at 271 Falmouth Road, Falmouth, Maine.

PURPOSE

This assessment action was performed to determine current airborne mold spore activity for general sampling locations performed on the First Floor, Second Floor, and Attic Space.

This action was not intended to be a comprehensive investigation action, but to determine if elevated mold spore levels existing that would warrant additional evaluation and assessment actions to identify causes of mold growth and the locations of source reservoirs requiring possible remediation actions.

PROCEDURES

This activity was comprised of the collection of 7 indoor air samples and 1 outdoor control.

The sampling conducted was performed in accordance with the *Environmental Criteria and Assessment Guidelines*, recommended by the U.S. EPA Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, US EPA 600/8-91/202 (ECAO-R-0315); American Conference of Governmental Industrial Hygienists (ACGIH); and the National Institute of Occupational Safety and Health (NIOSH).

Biological Airborne Activity:
Air samples were collected to determine indoor air quality relating to mold spores utilizing an Allergenco-D™ air sampling cassette collected for a ten-minute period at a flow rate of 15 liters per minute for a total sample volume of 150 Liters.

The Allergenco-D™ Air Sampling style cassette is a sampling device designed for the rapid collection and analysis of a wide range of airborne aerosols. These include fungal spores, pollen, insect parts, skin cell fragments, fibers, and inorganic particulates.

OVERVIEW of SAMPLING DATA

Biological Airborne Activity:

Airborne biological sampling indicated total mold spore levels indoors ranging from 340 - 32,340 ct/m^3.

The outdoor mold spore level was <53 ct/m^3 (no spores detected) at the same time of sampling indicating that spore activity detected indoors other than the common outdoor isolates typically present outdoors (*Ascospores, Basidiospores,* and *Unknown Dematiaceous spores*) is due to indoor sources.

The species detected indoors that are contributed to indoor source growth were comprised of *Aspergillus/Penicillium-like* spores detected at 11,000 - 32,000 ct/m^3 for Sample A-2 (General Office Area) and A-3 (Lobby) collected on the First Floor of the original building section, as well as Cladosporium spores at 1,500 ct/m^3 detected in sample A-3 (Lobby).

Currently there are no regulatory levels for mold spore activity, but most persons typically do not have any adverse reactions to general environmental mold spore levels <5,000 ct/m^3.

The most recent research by the various organizations indicate that ***Aspergillus /Penicillium sp.*** spore activity for indoor environments can be expressed as follows:

"Clean" residential buildings	Typical levels: 230 ct/m^3 +/- 630
Buildings with flooding/water damage	Typical levels: > 2,200 ct/m^3
Mold-damaged buildings	Typical levels: > 36,000 ct/m^3

Normal indoor levels of ***Cladosporium*** spores are typically < 500 ct/m^3.

Of note is that no ***Chaetomium***, ***Fusarium***, ***Memnoniella***, ***Stachybotrys***, or ***Trichoderma*** mold species were identified in the indoor air environment at the time of this testing. These species are indicators of long-term and ongoing moisture issues and/or water intrusion problems. ***Chaetomium***, ***Fusarium***, ***Memnoniella***, ***Stachybotrys***, or ***Trichoderma*** mold species are organisms that are **zero tolerance organisms** for the indoor environment as they have the capability to produce mycotoxins and microbial volatile organic compounds (mvoc's) and can seriously compromise a building and/or the health of occupants. These effects for human health can be worse for immuno compromised persons (such as those with HIV, the elderly, terminally or seriously ill patients (cancer patients)), persons with pre-existing breathing conditions or asthma, and the very young.

Refer to attached analytical data sheets for reference as the type and frequency of mold spore species detected during this sampling event.

SUMMARY of FINDINGS

The detection of elevated ***Aspergillus/Penicillium-like*** and moderate levels of ***Cladosporium*** spores in samples A-2 and A-3 indicate that sources of moisture in the presence of suitable nutrient sources is causing mold growth occurrence in the structure.

The limited nature of this assessment action does not allow adequate information so as to provide information regarding the cause of moisture influences and the locations of source reservoirs in order to provide recommendations for corrective and remediation actions at this time.

The levels of ***Aspergillus/Penicillium-like*** and ***Cladosporium*** spore activity can create an environment in which persons can create cold-like symptoms and individuals can experience upper respiratory issues such as stuffy nose and minor throat irritations. These symptoms typically do not persist for an extended period of time for normally healthy individuals upon vacating the impacted spaces; however persons with specific allergies, or pre-existing asthma or other breathing conditions may experience more intense temporary symptoms.

The mold species isolated indoors during this investigation may be causative agents for such symptoms as headaches, dizziness, sleepiness, general lethargy, coughing and watery eyes. Similar symptoms may also occur because of other indoor air pollutants or other common medical problems.

A medical professional should be consulted for a proper medical diagnosis for any persons experiencing such symptoms.

RECOMMENDATIONS

1. Immuno compromised persons (such as those with HIV, the elderly, terminally or seriously ill patients (cancer patients)), persons with pre-existing breathing conditions or asthma, and the very young should limit their time in the First Floor area of the original structure.

2. It is currently hypothesized that the First Floor area of the original structure is not the actual source of detected spore activity but may be due to Crawl Space condition influences.

3. Further evaluation actions comprised of a through physical assessment of the First Floor area of the original structure and Crawl Space, moisture evaluations, and additional airborne and possible surface sampling actions are required to determine cause of activity and to provide recommendations for corrective actions and remediation actions.

The findings relating to physical conditions observed during this investigation were not intended, nor do they attempt to identify every possible source of contaminants, such as chemical or mold, throughout the entire structure.

Any measured results, analysis data, and physical conditions observed are valid only for the period in which this inspection was conducted. Any additional degradation of building materials or contamination from new or reactivated sources, or areas inaccessible at the time of the inspection are not documented in this report.

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

Please review the enclosed analytical sampling data, interpretation of mold activity, explanation of isolates identified, and marked drawing.

Should you have any questions regarding this report, please feel free to give me a call.

Sincerely,

John M. Boilard, RIHT
Operations Manager

Attachments

MICROBIOLOGICAL SAMPLING DATA

Oak Point Associates
Falmouth Town Hall
271 Falmouth Rd
Falmouth, Maine

Sample Date: February 7, 2013
Sample Type: Air Sample
Volume: 150 Liters
Device: Allergenco-D Cassette™

ID #	Sample #	Location	Raw Count	Count/m³	IDENTIFIED ISOLATE
A-1	IHA3038004	**Outside Control** Ambient Air	0	<27	**Total Mold Spore & Fragments**
			0	<27	None Detected
A-2	IHA3038005	**Level 1; General Office, Centered** Ambient Air	1,216	**32,430**	**Total Mold Spore & Fragments**
			1,200	**32,000**	Aspergillus/Penicillium-like
			7	**190**	Smuts/Myxomycetes/Periconia
			5	**130**	Mycelial Fragments
			4	**110**	Unknown Dematiaceous Spores
A-3	IHA3038006	**Level 1; Lobby** Ambient Air	511	**13,323**	**Total Mold Spore & Fragments**
			2	**53**	Ascospores
			425	**11,000**	Aspergillus/Penicillium-like
			10	**270**	Basidiospores
			55	**1,500**	Cladosporium
			5	**130**	Smuts/Myxomycetes/Periconia
			8	**210**	Mycelial Fragments
			6	**160**	Unknown Dematiaceous Spores
A-4	IHA3038007	**Level 1; Food Pantry, Corridor** Ambient Air	19	**500**	**Total Mold Spore & Fragments**
			3	**80**	Aspergillus/Penicillium-like
			11	**290**	Cladosporium
			5	**130**	Unknown Dematiaceous Spores

KEY: Count/m³ = Total Count per cubic meter of air

The ***National Allergy Bureau*** has established relative exposure guidelines with respect to the raw count of mold spores per cubic meter of air. These values are not related to any specific medical condition but rather alert sensitive or allergy stricken individuals when to avoid prolonged exposures.

Those guidelines are as follows:

Allergen	Very Low	Low	Medium	High	Very High
Mold	Less Than 500 Spores /M³	500-1000 Spores /M³	1000-5000 Spores /M³	5000-10,000 Spores /M³	Greater Than 20,000 Spores /M³

The results should be correlated with any available medical evidence of infections, allergies or symptoms of individuals occupying the space.

Analytical Lab: *Northeast Laboratory Services*

MICROBIOLOGICAL SAMPLING DATA

Oak Point Associates
Falmouth Town Hall
271 Falmouth Rd
Falmouth, Maine

Sample Date: February 7, 2013
Sample Type: Air Sample
Volume: 150 Liters
Device: Allergenco-D Cassette™

ID #	Sample #	Location	Raw Count	Count/m³	IDENTIFIED ISOLATE
A-5	IHA3038008	**Level 2; Community Programs** Ambient Air	14	370	**Total Mold Spore & Fragments**
			5	130	Aspergillus/Penicillium-like
			2	53	Basidiospores
			5	130	Cladosporium
			2	53	Unknown Dematiaceous Spores
A-6	IHA3038009	**Level 2; Reception Area** Ambient Air	59	1,600	**Total Mold Spore & Fragments**
			45	1,200	Aspergillus/Penicillium-like
			2	53	Cladosporium
			3	80	Mycelial Fragments
			9	240	Unknown Dematiaceous Spores
A-7	IHA3038010	**Level 2; Secretary Area** Ambient Air	27	720	**Total Mold Spore & Fragments**
			8	210	Aspergillus/Penicillium-like
			4	110	Basidiospores
			10	270	Cladosporium
			2	53	Smuts/Myxomycetes/Periconia
			3	80	Unknown Dematiaceous Spores
A-8	IHA3038011	**Attic, Centered** Ambient Air	13	340	**Total Mold Spore & Fragments**
			2	53	Aspergillus/Penicillium-like
			3	80	Basidiospores
			5	130	Cladosporium
			1	27	Mycelial Fragments
			2	53	Unknown Dematiaceous Spores

KEY: **Count/m³** = Total Count per cubic meter of air

The ***National Allergy Bureau*** has established relative exposure guidelines with respect to the raw count of mold spores per cubic meter of air. These values are not related to any specific medical condition but rather alert sensitive or allergy stricken individuals when to avoid prolonged exposures.

Those guidelines are as follows:

Allergen	Very Low	Low	Medium	High	Very High
Mold	Less Than 500 Spores /M³	500-1000 Spores /M³	1000-5000 Spores /M³	5000-10,000 Spores /M³	Greater Than 20,000 Spores /M³

The results should be correlated with any available medical evidence of infections, allergies or symptoms of individuals occupying the space.

Analytical Lab: *Northeast Laboratory Services*

MOLD INTERPRETATION

Molds can be detected both indoors and outdoors year round. Ideal conditions for the proliferation of molds are humid environments, typically in basement/crawl spaces, bathrooms, and water compromised building materials.

Mold spores are considered a normal and essential component of all environments. Typically three key conditions are necessary for the proliferation of mold spores: a favorable physical environment (light & temperature), a source of food, and moisture.

Mold spores are almost always found in outdoor air, although their type and population will vary depending on environmental and climatic conditions. Doors and windows, mechanical ventilation equipment, and everyday foot traffic provide easy access to the interior of buildings.

It is normal to find some quantity of mold spores in indoor air, although their numbers should be significantly less than outdoor levels.

Currently, there are no regulatory standards for acceptable levels of mold spores in bio-aerosols, wipes or bulk samples derived from the indoor environment for interpreting health risks associated with molds.

The sampling analysis data provides a medical professional the information necessary to determine the appropriate treatment for individuals with chronic lung disease, persons who are immune compromised, or for individuals with allergies or exhibiting other symptoms relating to upper respiratory complaints.

Current recommended guidelines in the ***US EPA's*** publication, *Indoor Air Quality in Schools*, suggests that fungal spore species identified in samples collected from the indoor environment should not be different than those species found in the outdoor air at the same time of sampling. Also, fungal spore activity present in the indoor environment should be at levels of one-third to one-half of those found outdoors. Indoor levels of similar genera higher than one-third to one-half of outdoors may indicate inadequate fresh air exchange or poor air filtration. Fungi identified indoors that are of different genera than found outdoors may indicate contamination of interior building materials and substrates.

Chaetomium, Fusarium, Memnoniella, Stachybotrys and ***Trichoderma*** are **zero tolerance organisms** for the indoor environment as they have the capability to produce mycotoxins and microbial volatile organic compounds (mvoc's) and can seriously compromise a building and/or the health of occupants. These effects for human health can be worse for immuno compromised persons (such as those with HIV, the elderly, terminally or seriously ill patients (cancer patients)), persons with pre-existing breathing conditions or asthma, and the very young.

The ***National Allergy Bureau*** has established **relative** exposure guidelines with respect to the raw count of mold spores per cubic meter of air. These values are not related to any specific medical condition but rather alert sensitive or allergy stricken individuals when to avoid prolonged exposures. Those guidelines are as follows:

Allergen	Very Low	Low	Medium	High	Very High
Mold	Less Than 500 Spores /M^3	500-1000 Spores /M^3	1000-5000 Spores /M^3	5000-10,000 Spores /M^3	Greater Than 20,000 Spores /M^3

EXPLANATION OF ISOLATES**

Ascospores

Ascospores are a general category of spores that have been produced by means of sexual reproduction (in a sack-like structure called an ascus). These are ubiquitous saprobes and plant pathogens, many of which are easily identifiable (i.e. *Chaetomium*).

This group contains potential opportunistic pathogens, toxin producers, and allergens depending on the genus and species. A rupture in the top portion of the ascus disperses the spores during rain or in times of high humidity. Some asexual fungi, such as *Aspergillus* and *Penicillium* can become sexual under specific conditions, these are then considered ascomycetes and are given distinct names.

Aspergillus/Penicillium-like

Aspergillus and *Penicillium* spores are indistinguishable via direct microscopic examination. *Aspergillus* tends to colonize continuously damp materials such as damp wallboard and fabrics. *Penicillium* is commonly found in house dust, on water-damaged wallpaper, behind paint, and in decaying fabrics.

Aspergillus is a common Type I & III allergen. There are more than 160 different species of Aspergillus, sixteen of which have been documented as etiological agents of human disease but rarely occur in individuals with normally functioning immune systems.

Penicillium species are common contaminants on various substances. This organism causes food spoilage, colonizes leather objects and is typically an indicator organism for damp indoor conditions. Some species are known to produce mycotoxins.

The health of occupants may be adversely affected in an environment that has an amplification of Penicillium.

This fungal species is usually identified in source reservoirs such as chronically wet building components. Penicillium is typically one of the first fungal species to grow on moisture-compromised materials. Penicillium is characterized by rapidly growing colonies having conidial structures resembling brushes. It commonly produces a strong musty odor.

Basidiospores

Basidiospores are a general category of sexual spores that have been released from the basidium of a fungus. A ubiquitous type I & III allergen, saprobe and plant pathogen, mainly found in gardens, forests, and woodlands. Spores disseminate during rain or in times of high humidity. Rarely opportunistic pathogens, Basidiospores may produce toxins, including amanitins, monomethyl-hydrazine, muscarine, ibotenic acid, and psilocybin. Basidiospores are an agent of dry wood rot, which may destroy the structure wood of buildings.

Cladosporium

Cladosporium, with the ability to sporulate heavily, ease of dispersal, and buoyant spores makes this fungus the most important fungal airway allergen; and together with Alternaria, it commonly causes asthma and hay fever in the Western hemisphere. A few species of this genus cause disease, which range from phaeohyphomycosis, a group of mycotic infections characterized by the presence of dematiaceous septate hyphae.

Mycelial/Hyphal Fragments

Fragments of mycelium that have the potential to reproduce are counted.

Mycelium can be a form of reproduction of certain fungi. However, due to indistinct properties, these fragments cannot be classified as to what particular species they may grow into.

Smuts/Myxomycetes/Periconia

Smuts are ubiquitous, type I allergens that are parasitic plant pathogens, which require a living host to complete their life cycle, and are not usually found growing indoors. Smuts are most often found on corn, grass, weeds, flowering plants and other fungi; they are usually disseminated by wind. They are called smuts because they form black powdery spore masses that resemble soot or smut. Smuts are indistinguishable from Myxomycetes and *Periconia* under 600x microscopy.

Unknown Dematiaceous spores

All other non-distinctive unidentifiable dark colored spores seen on a sample are placed into this category. The common factor among the dematiaceous fungi is the presence of melanin pigments in the cell walls and spores.

The dematiaceous fungi are found throughout the world in soil and decaying vegetation but appear to be especially common in tropical and subtropical regions.

Dematiaceous fungi have melanin-like pigments in the cell walls and can cause a variety of infections in humans known as phaeohyphomycosis (phaeo is Greek for "dark") or chromomycosis. The most severe of the phaeohyphomycoses are infections of the central nervous system (CNS).

****References:**

Bioaerosols: Assessment and Control; ACGIH, 1999, Chapter 17.
Bioaerosols: Assessment and Control; ACGIH, 1999, Chapter 19.
Burge, 1986, Butcher *et al.*, 1987, Davis *et al.*, 1988, Hasnain *et al.*, 1985, Lehrer *et al.*, 1986, Santilli *et al.*, 1985
Environmental Microbiology; Academic Press, 2000, Chapter 2.2.
Environmental Microbiology; Academic Press, 2000, Chapter 2.3.
The Fungi, 2nd Edition; Academic Press, 2001.
Atlas of Moulds in Europe causing respiratory Allergy; Foundation for Allergy Research in Europe; Edited by KnudWilken-Jensen and Suzanne Gravesen; ASK Publishing, Denmark, 1984.
Manual of Medical Mycology; John Thorne Crissy, Heidi Lang, Lawrence Charles Parish; Blackwell Sciences, Cambridge, Massachusetts, 1995

ALLERGENS

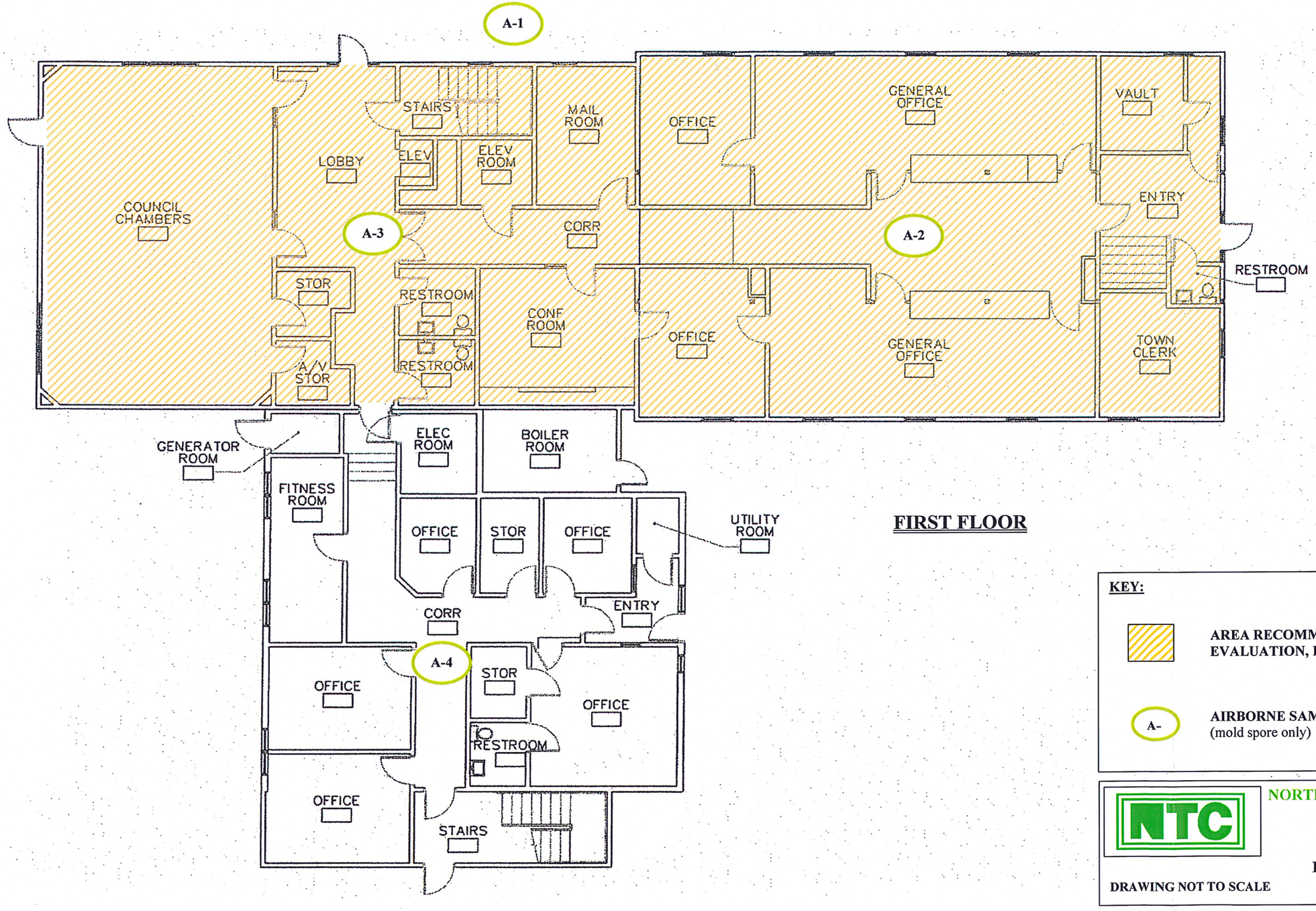
Allergens are any substance that can trigger an inappropriate immune response or can cause an allergic reaction in susceptible people.

There are four (4) types of hypersensitivity responses:

Type I: Anaphylactic, allergic
Type II: Cytotoxic
Type III: Immune Complex Induced
Type IV: Cell Mediated

LIMITED INDOOR AIR QUALITY ASSESSMENT

FALMOUTH TOWN HALL; 271 FALMOUTH ROAD; FALMOUTH, MAINE



FIRST FLOOR

KEY:

AREA RECOMMENDED FOR FURTHER EVALUATION, INCLUDING CRAWL SPACE

A- **AIRBORNE SAMPLE LOCATIONS** (mold spore only)

NORTHEAST TEST CONSULTANTS

NTC JOB #13458-2013

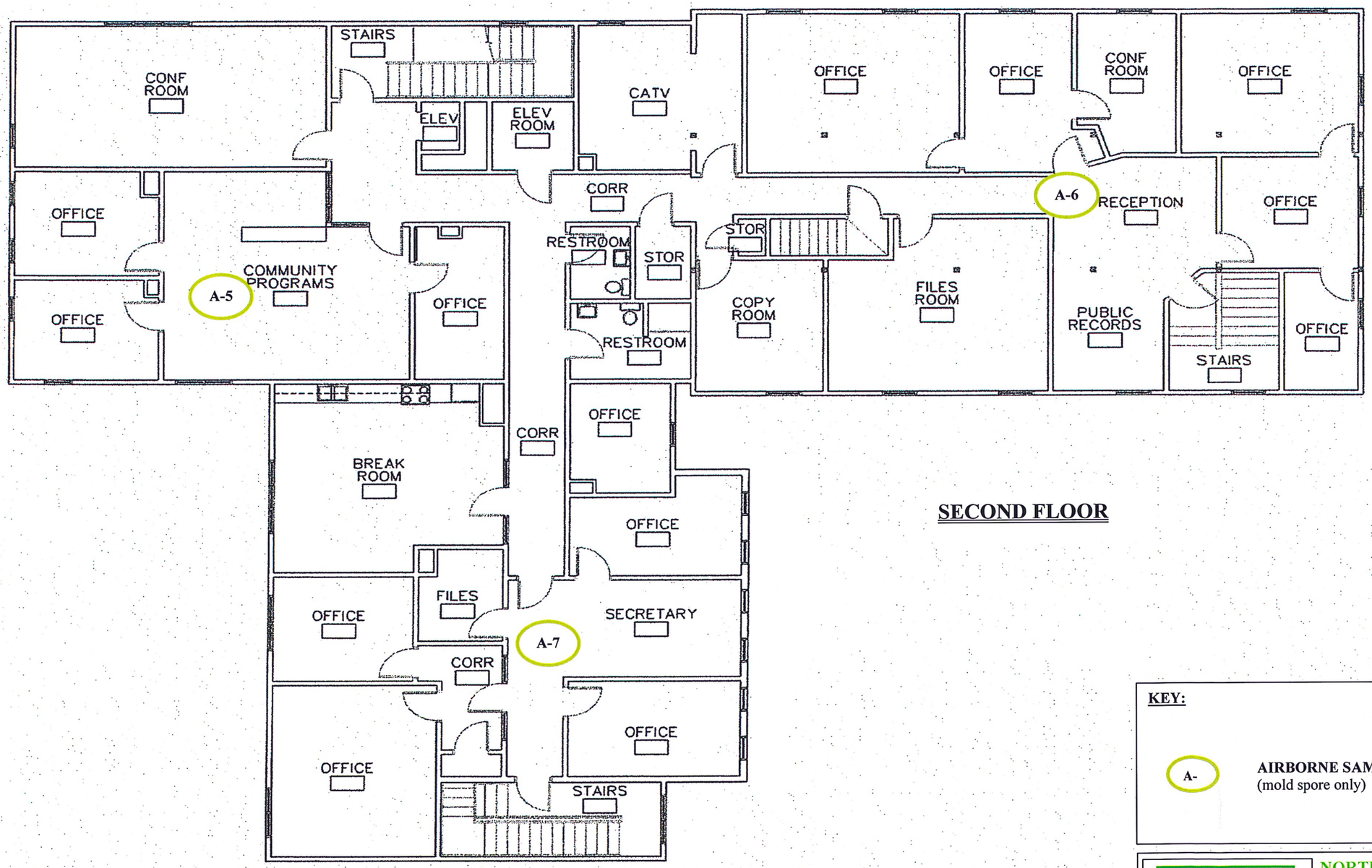
DRAWING DATE: 2-12-2013

JMB

DRAWING NOT TO SCALE

INDOOR AIR QUALITY ASSESSMENT

175 FORE RIVER PARKWAY; PORTLAND, MAINE



SECOND FLOOR

KEY:

A- **AIRBORNE SAMPLE LOCATIONS**
(mold spore only)

NORTHEAST TEST CONSULTANTS

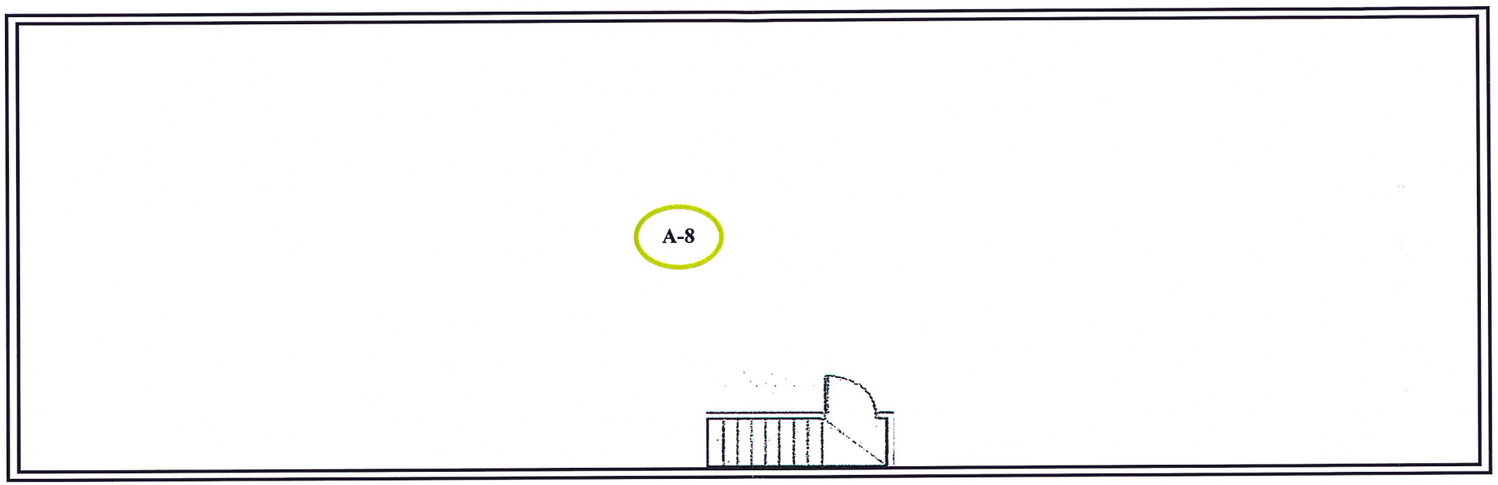
NTC JOB #13458-2013

DRAWING DATE: 2-12-2013
JMB

DRAWING NOT TO SCALE

INDOOR AIR QUALITY ASSESSMENT

175 FORE RIVER PARKWAY; PORTLAND, MAINE



ATTIC SPACE

KEY:

A- **AIRBORNE SAMPLE LOCATIONS**
(mold spore only)

NORTHEAST TEST CONSULTANTS

NTC JOB #13458-2013

DRAWING DATE: 2-12-2013
JMB

DRAWING NOT TO SCALE

NORTHEAST TEST CONSULTANTS

INDOOR AIR QUALITY ASSESSMENT

at

1st FLOOR & CRAWL SPACE
FALMOUTH TOWN HALL
271 FALMOUTH ROAD
FALMOUTH, MAINE

NTC JOB #13473-2013

Prepared by:

NORTHEAST TEST CONSULTANTS
587 SPRING STREET
WESTBROOK, ME 04092

Prepared for:

Glenn Harmon
Oak Point Associates
P.O. Box 1259
231 Main Street
Biddeford, ME 04005

February 21, 2013

NORTHEAST TEST CONSULTANTS

February 21, 2013

Glenn Harmon
Oak Point Associates
P.O. Box 1259
231 Main Street
Biddeford, ME 04005

RE: Indoor Air Quality Assessment
Falmouth Town Hall
271 Falmouth Road; Falmouth, ME
NTC Job #13473-2013

Mr. Harmon:

Please find enclosed the documentation for the Indoor Air Quality Assessment conducted by ***Northeast Test Consultants*** on February 15, 2013 at the Town of Falmouth Town Hall situated at 271 Falmouth Road, Falmouth, Maine.

PURPOSE

This assessment was performed as a follow-up to a Limited Indoor Air Quality Assessment conducted on February 7, 2013 as NTC Job #13458-2013 to determine the site conditions causing the elevated mold spore activity detected.

PROCEDURES

Testing was performed to determine airborne mold activity in the Crawl Space. A sample was collected from the passive air exchange detected from the floor vents, and from the outdoors as a control sample.

A wipe sample and bulk sample were collected from compromised materials in the Crawl Space to determine mold growth type and frequency.

In addition to the above sample collection, this activity was also comprised of a thorough evaluation of building conditions to determine the locations of mold growth reservoirs and potential moisture sources that could be the cause of the previously identified elevated airborne mold spore activity. The 1st Floor areas of the Original structure and the West Add-On as well as the crawl space under these building areas were evaluated.

The sampling conducted was performed in accordance with the *Environmental Criteria and Assessment Guidelines*, recommended by the U.S. EPA Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, US EPA 600/8-91/202 (ECAO-R-0315); American Conference of Governmental Industrial Hygienists (ACGIH); and the National Institute of Occupational Safety and Health (NIOSH).

Analysis & Testing Equipment

Direct-Read Instrumentation:

Moisture Content %: GE Protimeter SurveymasterR and/or TramexR Direct Read Moisture Meter, Model #M253, and a DriezR Hydro-Sensor Probe II and/or a Dryair Technology Hydro-Sensor Pro I.

Confined Space Testing: Multi RAE Plus, O2, CO, LEL, H2S, and VOC's, Ser#095-526237.

Biological Airborne Activity:
Air samples were collected to determine indoor air quality relating to mold spores utilizing an Allergenco-D™ air sampling cassette collected for a ten-minute period at a flow rate of 15 liters per minute for a total sample volume of 150 Liters.

The Allergenco-D™ Air Sampling style cassette is a sampling device designed for the rapid collection and analysis of a wide range of airborne aerosols. These include fungal spores, pollen, insect parts, skin cell fragments, fibers, and inorganic particulates.

Biological Surface Sampling:

Bulk and Wipe samples were collected to determine the potential frequency and type of mold species that may be present and/or to verify visual observations.

Tape lift, bulk, wipe, and swab sampling are techniques used for direct microscopic examination. A direct exam allows for the immediate determination of the presence of fungal spores as well as what types of fungi are present. This test should only be performed if visible growth is present.

OBSERVATIONS

1st Floor: Original Building Section

Overall the 1st Floor area of the Original Building Section was found to be free of any source reservoirs for mold.

Two areas along the north wall (east and west ends) where found to have stained suspended ceiling tiles.

The western ceiling area was found to have accumulations of cellulose insulation dislodged by rodent activity. The source of the cellulose debris is from above the original splined ceiling system. The cellulose insulation debris is being impacted by condensation from a pipe and rodent urine which is the cause of the staining to the ceiling tiles.

The eastern ceiling area was found to have stained ceiling tiles due to condensation from a pipe located above the suspended ceiling system.

Passive air movement from the crawl space into the occupied space via the floor ventilation return and supply grates was detected by use of smoke generation.

No other significant issue relating to conditions that could contribute to poor IAQ problems were observed at this time.

1st Floor: East Add-On Building Section

Overall the 1st Floor area of the East Add-On Building Section was found to be free of any source reservoirs for mold.

Some damaged wall areas were observed under windows, however materials were dry and no visible mold source reservoirs were present.

A perimeter door in the Lobby has a significant gap at the bottom edge that is a potential water intrusion, rodent and insect point, as well as potential point for ingress of vehicle exhaust.

The perimeter door in the Council Chambers has a gap at the lower side of the door where moisture/air infiltration is occurring and visible mold growth is present.

No other significant issue relating to conditions that could contribute to IAQ problems were observed at this time.

Crawl Space: Original Building Section

The crawl space under the Original Building Section was found to have moisture issues for soils and insulation materials and evidence of rodent activity.

Two non-operational AHU units are present in the space. These units have visual indications of being subjected to seasonal water intrusion/flooding as evidenced by the high

watermarks observed and the rusting lower metal components, particularly for the condensate pans and lower coil areas.

This area of the crawl space has had a thin layer of cement applied over poly sheeting on an earthen floor. In several areas the cement is broken revealing deteriorated poly sheeting conditions. Additionally, heavy silt/sand deposits which are water saturated are present on top of the cement layer indicating historical flooding conditions.

The insulations for the floor decking areas are deteriorating and falling out of place.

Overall the wood floor joists and floor decking are not currently a major source of fungal growth and only light sporadic growth is present.

A heavy musty odor is present due to mold growth occurrence for soils and insulations.

Of note is that an exterior access through the foundation wall was not accessible due to high snow accumulation.

Crawl Space: East Add-On Building Section

The crawl space under the East Add-On Building Section was found to have moisture issues for soils and insulation materials and evidence of rodent activity.

Poly sheeting placed sporadically on the earthen floor is deteriorating and not providing any barrier to moisture.

A significant source of standing water accumulation was present around the concrete base of the elevator shaft.

The insulations for the floor decking are deteriorating and falling out of place.

Overall the wood floor joists and floor decking are not currently a major source of the fungal growth and only light sporadic growth is present.

A heavy musty odor is present due to mold growth occurrence for soils, insulations, cardboard sonotubes, and plywood forms for concrete supports.

OVERVIEW of SAMPLING DATA

Biological Airborne Activity

Airborne biological sampling indicated total mold spore levels of 1,312,730 ct/m^3 in the Crawl Space and 14,000 ct/m^3 from the passive air flow out of one of the non-operable floor supply diffusers in the Original Building Section.

The outdoor mold spore level was 110 ct/m^3 at the same time of sampling indicating that spore activity detected indoors other than the common outdoor isolates typically present outdoors (*Basidiospores,* and *Unknown Dematiaceous spores*) is due to indoor sources.

The species detected indoors that are attributed to indoor source growth were comprised of the following:

Floor Supply Diffuser (Sample A-2)	
Aspergillus/Penicillium-like	11,000 ct/m^3
Mycelial Fragments	2,100 ct/m^3
Crawl Space (Sample A-3)	
Aspergillus/Penicillium-like	1,300,000 ct/m^3
Mycelial Fragments	11,000 ct/m^3

Currently there are no regulatory levels for mold spore activity, but most persons typically do not have any adverse reactions to general environmental mold spore levels <5,000 ct/m^3.

The most recent research by the various organizations indicate that *Aspergillus /Penicillium sp.* spore activity for indoor environments can be expressed as follows:

"Clean" residential buildings	Typical levels: 230 ct/m^3 +/- 630
Buildings with flooding/water damage	Typical levels: > 2,200 ct/m^3
Mold-damaged buildings	Typical levels: > 36,000 ct/m^3

Typical indoor levels of *Mycelial Fragments* spores are < 150 ct/m^3.

Of note is that no ***Chaetomium, Fusarium, Memnoniella, Stachybotrys***, or ***Trichoderma*** mold species were identified in the indoor air environment at the time of this testing. These species are indicators of long-term and ongoing moisture issues and/or water intrusion problems. ***Chaetomium, Fusarium, Memnoniella, Stachybotrys***, or ***Trichoderma*** mold species are organisms that are **zero tolerance organisms** for the indoor environment as they have the capability to produce mycotoxins and microbial

volatile organic compounds (mvoc's) and can seriously compromise a building and/or the health of occupants. These effects for human health can be worse for immuno compromised persons (such as those with HIV, the elderly, terminally or seriously ill patients (cancer patients)), persons with pre-existing breathing conditions or asthma, and the very young.

Refer to attached analytical data sheets for reference as the type and frequency of mold species detected during this sampling event.

Surface Sampling

Bulk sampling indicated the following:

B-1	Kraft paper for Insulation	***Aspergillus/Penicillium-like***	**Level 1***
	In Crawl Space	***Cladosporium sp.***	**Level 1***

Wipe sampling indicated the following:

W-1	Plywood form for concrete supports	***Aspergillus/Penicillium-like***	**Level 5***

* *The qualitative scale ranges from*: 0=none observed, 1=lowest (trace) to 5=highest (heavy or highly abundant)

Refer to attached analytical data sheet for reference as the type and frequency of mold spore species detected during this sampling event.

SUMMARY of FINDINGS

No issues were detected prior to entry into the Crawl Space for measured values of O_2, CO, LEL, and VOC's.

The detection of elevated levels of ***Aspergillus/Penicillium-like*** and **Mycelial Fragments** in samples A-2 and A-3 indicate that sources of moisture in the presence of suitable nutrient sources is causing mold growth occurrence in the Crawl Space that is impacting the 1st Floor, particularly in the Original Building Section due to air flow from the Crawl Space via the floor supply and return vents associated with the non-operational AHU's. This condition is also the cause of musty odors that are experienced at the site.

Based on visible conditions observed, it appears that the Crawl Space is prone to significant water intrusion during springtime snow melt and possibly during times of heavy rain.

In addition to the observed water/moisture issues in the Crawl Space, there is also evidence of rodent activity with feces and urine impacting ceiling insulations.

No moisture or water intrusion issues are present that would cause mold growth of significance for the 1st Floor areas comprised of the Original and East Add-On Building Sections.

One ceiling area for the north wall, east end, of the Original Building Section was found to have cellulose ceiling insulations dislodged and piled on top of the suspended ceiling tiles. This insulation debris is impacted with rodent feces and urine, as well as some moisture due to condensation from a pipe in the same area above the ceiling.

Several stained ceiling tiles were observed for the 1st Floor area; however they were dry and did not exhibit any visible signs of fungal growth activity.

The mold species isolated indoors during this investigation may be causative agents for such symptoms as headaches, dizziness, sleepiness, general lethargy, coughing and watery eyes. Similar symptoms may also occur because of other indoor air pollutants or other common medical problems.

A medical professional should be consulted for a proper medical diagnosis for any persons experiencing such symptoms.

RECOMMENDATIONS

1. All floor ventilation return and supply diffusers in the floor of the Original Building Section need to be sealed. The best short-term solution is to install 6-mil poly sheeting sealed with duct tape.

   For the long-term, these vent/openings should be removed and in-filled with floor decking.

2. No ventilation system should be placed in this Crawl Space area.

3. Mold remediation actions should be implemented to remove all Crawl Space insulation, floor debris, and clean/sanitize sonotube and plywood form materials. Additionally, any floor framing and decking surfaces exhibiting surface mold growth need to be cleaned/sanitized.

   Operations should only be performed by personnel that have the experience and training in the implementation of engineering controls and work practices and subsequent decontamination of surfaces to reduce airborne emission generation of hazardous air pollutants.

Personnel performing direct removal, clean up, and any packaging of contaminated materials should be required to utilize full-body disposable clothing and respiratory protection.

Northeast Test Consultants strongly recommends that all biological remediation be conducted following guidelines established by the New York City Department of Health. The document produced by the New York City Department of Health Bureau of Environmental and Occupational Disease Epidemiology entitled *Guidelines on Assessment and Remediation of Fungi in Indoor Environments* outlines work practices and equipment to be utilized during the remediation procedure and recommendations outlined in US EPA: *Mold Remediation in Schools and Commercial Buildings*, Publication EPA 402-K-01-001.

The cleaning/sanitizing of materials in which biocides or sanitizing agents are utilized to kill, clean, or otherwise control mold growth **must be performed** properly by a licensed **Master Applicator** certified by the *Maine Pesticide Bureau*.

4. The suspended ceiling tiles along the north wall of the Original Building Section need to have the accumulations of cellulose insulations infused with rodent feces and urine cleaned/removed.

   Operations should only be performed by personnel that have the experience and training in the implementation of engineering controls and work practices and subsequent decontamination of surfaces to reduce airborne emission generation of hazardous air pollutants.

   Personnel performing direct removal, clean up, and any packaging of contaminated materials should be required to utilize full-body disposable clothing and respiratory protection.

   Isolation of the area, use of drop cloths, and HEPA vacuum techniques are the preferred work practice.

5. Following mold remediation actions in the Crawl Space, insulation should be re-installed in the ceiling with the application of a sealed vapor barrier system and then overlaid with a metal mesh (< ¼ " grid opening) to prevent rodents from nesting in the insulation materials.

6. Consideration should be given to the installation of a crawl space drainage and lining system to control moisture conditions for soils.

7. A pest control specialist should be retained to perform a thorough perimeter inspection and properly seal all rodent access points.

In addition to the inspection and sealing of access point, an Integrated Pest Management (IPM) program needs to be implemented at the site that focuses on control and prevention methods.

8. The conditions for the poorly sealed doors identified should be corrected to prevent potential intrusion points for water, rodents, and insects.

   The minimal surface mold growth for the lower area of the perimeter door in the Council chambers can be cleaned with a simple soap solution. No harsh chemical usage is recommended.

The findings relating to physical conditions observed during this investigation were not intended, nor do they attempt to identify every possible source of contaminants, such as chemical or mold, throughout the entire structure.

Any measured results, analysis data, and physical conditions observed are valid only for the period in which this inspection was conducted. Any additional degradation of building materials or contamination from new or reactivated sources, or areas inaccessible at the time of the inspection are not documented in this report.

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

Please review the enclosed analytical sampling data, interpretation of mold activity, explanation of isolates identified, photograph log, and marked drawing.

Should you have any questions regarding this report, please feel free to give me a call.

Sincerely,

John M. Boilard, RIHT
Operations Manager

Attachments

cc: Allison Towne Dimatteo
Oak Point Associates
P.O. Box 1259
231 Main Street
Biddeford, ME 04005

MICROBIOLOGICAL SAMPLING DATA

Oak Point Associates
271 Falmouth Road
Falmouth, Maine

Sample Date: February 15, 2013

Sample Type: Wipe Sample – Microscopic Examination

ID #	Sample #	Location	Background Particles (1)	Mold Growth (2)
W-1	IHW3028021	**Plywood Support Cover; Crawl Space, Centered**	2	**5 – Aspergillus / Penicillium-like**

KEY: QUALITATIVE SCALE: 0=Not Observed, 1=Lowest (Trace), 5=(Heavy Or Highly Abundant Presence)

(1) Background particles include organic and inorganic debris from a variety of sources, and generally occur as a result of settling from an airborne state.

(2) Mold observed with associated vegetative structures indicating that growth has occurred or is occurring at the site sampled. In addition to a relative numerical abundance rating, molds present are identified to the highest level possible. Mold growing at level 4 or above could obscure the visibility of other, smaller mold growing under and/or within the heavily growing mold.

The results should be correlated with any available medical evidence of infections, allergies or symptoms of individuals occupying the space.

Analytical Lab: *Northeast Laboratory Services*

MICROBIOLOGICAL SAMPLING DATA

Oak Point Associates
271 Falmouth Road
Falmouth, Maine

Sample Date: February 15, 2013

Sample Type: Bulk Sample – Microscopic Examination

ID #	Sample #	Location	Background Particles (1)	Mold Growth (2)
B-1	IHB3046001	**Paper from Fiber Glass Insulation; Crawl Space, North End**	3	**1 – Aspergillus / Penicillium-like** **1 – Cladosporium sp.**

KEY: Qualitative Scale: 0=Not Observed, 1=Lowest (Trace), 5=(Heavy Or Highly Abundant Presence)

(1) Background particles include organic and inorganic debris from a variety of sources, and generally occur as a result of settling from an airborne state.

(2) Mold observed with associated vegetative structures indicating that growth has occurred or is occurring at the site sampled. In addition to a relative numerical abundance rating, molds present are identified to the highest level possible. Mold growing at level 4 or above could obscure the visibility of other, smaller mold growing under and/or within the heavily growing mold.

The results should be correlated with any available medical evidence of infections, allergies or symptoms of individuals occupying the space.

Analytical Lab: *Northeast Laboratory Services*

MICROBIOLOGICAL SAMPLING DATA

Oak Point Associates
271 Falmouth Road
Falmouth, Maine

Sample Date: February 15, 2013
Sample Type: Air Sample
Volume: 150 Liters
Device: Allergenco-D Cassette™

ID #	Sample #	Location	Raw Count	Count/m^3	IDENTIFIED ISOLATE
A-1	IHA3046001	**Outside Control**	4	110	**Total Mold Spore & Fragments**
			2	53	Basidiospores
		Ambient Air	2	53	Unknown Dematiaceous Spores
A-2	IHA3046002	**Original Structure, 1st Floor; General Office, Supply Vent**	531	14,000	**Total Mold Spore & Fragments**
			425	11,000	Aspergillus/Penicillium-like
			8	210	Basidiospores
			3	80	Smuts/Myxomycetes/Periconia
		Ambient Air	80	2,100	Mycelial Fragments
			15	400	Unknown Dematiaceous Spores
A-3	IHA3046003	**Original Structure; Crawl Space Basement, Centered**	50,465	1,312,730	**Total Mold Spore & Fragments**
			50,000	1,300,000	Aspergillus/Penicillium-like
			20	530	Smuts/Myxomycetes/Periconia
			400	11,000	Mycelial Fragments
		Ambient Air	45	1,200	Unknown Dematiaceous Spores

KEY: **Count/m^3** = Total Count per cubic meter of air

The ***National Allergy Bureau*** has established relative exposure guidelines with respect to the raw count of mold spores per cubic meter of air. These values are not related to any specific medical condition but rather alert sensitive or allergy stricken individuals when to avoid prolonged exposures.

Those guidelines are as follows:

Allergen	Very Low	Low	Medium	High	Very High
Mold	Less Than 500 Spores /M^3	500-1000 Spores /M^3	1000-5000 Spores /M^3	5000-10,000 Spores /M^3	Greater Than 20,000 Spores /M^3

The results should be correlated with any available medical evidence of infections, allergies or symptoms of individuals occupying the space.

Analytical Lab: *Northeast Laboratory Services*

MOLD INTERPRETATION

Air samples are collected to determine indoor air quality relating to mold spores utilizing Allergenco-D™ air-sampling cassettes collected for a ten-minute period at a flow rate of 15 liters per minute for a total volume of 150 Liters per sample. The Allergenco-D™ air sampling style cassette is a sampling device designed for the rapid collection and analysis of a wide range of airborne aerosols. These include fungal spores, pollen, insect parts, skin cell fragments, fibers, and inorganic particulates. All air sampling is performed by collection of an outside control before entering the building and subsequent inside samples from areas of lesser potential activity to greatest area of activity to eliminate/ reduce the possibility for cross contamination of collection media by handling. Also, no physical investigations or disturbance of materials are performed until air sample collection is completed for the same considerations.

Bulk, vacuum/dust and wipe samples are collected to determine indoor air quality relating to mold spores. Bulk, tape lift, bulk, swab, wipe and vacuum/dust sampling are techniques used for direct microscopic examination. A direct exam allows for the immediate determination of the presence of fungal spores as well as what types of fungi are present. This test should only be performed if visible mold growth is present.

Molds can be detected both indoors and outdoors year round. Ideal conditions for the proliferation of molds are humid environments, typically in basement/crawl spaces, bathrooms, and water compromised building materials. Mold spores are considered a normal and essential component of all environments. Typically three key conditions are necessary for the proliferation of mold spores: a favorable physical environment (light & temperature), a source of food, and moisture.

Mold spores are almost always found in outdoor air, although their type and population will vary depending on environmental and climatic conditions. Doors and windows, mechanical ventilation equipment, and everyday foot traffic provide easy access to the interior of buildings. It is normal to find some quantity of mold spores in indoor air, although their numbers should be significantly less than outdoor levels.

Currently, there are no regulatory standards for acceptable levels of mold spores in bio-aerosols, wipes or bulk samples derived from the indoor environment for interpreting health risks associated with molds.

The sampling analysis data provides a medical professional the information necessary to determine the appropriate treatment for individuals with chronic lung disease, persons who are immune compromised, or for individuals with allergies or exhibiting other symptoms relating to upper respiratory complaints.

Current recommended guidelines in the ***US EPA's*** publication, *Indoor Air Quality in Schools*, suggests that fungal spore species identified in samples collected from the indoor environment should not be different than those species found in the outdoor air at the same time of sampling. Also, fungal spore activity present in the indoor environment should be at levels of one-third to one-half of those found outdoors. Indoor levels of similar genera higher than one-third to one-half of outdoors may indicate inadequate fresh air exchange or poor air filtration. Fungi identified indoors that are of different genera than found outdoors may indicate contamination of interior building materials and substrates.

The ***World Health Organization*** publication, Indoor Air Quality: *Biological Contaminants* does not set numeric standards for airborne fungi in indoor environments; however, this organization recommends that ***any indoor airborne presence of Aspergillus fumigatus and Stachybotrys chartum should be considered unacceptable.***

The ***National Allergy Bureau*** has established relative exposure guidelines with respect to the raw count of mold spores per cubic meter of air. These values are not related to any specific medical condition but rather alert sensitive or allergy stricken individuals when to avoid prolonged exposures. Those guidelines are as follows:

Allergen	Very Low	Low	Medium	High	Very High
Mold	Less Than 500 Spores /M^3	500-1000 Spores /M^3	1000-5000 Spores /M^3	5000-10,000 Spores /M^3	Greater Than 20,000 Spores /M^3

EXPLANATION OF ISOLATES**

Aspergillus/Penicillium-like

Aspergillus and *Penicillium* spores are indistinguishable via direct microscopic examination. *Aspergillus* tends to colonize continuously damp materials such as damp wallboard and fabrics. *Penicillium* is commonly found in house dust, on water-damaged wallpaper, behind paint, and in decaying fabrics.

Aspergillus is a common Type I & III allergen. There are more than 160 different species of Aspergillus, sixteen of which have been documented as etiological agents of human disease but rarely occur in individuals with normally functioning immune systems.

Penicillium species are common contaminants on various substances. This organism causes food spoilage, colonizes leather objects and is typically an indicator organism for damp indoor conditions. Some species are known to produce mycotoxins.

The health of occupants may be adversely affected in an environment that has an amplification of Penicillium.

This fungal species is usually identified in source reservoirs such as chronically wet building components. Penicillium is typically one of the first fungal species to grow on moisture-compromised materials. Penicillium is characterized by rapidly growing colonies having conidial structures resembling brushes. It commonly produces a strong musty odor.

Basidiospores

Basidiospores are a general category of sexual spores that have been released from the basidium of a fungus. A ubiquitous type I & III allergen, saprobe and plant pathogen, mainly found in gardens, forests, and woodlands. Spores disseminate during rain or in times of high humidity. Rarely opportunistic pathogens, Basidiospores may produce toxins, including amanitins, monomethyl-hydrazine, muscarine, ibotenic acid, and psilocybin. Basidiospores are an agent of dry wood rot, which may destroy the structure wood of buildings.

Cladosporium

Cladosporium, with the ability to sporulate heavily, ease of dispersal, and buoyant spores makes this fungus the most important fungal airway allergen; and together with Alternaria, it commonly causes asthma and hay fever in the Western hemisphere. A few species of this genus cause disease, which range from phaeohyphomycosis, a group of mycotic infections characterized by the presence of dematacceous septate hyphae.

Mycelial/Hyphal Fragments

Fragments of mycelium that have the potential to reproduce are counted.

Mycelium can be a form of reproduction of certain fungi. However, due to indistinct properties, these fragments cannot be classified as to what particular species they may grow into.

Smuts/Myxomycetes/Periconia

Smuts are ubiquitous, type I allergens that are parasitic plant pathogens, which require a living host to complete their life cycle, and are not usually found growing indoors. Smuts are most often found on corn, grass, weeds, flowering plants and other fungi; they are usually disseminated by wind. They are called smuts because they form black powdery spore masses that resemble soot or smut. Smuts are indistinguishable from Myxomycetes and *Periconia* under 600x microscopy.

Unknown Dematiaceous spores

All other non-distinctive unidentifiable dark colored spores seen on a sample are placed into this category. The common factor among the dematiaceous fungi is the presence of melanin pigments in the cell walls and spores.

The dematiaceous fungi are found throughout the world in soil and decaying vegetation but appear to be especially common in tropical and subtropical regions.

Dematiaceous fungi have melanin-like pigments in the cell walls and can cause a variety of infections in humans known as phaeohyphomycosis (phaeo is Greek for "dark") or chromomycosis. The most severe of the phaeohyphomycoses are infections of the central nervous system (CNS).

****References:**

Bioaerosols: Assessment and Control; ACGIH, 1999, Chapter 17.
Bioaerosols: Assessment and Control; ACGIH, 1999, Chapter 19.
Burge, 1986, Butcher *et al.*, 1987, Davis *et al.*, 1988, Hasnain *et al.*, 1985, Lehrer *et al.*, 1986, Santilli *et al.*, 1985
Environmental Microbiology; Academic Press, 2000, Chapter 2.2.
Environmental Microbiology; Academic Press, 2000, Chapter 2.3.
The Fungi, 2nd Edition; Academic Press, 2001.
Atlas of Moulds in Europe causing respiratory Allergy; Foundation for Allergy Research in Europe; Edited by KnudWilken-Jensen and Suzanne Gravesen; ASK Publishing, Denmark, 1984.
Manual of Medical Mycology; John Thorne Crissy, Heidi Lang, Lawrence Charles Parish; Blackwell Sciences, Cambridge, Massachusetts, 1995

ALLERGENS

Allergens are any substance that can trigger an inappropriate immune response or can cause an allergic reaction in susceptible people.

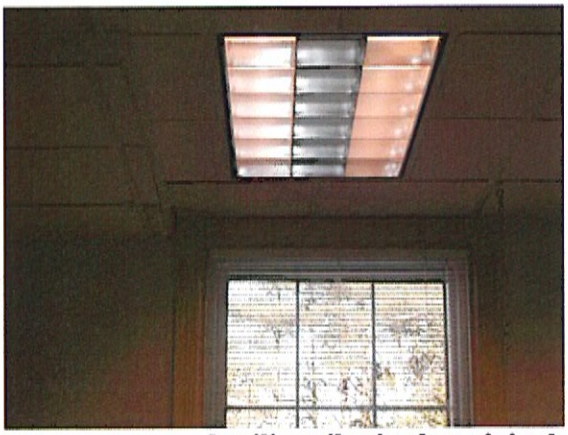
There are four (4) types of hypersensitivity responses:

Type I: Anaphylactic, allergic
Type II: Cytotoxic
Type III: Immune Complex Induced
Type IV: Cell Mediated

PHOTOGRAPH LOG

Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

Original Structure



Water damaged ceiling tiles in the original structure level one - northwest wall area

Original Structure, general office area, level one

Above damaged ceiling tiles, disturbed cellulose insulations by rodent activity

Water damaged ceiling tiles seen in the original structure level one – northeast wall area

Rodent disturbed insulations on top ceiling of tile, visible signs of rodent urine and pipe condensation

PHOTOGRAPH LOG

Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

Ventilation return in floor for original structure level one – north side

Passive air movement out of non-operating ventilation supply floor vent

Ventilation return in floor for original structure level one – south side

Poor housekeeping behind cubical sections up against the exterior wall areas

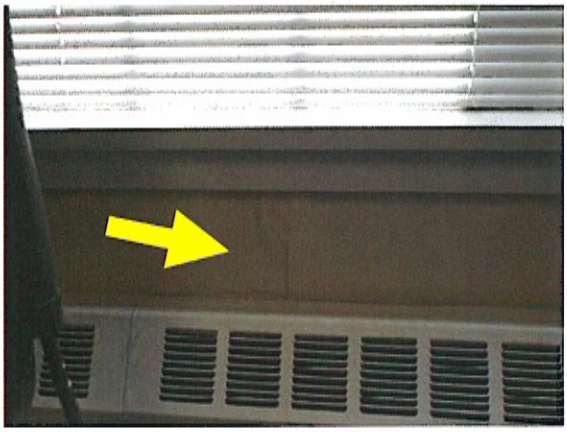
Passive air movement out of non-operating ventilation supply floor vent

Heavy wear for carpets in walkways, may contribute to elevated particle activity

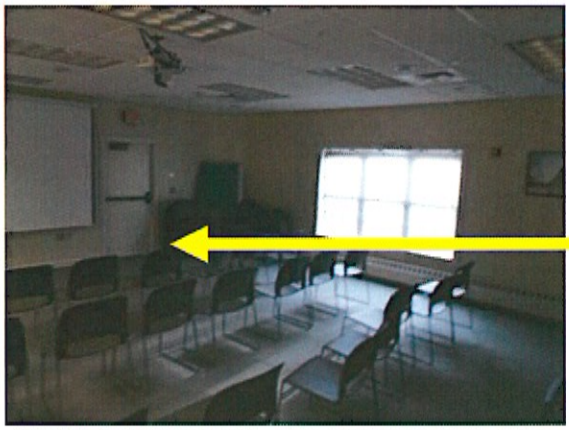
PHOTOGRAPH LOG

Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

Door sweep gap allows for rodent/insect access and exhaust fume infiltration



Council Chambers with water damage to paint on the south side of the exterior wall below the window



Council Chambers, add-on structure area level one

A large gap in the Chambers Room door with visible mold growth for door surface

Council Chambers with a crack in south side exterior wall below the window

Access to the crawlspace in Council Chambers closet

PHOTOGRAPH LOG

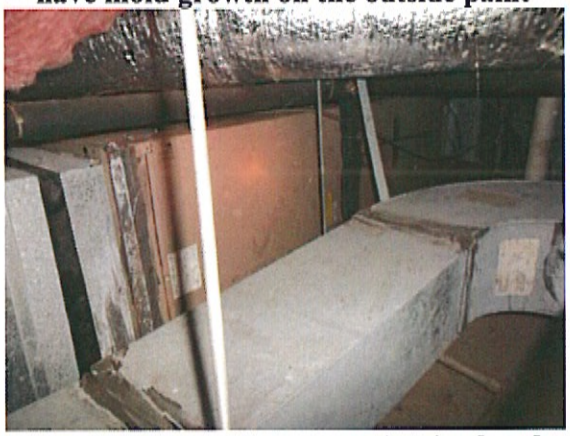
Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

The areas around each AHU have loose fiberglass insulation and damp soils

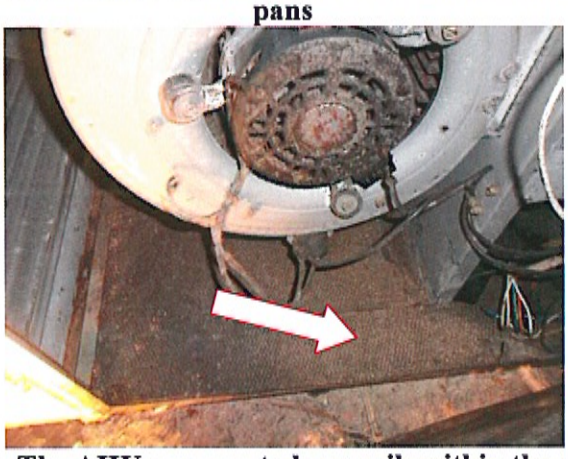
AHU's are in close proximity to damp crawl space soils

The AHU's are dirty, unmaintained and have mold growth on the outside paint

AHU's have significant rust for condensate pans



The AHU's are dirty, unmaintained and have mold growth on the outside paint



The AHU appears to have soils within the unit, likely from high water levels

PHOTOGRAPH LOG

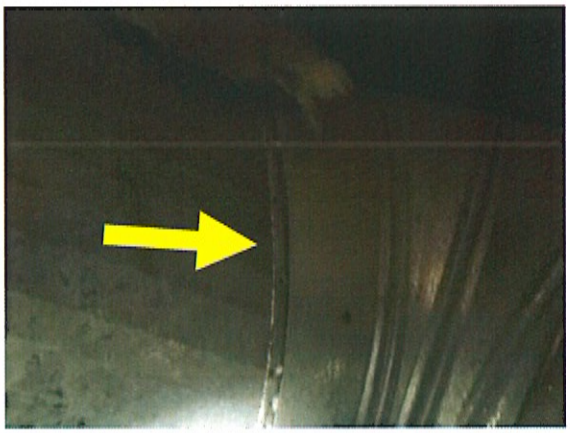
Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

Visible indication of high water mark on ductwork, level is higher than AHU units

The east end of the crawlspace (add-on structure), has damp/wet sand floor with a tattered poly vapor barrier

One of several locations with unsealed holes in ventilation ductwork

Sonotubes within the crawlspace have visible mold growth



One of several locations where crawlspace air infiltrates the AHU ductwork

Plywood forms around steel posts have visible heavy mold growth

PHOTOGRAPH LOG

Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

Wipe Sample W-1 from a plywood form in the west end of the crawlspace

Standing water around base of elevator shaft in crawl space

This window appears to allow water and rodents access into the crawlspace

The paper faced insulations are moldy, moisture damaged, and have rodent urine

Soils below window above show signs of routine water intrusion

Insulation damage due to crawlspace humidity, mold growth and rodent urine

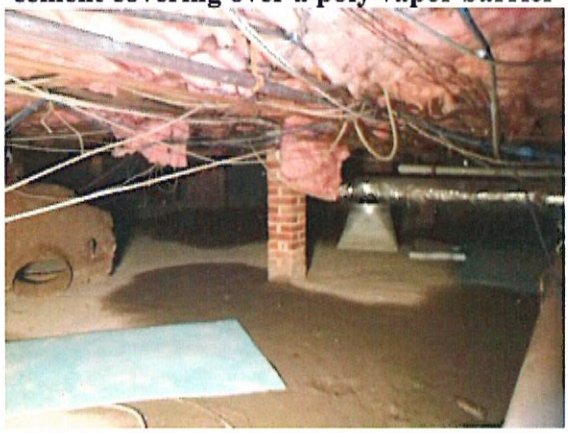
PHOTOGRAPH LOG

Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

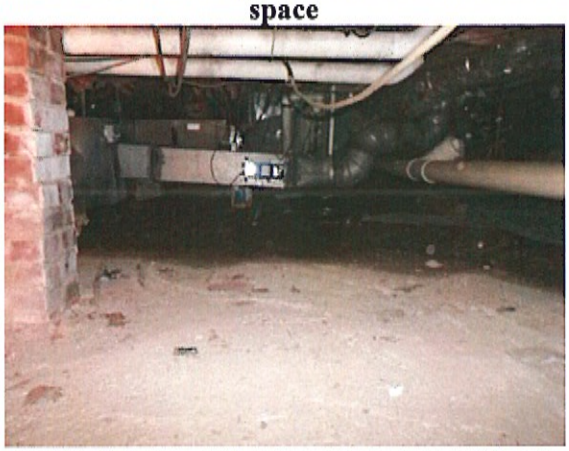
Floor joists appear to be in good shape, with many joists just starting to grow fungi

The west end of the crawlspace has a thin cement covering over a poly vapor barrier

Mold growth covers much of the paper covering for fiberglass insulations in crawl space



Settled damp soil covers the cement floor area at west end of crawlspace



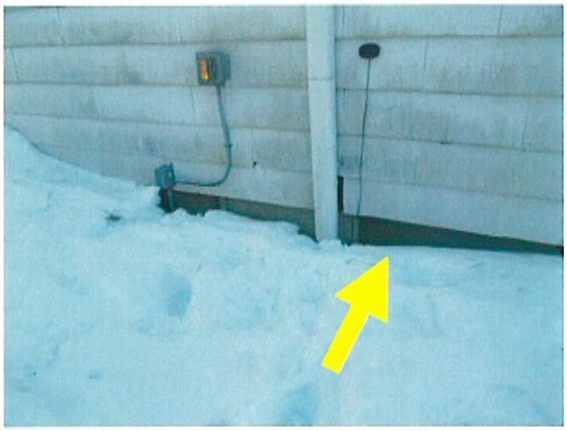
Settled damp soil covers the cement floor area at west end of crawlspace

Wet/damp soils cover much of the crawl space floor around both AHU's

PHOTOGRAPH LOG

Falmouth Town Hall
271 Falmouth Road; Falmouth, Maine

Exterior access point into the east end crawlspace area (access blocked with snow)



Snow melt is contributor to crawlspace water intrusion via window units

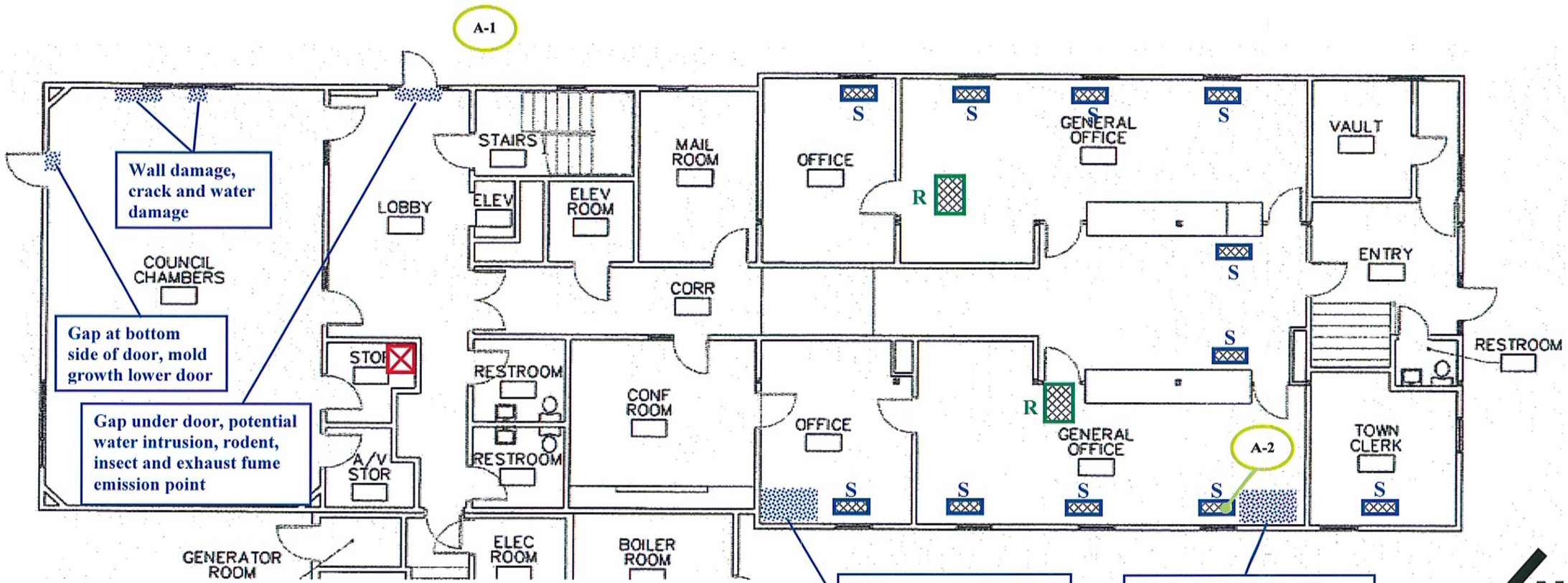
Conditions behind ridged foam board for crawl space foundation walls

Window appears to be an access point for water and rodent intrusion

Snow accumulations covering crawlspace windows

INDOOR AIR QUALITY ASSESSMENT

FALMOUTH TOWN HALL; 271 FALMOUTH ROAD; FALMOUTH, MAINE



KEY:

S	VENTILATION SUPPLY FLOOR VENT
R	VENTILATION RETURN FLOOR VENT
☒	CRAWL SPACE ACCESS HATCH
A-	AIRBORNE SAMPLE LOCATIONS (mold spore only)

FIRST FLOOR

NORTHEAST TEST CONSULTANTS

NTC JOB #13473-2013

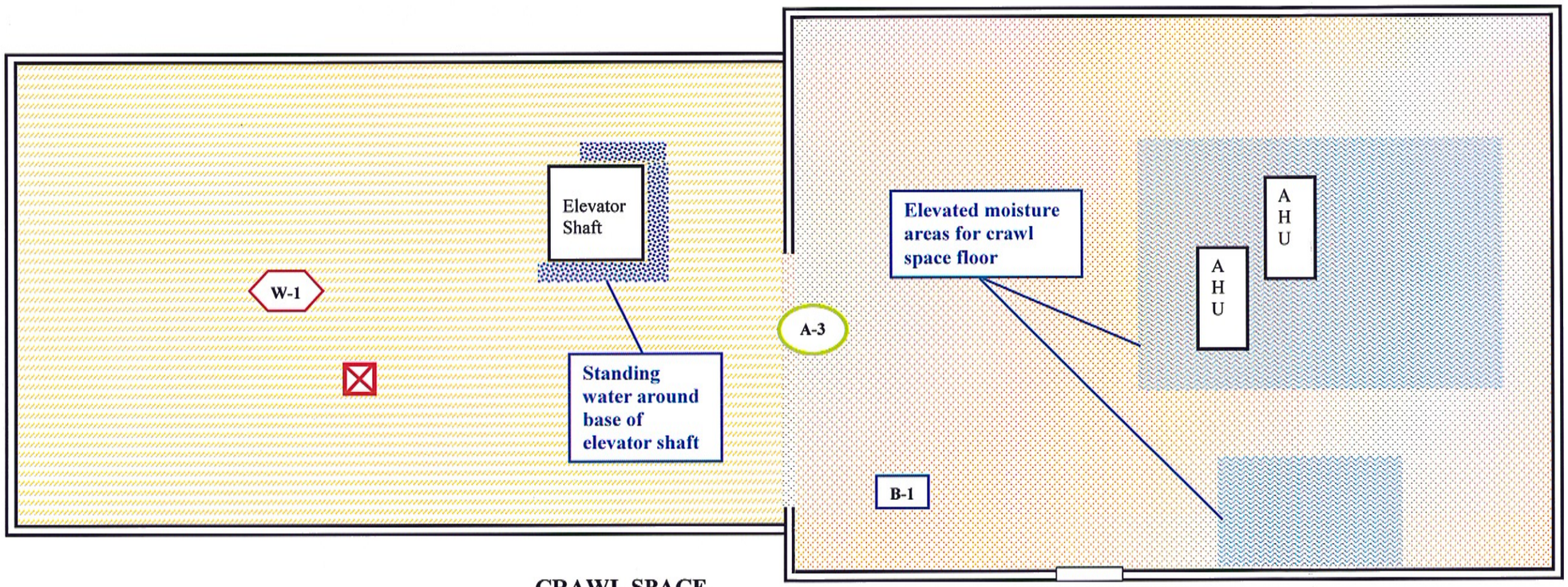
DRAWING DATE: 2-21-2013

JMB

DRAWING NOT TO SCALE

INDOOR AIR QUALITY ASSESSMENT

FALMOUTH TOWN HALL; 271 FALMOUTH ROAD; FALMOUTH, MAINE



CRAWL SPACE

KEY:

- W- : WIPE SAMPLE for MOLD EVALUATION
- B- : BULK SAMPLE for MOLD EVALUATION
- A- : AIRBORNE SAMPLE LOCATIONS (mold spore only)
- CRAWL SPACE ACCESS HATCH
- FLOOR INSULATIONS IN POOR CONDITION FROM MOISTURE AND RODENT URINE. PARTIALLY POLY COVERED FLOOR AREA WITH DAMP SOILS
- THIN LAYER OF CEMENT OVER POLY SHEETING WITH DAMP SOILS. FLOOR INSULATIONS IN POOR CONDITION.

N

NORTHEAST TEST CONSULTANTS

NTC JOB #13473-2013

DRAWING DATE: 2-21-2013

JMB

DRAWING NOT TO SCALE

Appendix E – Cost Estimates

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME	CONSTRUCTION CONTRACT NUMBER:	IDENTIFICATION NUMBER:
	ESTIMATED BY: Oak Point Associates	CATEGORY CODE NUMBER:
PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation	STATUS OF DESIGN: Concept	JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
SUMMARY SHEET	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
TITLE SHEET								
CRAWL SPACE TOTAL:								**$141,877**
EXTERIOR ENVELOPE REPAIRS TOTAL:								**$350,243**
MECHANICAL/ELECTRICAL UPGRADES TOTAL:								**$262,221**
SPACE PLANNING TOTAL:								**$119,971**
SITE-RELATED ITEMS TOTAL:								**$55,122**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
SUMMARY SHEET	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUMMARY - CRAWL SPACE								
Civil								$29,886
Architectural								$53,850
Mechanical								$16,500
Electrical								$3,000
Subtotal								$103,236
Location Factor (published) (-8%)	-8.0%							-$8,259
Subtotal								$94,977
Construction Contingency (10%)	10.0%							$9,498
Construction Subtotal								$104,475
Design Fee	8.0%							$8,358
General Conditions	10.0%							$10,447
General Contractor Overhead and Profit	10.0%							$10,447
Escalation (4.5% per year through 2014)	7.8%							$8,149
CRAWL SPACE TOTAL:								**$141,877**
Rounded to								$141,900

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME	CONSTRUCTION CONTRACT NUMBER:	IDENTIFICATION NUMBER:
	ESTIMATED BY: Oak Point Associates	CATEGORY CODE NUMBER:
PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation	STATUS OF DESIGN: Concept	JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
SUMMARY SHEET	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUMMARY - EXTERIOR ENVELOPE REPAIRS								
Architectural								$254,853
Subtotal								$254,853
Location Factor (published) (-8%)	-8.0%							-$20,388
Subtotal								$234,465
Construction Contingency (10%)	10.0%							$23,446
Construction Subtotal								$257,911
Design Fee	8.0%							$20,633
General Conditions	10.0%							$25,791
General Contractor Overhead and Profit	10.0%							$25,791
Escalation (4.5% per year through 2014)	7.8%							$20,117
EXTERIOR ENVELOPE REPAIRS TOTAL:								**$350,243**
Rounded to								$350,200

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
SUMMARY SHEET	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUMMARY - MECHANICAL/ELECTRICAL UPGRADES								
Architectural								$23,430
Mechanical								$142,682
Plumbing								$2,175
Electrical								$22,517
Subtotal								$190,804
Location Factor (published) (-8%)	-8.0%							-$15,264
Subtotal								$175,540
Construction Contingency (10%)	10.0%							$17,554
Construction Subtotal								$193,093
Design Fee	8.0%							$15,447
General Conditions	10.0%							$19,309
General Contractor Overhead and Profit	10.0%							$19,309
Escalation (4.5% per year through 2014)	7.8%							$15,061
MECHANICAL/ELECTRICAL UPGRADES TOTAL:								**$262,221**
Rounded to								$262,200

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION	CONSTRUCTION CONTRACT NUMBER	IDENTIFICATION NUMBER
Town Hall and Food Pantry Renovations; Falmouth, ME		
	ESTIMATED BY: Oak Point Associates	CATEGORY CODE NUMBER
PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation	STATUS OF DESIGN: Concept	JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
SUMMARY SHEET	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUMMARY - SPACE PLANNING								
Space Planning								$87,297
Subtotal								$87,297
Location Factor (published) (-8%)	-8.0%							-$6,984
Subtotal								$80,313
Construction Contingency (10%)	10.0%							$8,031
Construction Subtotal								$88,344
Design Fee	8.0%							$7,068
General Conditions	10.0%							$8,834
General Contractor Overhead and Profit	10.0%							$8,834
Escalation (4.5% per year through 2014)	7.8%							$6,891
SPACE PLANNING TOTAL:								**$119,971**
Rounded to								$120,000

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
SUMMARY SHEET	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUMMARY - SITE-RELATED ITEMS								
Civil								$17,900
Electrical								$22,210
Subtotal								$40,110
Location Factor (published) (-8%)	-8.0%							-$3,209
Subtotal								$36,901
Construction Contingency (10%)	10.0%							$3,690
Construction Subtotal								$40,591
Design Fee	8.0%							$3,247
General Conditions	10.0%							$4,059
General Contractor Overhead and Profit	10.0%							$4,059
Escalation (4.5% per year through 2014)	7.8%							$3,166
SITE-RELATED ITEMS TOTAL:								**$55,122**
Rounded to								$55,100

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
CIVIL								
CRAWL SPACE								
Removals								
Mobilization/Access	1	LS			$1,000.00	$1,000.00	$1,000.00	$1,000.00
Erosion control	1	LS			$200.00	$200.00	$200.00	$200.00
Dust control	1	LS			$200.00	$200.00	$200.00	$200.00
Maintenance	1	LS			$200.00	$200.00	$200.00	$200.00
Sawcut ACP	160	LF			$3.00	$480.00	$3.00	$480.00
Remove ACP	90	SY			$5.00	$450.00	$5.00	$450.00
Clean debris on crawl space floor	1	LS			$600.00	$600.00	$600.00	$600.00
Clear and grub	1	LS			$400.00	$400.00	$400.00	$400.00
Excavation (by hand in crawl space)	30	CY			$75.00	$2,250.00	$75.00	$2,250.00
Excavation (trench)	52	CY			$10.00	$520.00	$10.00	$520.00
Excavation (rock)	26	CY			$120.00	$3,120.00	$120.00	$3,120.00
Disposal (soil and acp)	71	CY			$6.00	$426.00	$6.00	$426.00
Misc removals	1	LS			$500.00	$500.00	$500.00	$500.00
New Work								
Vapor barrier	4000	SF	$0.09	$360.00	$0.25	$1,000.00	$0.34	$1,360.00
Filter fabric	200	SY	$2.15	$430.00	$5.00	$1,000.00	$7.15	$1,430.00
4" perforated pipe	420	LF	$0.59	$247.80	$1.25	$525.00	$1.84	$772.80
6" drain line	140	LF	$1.60	$224.00	$10.10	$1,414.00	$11.70	$1,638.00
Crawl space pipe clean out	3	EA	$60.00	$180.00	$80.00	$240.00	$140.00	$420.00
Clean out (exterior)	1	EA	$150.00	$150.00	$150.00	$150.00	$300.00	$300.00

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Crushed stone	60	CY	$25.00	$1,500.00	$35.00	$2,100.00	$60.00	$3,600.00
Protection board (over vapor barrier)	4000	SF	$0.32	$1,280.00	$0.36	$1,440.00	$0.68	$2,720.00
Pipe bedding	28	CY	$16.00	$448.00	$12.00	$336.00	$28.00	$784.00
Backfill (reuse)	41	CY			$10.00	$410.00	$10.00	$410.00
Aggregate subbase	19	CY	$8.00	$152.00	$12.00	$228.00	$20.00	$380.00
Aggregate base	6	CY	$12.00	$72.00	$12.00	$72.00	$24.00	$144.00
Compaction	94	CY			$2.00	$188.00	$2.00	$188.00
ACP wearing course	90	SY	$6.33	$569.70	$7.00	$630.00	$13.33	$1,199.70
ACP binder course	90	SY	$10.55	$949.50	$9.00	$810.00	$19.55	$1,759.50
FDN wall penetration	1	EA	$150.00	$150.00	$300.00	$300.00	$450.00	$450.00
Topsoil	9	CY	$35.00	$315.00	$10.00	$90.00	$45.00	$405.00
Fine Grade	157	SY			$2.00	$314.00	$2.00	$314.00
Seed & mulch	1	LS	$40.00	$40.00	$75.00	$75.00	$115.00	$115.00
Rip rap	1	LS	$50.00	$50.00	$100.00	$100.00	$150.00	$150.00
Misc site work	1	LS	$500.00	$500.00	$500.00	$500.00	$1,000.00	$1,000.00
CRAWL SPACE SUBTOTAL:								**$29,886.00**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SITE-RELATED ITEMS								
Site Lighting								
Removals								
Mobilization	1	LS			$750.00	$750.00	$750.00	$750.00
Erosion control	1	LS			$300.00	$300.00	$300.00	$300.00
Sawcut ACP	90	LF			$3.00	$270.00	$3.00	$270.00
Remove ACP	20	SY			$9.00	$180.00	$9.00	$180.00
Strip topsoil	7	CY			$20.00	$140.00	$20.00	$140.00
Remove shrubs/mulch bed	1	LS			$175.00	$175.00	$175.00	$175.00
Excavation	48	CY			$10.00	$480.00	$10.00	$480.00
Misc site removals	1	LS			$500.00	$500.00	$500.00	$500.00
Disposal (soil and acp)	27	CY			$6.00	$162.00	$6.00	$162.00
New Work								
Conduit bedding	14	CY	$16.00	$224.00	$12.00	$168.00	$28.00	$392.00
Aggregate subbase	4	CY	$8.00	$32.00	$12.00	$48.00	$20.00	$80.00
Aggregate base	2	CY	$12.00	$24.00	$12.00	$24.00	$24.00	$48.00
Light pole base	4	EA	$500.00	$2,000.00	$200.00	$800.00	$700.00	$2,800.00
Backfill (reuse)	34	CY			$10.00	$340.00	$10.00	$340.00
Compaction	54	CY			$2.00	$108.00	$2.00	$108.00
ACP wearing course	20	SY	$6.33	$126.60	$7.00	$140.00	$13.33	$266.60
ACP binder course	20	SY	$10.55	$211.00	$9.00	$180.00	$19.55	$391.00
Topsoil	9	CY	$35.00	$315.00	$15.00	$135.00	$50.00	$450.00
Fine grade	78	SY			$1.50	$117.00	$1.50	$117.00
Seed and mulch	1	LS	$50.00	$50.00	$100.00	$100.00	$150.00	$150.00
Misc site work	1	LS	$250.00	$250.00	$250.00	$250.00	$500.00	$500.00

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Site Improvements								
Remove existing foundation plantings	1	LS			$3,000.00	$3,000.00	$3,000.00	$3,000.00
New foundation plantings / landscaping	1	LS	$1,500.00	$1,500.00	$1,000.00	$1,000.00	$2,500.00	$2,500.00
Flagpole and Base	1	LS	$2,800.00	$2,800.00	$1,000.00	$1,000.00	$3,800.00	$3,800.00
SITE-RELATED ITEMS SUBTOTAL:								**$17,899.60**
CIVIL TOTAL:								**$47,785.60**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE	DATE PREPARED	sheet 11 of 23
	12 July 2013	

ACTIVITY AND LOCATION	CONSTRUCTION CONTRACT NUMBER	IDENTIFICATION NUMBER
Town Hall and Food Pantry Renovations; Falmouth, ME		
	ESTIMATED BY	CATEGORY CODE NUMBER
PROJECT TITLE	Oak Point Associates	
Falmouth Town Hall and Food Pantry Renovation	STATUS OF DESIGN	JOB ORDER NUMBER
	Concept	21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
ARCHITECTURAL								
CRAWL SPACE								
General Conditions								
Mobilization	1	job			$1,280.00	$1,280.00	$1,280.00	$1,280.00
Dumpster Rental	1	job			$750.00	$750.00	$750.00	$750.00
Disposal	1	job			$750.00	$750.00	$750.00	$750.00
Final Cleaning	1	job			$630.00	$630.00	$630.00	$630.00
General Conditions Subtotal:								**$3,410.00**
Haz Mat Abatement								
Removal and disposal allowance	1	job			$20,000.00	$20,000.00	$20,000.00	$20,000.00
Abatement Subtotal:								**$20,000.00**
Removals								
BATT insulation (crawl space)	4800	sf			$0.25	$1,200.00	$0.25	$1,200.00
Misc. Removals	1	job			$500.00	$500.00	$500.00	$500.00
Removals Subtotal:								**$1,700.00**
Construction								
Basement window	4	ea	$350.00	$1,400.00	$75.00	$300.00	$425.00	$1,700.00
Crawl space insul (spray foam)	4800	sf	$3.50	$16,800.00	$2.00	$9,600.00	$5.50	$26,400.00
Floor register infill	32	sf	$8.00	$256.00	$12.00	$384.00	$20.00	$640.00
Construction Subtotal:								**$28,740.00**
CRAWL SPACE SUBTOTAL:								**$53,850**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
EXTERIOR ENVELOPE REPAIRS								
General Conditions								
Mobilization	1	job			$1,280.00	$1,280.00	$1,280.00	$1,280.00
Dumpster Rental	1	job			$750.00	$750.00	$750.00	$750.00
Disposal	1	job			$750.00	$750.00	$750.00	$750.00
Final Cleaning	1	job			$630.00	$630.00	$630.00	$630.00
General Conditions Subtotal:								**$3,410.00**
Removals								
Haz Mat Abatement	1	job			$7,500.00	$7,500.00	$7,500.00	$7,500.00
Asbestos Siding, trim	4200	sf			$3.60	$15,120.00	$3.60	$15,120.00
Wood clapboard siding behind asbestos siding	4200	sf			$1.20	$5,040.00	$1.20	$5,040.00
Vinyl Siding, trim	5700	sf			$1.00	$5,700.00	$1.00	$5,700.00
Fascia & soffit	600	lf			$1.50	$900.00	$1.50	$900.00
Salvage roof gutter	190	lf			$3.00	$570.00	$3.00	$570.00
Salvage downspout	185	lf			$2.00	$370.00	$2.00	$370.00
Vinyl windows	66	ea			$40.00	$2,640.00	$40.00	$2,640.00
Wood basement window	4	ea			$25.00	$100.00	$25.00	$100.00
Fixed aluminum window	4	ea			$30.00	$120.00	$30.00	$120.00
Wood shutters	53	ea			$10.00	$530.00	$10.00	$530.00
Salvage existing shutter dogs	54	ea			$5.00	$270.00	$5.00	$270.00
Aluminum storefront	1	ea			$100.00	$100.00	$100.00	$100.00
HM door, frame & hardware	6	ea			$100.00	$600.00	$100.00	$600.00
Salvage existing signage	1	ea			$50.00	$50.00	$50.00	$50.00
Salvage existing window planter	2	ea			$25.00	$50.00	$25.00	$50.00
Misc. Removals	1	job			$1,000.00	$1,000.00	$1,000.00	$1,000.00

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE	DATE PREPARED	sheet 13 of 23
	12 July 2013	

ACTIVITY AND LOCATION	CONSTRUCTION CONTRACT NUMBER	IDENTIFICATION NUMBER
Town Hall and Food Pantry Renovations; Falmouth, ME		
	ESTIMATED BY	CATEGORY CODE NUMBER
PROJECT TITLE	Oak Point Associates	
Falmouth Town Hall and Food Pantry Renovation	STATUS OF DESIGN	JOB ORDER NUMBER
	Concept	21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Removals Subtotal:								**$40,660.00**
Construction								
Fiber cement siding and trim	10500	sf	$2.75	$28,875.00	$2.00	$21,000.00	$4.75	$49,875.00
1" Rigid wall insulation	3100	sf	$1.25	$3,875.00	$0.75	$2,325.00	$2.00	$6,200.00
Mtl "Z" channel furring	3100	sf	$0.75	$2,325.00	$2.00	$6,200.00	$2.75	$8,525.00
Fiber cement fascia board	600	lf	$2.50	$1,500.00	$1.75	$1,050.00	$4.25	$2,550.00
Fiber cement soffit board	600	lf	$4.00	$2,400.00	$6.00	$3,600.00	$10.00	$6,000.00
Fiber cement frieze board	600	lf	$2.50	$1,500.00	$2.00	$1,200.00	$4.50	$2,700.00
Paint fiber cement siding	11300	sf	$1.25	$14,125.00	$1.00	$11,300.00	$2.25	$25,425.00
Reinstall existing roof gutter	190	lf			$6.00	$1,140.00	$6.00	$1,140.00
Reinstall existing downspout	185	lf			$4.00	$740.00	$4.00	$740.00
Alum clad wood window	70	ea	$750.00	$52,500.00	$150.00	$10,500.00	$900.00	$63,000.00
Wood shutters	27	pr	$250.00	$6,750.00	$50.00	$1,350.00	$300.00	$8,100.00
Reinstall/paint existing shutter dogs	54	ea	$2.00	$108.00	$5.00	$270.00	$7.00	$378.00
HM door, frame and hardware	7	ea	$1,500.00	$10,500.00	$300.00	$2,100.00	$1,800.00	$12,600.00
Reinstall existing signage	1	ea			$50.00	$50.00	$50.00	$50.00
Reinstall existing window planter	2	ea			$25.00	$50.00	$25.00	$50.00
Wash existing masonry surface	800	sf	$0.50	$400.00	$1.00	$800.00	$1.50	$1,200.00
Pourable expanding foam insul (orig bldg walls)	4100	sf	$2.50	$10,250.00	$1.25	$5,125.00	$3.75	$15,375.00
Attic BATT insulation (original bldg)	2500	sf	$0.50	$1,250.00	$0.25	$625.00	$0.75	$1,875.00
Roof Hold Down Anchors	1	job	$1,500.00	$1,500.00	$2,500.00	$2,500.00	$4,000.00	$4,000.00
Misc. Repairs	1	job	$750.00	$750.00	$250.00	$250.00	$1,000.00	$1,000.00
Construction Subtotal:								**$210,783.00**
EXTERIOR ENVELOPE REPAIRS SUBTOTAL:								**$254,853**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
MECHANICAL/ELECTRICAL UPGRADES								
General Conditions								
Mobilization	1	job			$625.00	$625.00	$625.00	$625.00
Dumpster Rental	1	job			$375.00	$375.00	$375.00	$375.00
Disposal	1	job			$375.00	$375.00	$375.00	$375.00
Final Cleaning	1	job			$315.00	$315.00	$315.00	$315.00
General Conditions Subtotal:								**$1,690.00**
Removals								
Remove Ceiling at clerk's office area	2400	sf			$0.60	$1,440.00	$0.60	$1,440.00
Floor Removal at 2nd floor	100	sf			$10.00	$1,000.00	$10.00	$1,000.00
Misc. Removals	1	job			$1,500.00	$1,500.00	$1,500.00	$1,500.00
Removals Subtotal:								**$3,940.00**
Construction								
Provide Ceiling at clerk's office area	2400	sf	$2.50	$6,000.00	$1.50	$3,600.00	$4.00	$9,600.00
Floor Patch at 2nd floor	100	sf	$5.00	$500.00	$15.00	$1,500.00	$20.00	$2,000.00
Duct Chase	100	sf	$7.00	$700.00	$5.00	$500.00	$12.00	$1,200.00
Misc. Framing	1	job	$1,500.00	$1,500.00	$2,500.00	$2,500.00	$4,000.00	$4,000.00
Misc. Repairs	1	job	$750.00	$750.00	$250.00	$250.00	$1,000.00	$1,000.00
Construction Subtotal:								**$17,800.00**
MECHANICAL/ELECTRICAL UPGRADES SUBTOTAL:								**$23,430**
ARCHITECTURAL TOTAL:								**$332,133**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
MECHANICAL								
CRAWL SPACE								
Crawl space dehumidification								
Removals								
Remove air handler units	2	ea		$0.00	$2,500.00	$5,000.00	$2,500.00	$5,000.00
Mechanical								
Dehumidifiers	2	ea	$2,000.00	$4,000.00	$3,000.00	$6,000.00	$5,000.00	$10,000.00
Controls	1	ls	$1,000.00	$1,000.00	$500.00	$500.00	$1,500.00	$1,500.00
CRAWL SPACE SUBTOTAL:								**$16,500.00**
MECHANICAL/ELECTRICAL UPGRADES								
Town Office Air Conditioning								
Air handling unit	1	ea	$4,375.00	$4,375.00	$1,550.00	$1,550.00	$5,925.00	$5,925.00
Return fan	1	ea	$1,400.00	$1,400.00	$900.00	$900.00	$2,300.00	$2,300.00
Condensing unit	1	ea	$3,850.00	$3,850.00	$2,600.00	$2,600.00	$6,450.00	$6,450.00
Hot Water Pipe and Fittings	1	ls	$1,890.00	$1,890.00	$4,260.00	$4,260.00	$6,150.00	$6,150.00
Hot water Pipe Insulation	1	ls	$339.00	$339.00	$1,626.00	$1,626.00	$1,965.00	$1,965.00
Refrigerant Tubing and Fittings	1	ls	$875.00	$875.00	$85.00	$85.00	$960.00	$960.00
Refrigerant Pipe Insulation	1	ls	$475.00	$475.00	$2,310.00	$2,310.00	$2,785.00	$2,785.00

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Ductwork	900	lbs	$0.68	$612.00	$7.22	$6,498.00	$7.90	$7,110.00
Insulation	390	sf	$0.37	$144.30	$3.75	$1,462.50	$4.12	$1,606.80
Diffusers	15	ea	$81.00	$1,215.00	$67.00	$1,005.00	$148.00	$2,220.00
Intake and relief vents	2	ea	$1,500.00	$3,000.00	$500.00	$1,000.00	$2,000.00	$4,000.00
Controls	1	ls	$2,500.00	$2,500.00	$2,500.00	$2,500.00	$5,000.00	$5,000.00
Testing and Balancing: Air								
Air handling unit	1	ea			$780.00		$780.00	$780.00
Diffusers	15	ea			$78.00		$78.00	$1,170.00
Testing and Balancing: Water								
Coils	1	ea			$126.00		$126.00	$126.00
Air cooled condensing unit	1	ea			$239.00		$239.00	$239.00
Town Office Air Conditioning Subtotal:								**$48,786.80**
Replace Air Conditioning Units in Attic								
Removals								
Air handling unit	5	ea		$0.00	$455.00	$2,275.00	$455.00	$2,275.00
Condensing unit	5	ea		$0.00	$400.00	$2,000.00	$400.00	$2,000.00
Mechanical								
Air handling unit - 3.5 tons	2	ea	$3,500.00	$7,000.00	$1,375.00	$2,750.00	$4,875.00	$9,750.00
Air handling unit - 5 tons	2	ea	$3,500.00	$7,000.00	$1,375.00	$2,750.00	$4,875.00	$9,750.00
Air handling unit - 7.5 tons	1	ea	$4,375.00	$4,375.00	$1,550.00	$1,550.00	$5,925.00	$5,925.00
Return fan	2	ea	$1,275.00	$2,550.00	$900.00	$1,800.00	$2,175.00	$4,350.00
Return fan	3	ea	$1,400.00	$4,200.00	$900.00	$2,700.00	$2,300.00	$6,900.00
Condensing unit - 3.5 tons	2	ea	$1,700.00	$3,400.00	$1,300.00	$2,600.00	$3,000.00	$6,000.00
Condensing unit - 5 tons	2	ea	$2,375.00	$4,750.00	$2,300.00	$4,600.00	$4,675.00	$9,350.00
Condensing unit - 7.5 tons	1	ea	$3,850.00	$3,850.00	$2,600.00	$2,600.00	$6,450.00	$6,450.00

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Misc piping	1	ls	$2,500.00	$2,500.00	$2,000.00	$2,000.00	$4,500.00	$4,500.00
Controls	5	ea	$2,000.00	$10,000.00	$1,500.00	$7,500.00	$3,500.00	$17,500.00
Testing and Balancing: Air								
Air handling unit	5	ea			$780.00		$780.00	$3,900.00
Testing and Balancing: Water Coils	5	ea			$126.00		$126.00	$630.00
Air cooled condensing unit	5	ea			$239.00		$239.00	$1,195.00
Replace Air Conditioning Units in Attic Subtotal:								**$90,475.00**
Replace Duct Split System for Server Room								
Removals								
Remove ductless split system	1	ea		$0.00	$154.00	$154.00	$154.00	$154.00
Mechanical								
Ductless split system	1	ea	$844.00	$844.00	$922.00	$922.00	$1,766.00	$1,766.00
Refrigerant tubing	1	ls	$1,000.00	$1,000.00	$500.00	$500.00	$1,500.00	$1,500.00
Replace Duct Split System for Server Room Subtotal:								**$3,420.00**
MECHANICAL/ELECTRICAL UPGRADES SUBTOTAL:								**$142,681.80**
MECHANICAL TOTAL:								**$159,181.80**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
PLUMBING								
MECHANICAL/ELECTRICAL UPGRADES								
Removals								
Electric water cooler	1	ea			$100.00	$100.00	$100.00	$100.00
Plumbing								
Electric water cooler	1	ea	$1,450.00	$1,450.00	$625.00	$625.00	$2,075.00	$2,075.00
MECHANICAL/ELECTRICAL UPGRADES SUBTOTAL:								**$2,175.00**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
ELECTRICAL								
CRAWL SPACE								
Crawl space dehumidifier connections	1	LS						$3,000.00
CRAWL SPACE SUBTOTAL:								**$3,000.00**
MECHANICAL/ELECTRICAL UPGRADES								
Food Pantry Repairs								
Labor	8	HR			$65.00	$520.00	$65.00	$520.00
Miscellaneous Materials	1	LS	$300.00	$300.00			$300.00	$300.00
Provide fire alarm pull station in Council Chambers								
Manual pull station	1	EA	$157.30	$157.30	$85.50	$85.50	$242.80	$242.80
FPLP/FEP teflon #18, 1pair	0.5	CLF	$77.55	$38.78	$77.25	$38.63	$154.80	$77.40
EMT conduit 3/4"	50	LF	$1.06	$53.00	$4.53	$226.50	$5.59	$279.50
FPE Testing, Reports, As-Builts	2	HR			$200.00	$400	$200.00	$400.00
Provide occupancy sensors								
Occupancy sensor-ceiling-dual tech	25	EA	$194.70	$4,867.50	$95.25	$2,381.25	$289.95	$7,248.75
Remote power pack	13	EA	$40.15	$521.95	$61.50	$799.50	$101.65	$1,321.45
MC cable #12-2	2.5	CLF	$80.30	$200.75	$268.50	$671.25	$348.80	$872.00
Test/Replace Egress Lighting and Exit Signs								
Exit sign 1 face LED w/ battery	5	EA	$150.70	$753.50	$143.25	$716.25	$293.95	$1,469.75

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE	DATE PREPARED	sheet 20 of 23
	12 July 2013	

ACTIVITY AND LOCATION	CONSTRUCTION CONTRACT NUMBER	IDENTIFICATION NUMBER
Town Hall and Food Pantry Renovations; Falmouth, ME		
	ESTIMATED BY	CATEGORY CODE NUMBER
PROJECT TITLE	Oak Point Associates	
Falmouth Town Hall and Food Pantry Renovation	STATUS OF DESIGN	JOB ORDER NUMBER
	Concept	21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Emergency light w/Nicad battery	5	EA	$693.00	$3,465.00	$157.50	$787.50	$850.50	$4,252.50
Label Horizontal Cabling								
Labor	8	HR			$65.00	$520.00	$65.00	$520.00
Miscellaneous Materials	1	LS	$200.00	$200.00			$200.00	$200.00
Provide Generator Signage for Elevator								
Sign with illuminated background	1	EA	$150.70	$150.70	$143.25	$143.25	$293.95	$293.95
MC cable #12-2	1.5	CLF	$80.30	$120.45	$268.50	$402.75	$348.80	$523.20
LV #14-2 cable	2.5	CLF	$26.40	$66.00	$88.50	$221.25	$114.90	$287.25
Relay 1 pole	1	EA	$25.00	$25.00	$65.00	$65.00	$90.00	$90.00
Programming	2	HR			$65.00	$130.00	$65.00	$130.00
Support Antenna Wiring								
Labor	8	HR			$65.00	$520.00	$65.00	$520.00
Miscellaneous Materials	1	LS	$400.00	$400.00			$400.00	$400.00
Provide Exterior Emergency Egress Lighting								
Light-wall mount	6	EA	$238.70	$1,432.20	$154.50	$927.00	$393.20	$2,359.20
MC cable #12-2	0.6	CLF	$80.30	$48.18	$268.50	$161.10	$348.80	$209.28
MECHANICAL/ELECTRICAL UPGRADES SUBTOTAL:								**$22,517.03**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SITE-RELATED ITEMS								
Provide Parking Area Lighting								
Steel pole 14'	4	EA	$808.50	$3,234.00	$199.50	$798.00	$1,008.00	$4,032.00
Area luminaire LED	4	EA	$1,500.00	$6,000.00	$280.50	$1,122.00	$1,780.50	$7,122.00
PVC sched 40 conduit 1"-underground	250	LF	$1.24	$310.00	$2.39	$597.50	$3.63	$907.50
600V #12 cable	7.5	CLF	$13.64	$102.30	$54.26	$406.95	$67.90	$509.25
Time switch,SPST,7day	1	EA	$171.60	$171.60	$187.50	$187.50	$359.10	$359.10
Site work for Parking area lighting	1	LS						$8,599.60
Flag pole light	1	EA	$500.00	$500.00	$180.50	$180.50	$680.50	$680.50
SITE-RELATED ITEMS SUBTOTAL:								**$22,209.95**
ELECTRICAL TOTAL:								**$47,726.98**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

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CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SPACE PLANNING								
General Conditions								
Mobilization	1	job			$1,250.00	$1,250.00	$1,250.00	$1,250.00
Dumpster Rental	1	job			$750.00	$750.00	$750.00	$750.00
Disposal	1	job			$750.00	$750.00	$750.00	$750.00
Final Cleaning	1	job			$630.00	$630.00	$630.00	$630.00
General Conditions Subtotal:								**$3,380.00**
Removals								
Flooring	6370	sf			$0.75	$4,777.50	$0.75	$4,777.50
Ceiling	615	sf			$0.60	$369.00	$0.60	$369.00
Walls	540	sf			$2.15	$1,161.00	$2.15	$1,161.00
Removals Subtotal:								**$6,307.50**
Construction								
Walls	970	sf	$1.70	$1,649.00	$2.50	$2,425.00	$4.20	$4,074.00
Flooring	6685	sf	$2.00	$13,370.00	$2.00	$13,370.00	$4.00	$26,740.00
Base	2130	lf	$1.50	$3,195.00	$1.25	$2,662.50	$2.75	$5,857.50
Ceiling	650	sf	$2.50	$1,625.00	$1.50	$975.00	$4.00	$2,600.00
Doors	4	ea	$700.00	$2,800.00	$150.00	$600.00	$850.00	$3,400.00
Paint	21250	sf	$0.15	$3,187.50	$0.60	$12,750.00	$0.75	$15,937.50
Misc. Repairs	1	job	$1,000.00	$1,000.00	$500.00	$500.00	$1,500.00	$1,500.00
Council Chambers Furniture	15	lf	$400.00	$6,000.00	$60.00	$900.00	$460.00	$6,900.00
Food Pantry Furnishings	1	ls	$300.00	$300.00	$2,700.00	$2,700.00	$3,000.00	$3,000.00
Solar tube and shaft	1	job	$1,250.00	$1,250.00	$1,250.00	$1,250.00	$2,500.00	$2,500.00
Reinforce Floor Framing	1	job	$2,500.00	$2,500.00	$2,500.00	$2,500.00	$5,000.00	$5,000.00

U.S. Government Printing Office: 1884-705-0121/17884 2-1

COST ESTIMATE

DATE PREPARED: 12 July 2013

ACTIVITY AND LOCATION: Town Hall and Food Pantry Renovations; Falmouth, ME

CONSTRUCTION CONTRACT NUMBER:

IDENTIFICATION NUMBER:

ESTIMATED BY: Oak Point Associates

CATEGORY CODE NUMBER:

PROJECT TITLE: Falmouth Town Hall and Food Pantry Renovation

STATUS OF DESIGN: Concept

JOB ORDER NUMBER: 21304.01

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
CONSTRUCTION COST	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
Live load Storage Sign	1	job	$25.00	$25.00	$75.00	$75.00	$100.00	$100.00
Construction Subtotal:								**$77,609.00**
SPACE PLANNING SUBTOTAL:								**$87,296.50**

U.S. Government Printing Office: 1884-705-0121/17884 2-1

OAK POINT
ASSOCIATES

ARCHITECTURE ■ ENGINEERING ■ PLANNING

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