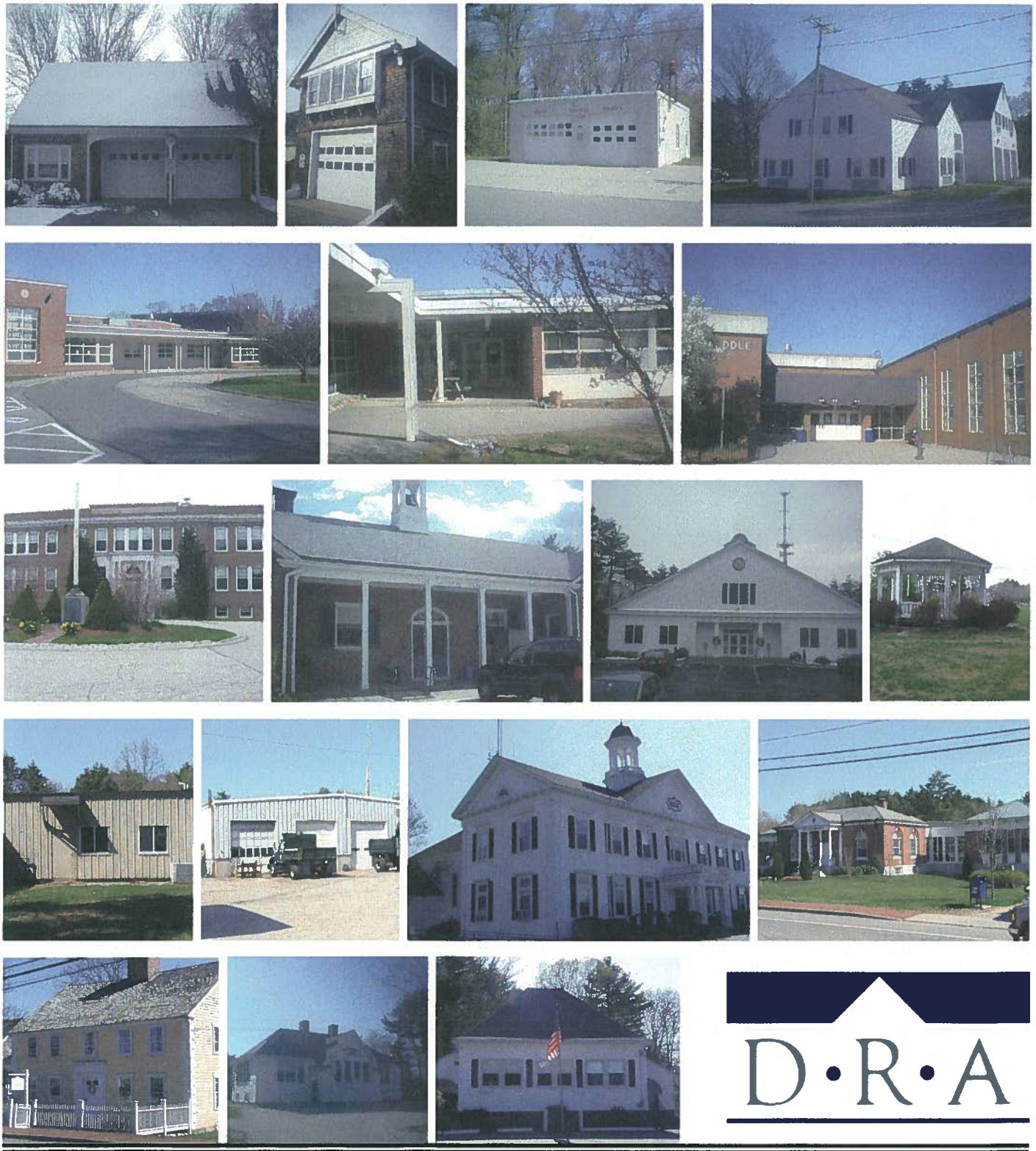
TOWN OF HANOVER

Vol. 1

Municipal Facilities Assessment-2011
Capital Improvement Committee
Hanover, Massachusetts
September 2011

Building Study



D·R·A

Drummey Rosane Anderson Inc. Planning Architecture Interior Design

Volume One:

End of Volume One

Volume Two:

End of Volume Two

Executive Summary

1. Purpose

The purpose of this study is to help the Town of Hanover plan for the future. Specifically, to develop an understanding of the current conditions of town-owned buildings, and to develop a 15-year budget of anticipated capital project expenses for those properties. The intent is to create a document that serves as a resource for future budgeting, and also as a guide to successfully implementing necessary repairs, renovations, and improvements to specific buildings.

2. Methodology

Working from a list of 18 properties, including 6 of which have been identified as 'historic', a specified 10-step process has been followed in the preparation of this document.

In the fall of 2009, and initial meeting was held with the Town Planner, and an initial 'walk-through' of the buildings was conducted. This was followed by meetings with key staff members, and with key oversight Boards and Committees, as arranged by the Town Planner.

Over the winter and spring of 2009, previous data was collected and reviewed, including plan drawings of school buildings, and previous reports conducted by other consultants. Simultaneously, our team was on-site several times to conduct more thorough observations of the various properties. Using printed copies of photographs taken during the initial walk-through, we noted observations of various existing conditions at each property, directly on those photo images. For the buildings where plans were available, we made similar observation notes directly on copies of those floor plans. For buildings where no plans were available, we took measurements of the buildings, and sketched the floor plan layouts on-site. Measured sketches were brought back to the office and transcribed into AutoCAD floor plan drawings. Return visits were made to re-measure, where and as necessary.

For site plans, where previously drawn data was not available, we used the best available satellite imagery, coupled with on-site sketching, to document the existing site plan layouts as best as possible.

During field measuring trips, additional observations were made, and additional photographs were taken.

The findings were then assembled and documented in a draft form of this report, after careful consideration of report format by the Town of Hanover, including multiple reviews of the proposed budget spreadsheet document. In order to finalize the formatting questions, a 'sample chapter' report was written for Fire Station #1, and submitted for review in the fall of 2010. This proved to be quite a valuable exercise, as it quickly became apparent that future use of satellite fire stations is a central issue to the direction of the overall planning for the Town.

Upon approval of the proposed format, writing and budget development for all of the properties proceeded during the fall of 2010. As work progressed, return visits were again made to various properties to answer specific questions as needed. This also included a brief meeting with the Director of Business Administration for the Public Schools, and phone conversations with other key individuals.

3. Distinguishing Characteristics of Town Building Infrastructure

Hanover is a delightful semi-rural community, with large home lots, a wide variety of single-family home types, an attractive and historic town center district, and a vibrant commercial business district. There is considerable open space in the Town, including resource-rich forested areas, wetland, and farmland.

The Town is in the process of building a new High School, a major capital project and serious endeavor. This follows upon other recent building projects, including the recent completion of the new Senior Center, and before that, the large new addition to the Library, the new Police Station, and a new central Fire Station headquarters a few years back. Thus it is clear that the Town of Hanover takes a proactive stance towards providing up-to-date facilities and services for the residents of the Town, and that the Town has good experience with completion of significant public building projects.

The historic buildings in town, both private and public, have been documented by the Town Historic Commission, in a report. For this study, six properties were identified as being of historic value. The Town Hall, The Curtis Library, The Stetson House, The Grange Hall (now Parks and Recreation), the Curtis School, and Fire Station #2 was later added to this list. In addition to this list of six, it is noted that the existing Sylvester School is located within the Town Center Historic District, and has attractive period styling considered by many to be worth preserving.

These historic properties, at the time of this report, are in various states of condition from 'very poor', to excellent. The buildings are being used for varied purposes, and/or are underutilized. The Curtis School is currently abandoned and boarded up, and was a prime cause for the desire to conduct this study.

The true historic value of some of these properties has apparently not been fully documented. While all of these buildings are obviously attractive period buildings, and all have strong visual appeal and hold a warm place in the hearts of town residents, full Historic Structure reports have not been prepared, which would finally determine the true historic value of the buildings. The exception is the Stetson House, which is the only property in the Town that is individually listed on the National Register of Historic Places.

Another distinguishing characteristic of the town is the commendable effort at maintenance of school buildings. At a time when all Cities and Towns face difficult budget choices, it is clear that the Town of Hanover has done a good job of maintaining school facilities. All of the school buildings we visited, while having some evident needs, were generally well maintained and in good, serviceable and safe condition.

4. Conditions Summary

The Town's Historic Buildings range in condition from very poor (the Curtis School) to excellent (the Stetson House, Library and Town Hall). Refer to the body of the report for additional specific information.

The school buildings are all at about the same level of overall condition, being generally in good condition, with relatively few and specific maintenance needs. The Sylvester School is the building in the most need of remedial work.

The remaining departmental buildings and properties are generally in good condition. The police station is new and in excellent overall condition, with a few 'bugs' from the original construction that still need to be fully evaluated and perhaps corrected. The Fire Station Headquarters building needs some attention to attic insulation, overhead doors, and other items of work, but is also in overall good condition. Fire Department satellite buildings are in fair to poor condition, and are all underutilized and therefore energy-inefficient. The DPW yard and adjacent buildings are perhaps the facilities most in need of significant improvements. The Parks and Recreation department is happy in their new home in the historic Grange Hall, but this building definitely needs some improvements.

The two main issues with town-owned buildings are accessibility compliance issues, and hazardous materials issues.

Accessibility issues were found in all properties visited. Under current laws and regulations, places that offer services to the public must be fully accessible (per standards and regulations of the federal Americans With Disabilities Act Guidelines (ADAG)), or if not fully accessible, a written plan for accommodation of persons with disabilities, in order to provide full services to such persons, must be in place. As new repair and renovation projects are completed, monetary thresholds may be triggered which also require further compliance with the regulations of the Massachusetts Architectural Access Board (MAAB). Historic buildings typically present particular challenges to accommodation of persons with disabilities, without overly compromising the historic fabric of the building. Hanover faces this challenge at several properties. Successful accessibility compliance can be achieved while preserving historic features, but it requires careful planning and diligent attention to complex regulatory procedures.

Hazardous materials issues have been closely monitored in the school buildings, in compliance with applicable laws and regulations. The requisite AHERA reports are maintained in the schools as required, and plans are in place for continuing to replace asbestos-containing floor tiles, which are the primary remaining source of asbestos-containing materials in the schools. Underground oil tanks also appear to have been properly monitored, and removed and replaced as needed with new equipment. An item of note that is a relatively new concern, is the issue of potentially pcb-containing products in building sealants, for example around windows, in instances where sealant work was done during the years between about 1950 to 1978. Mitigation of compounds which may have leached out of caulking and glazing compounds into surrounding masonry, can be quite expensive and very disruptive. Under current regulations, it is generally interpreted that mitigation is required upon confirmed testing discovery of such pcb compounds. Therefore, laboratory testing should be done if it is known that a project will be undertaken which will disturb suspected pcb-containing sealants, caulking and/or glazing compounds. Lead paint may also exist in some of the older structures. Generally, lead paint is not required to be removed unless the property is residential and young children are present. However, when construction is undertaken, it is the responsibility of the person conducting the work to prevent the migration of lead into the environment, and to protect the workers employed in the project from lead dust, under OSHA and other workplace regulations.

5. Recommendations

There are several questions which we discovered during the course of this project, which need to be answered, in order to arrive at a cohesive and useful 15-year capital expenditure plan:

What should be done with the Historic Curtis School Building, now mothballed?

What is the best use for the historic Fire Station #2 building?

How should the Fire Department support emergency response times in the North end of Town?

How can the Town manage energy costs with building improvements?

What should be done with Fire station #1, with bays too small for any of the newer larger equipment, and being non-accessible?

Is there a way to combine the now separated student populations of the Center School, and the Sylvester School?

What should be done about accessibility in the Sylvester School, and other similar town properties with similar challenges?

The answers to these questions, determines the overall planning objectives for the Town. A variety of answers to these various questions, results in a wide range of possible scenarios.

When writing the draft report of Chapter 1, for example, regarding Fire Station #1, it became clear that there were three possible 'futures' for this building, each with a very different budgetary outcome: a) maintain the building as it is now, as essentially a storage building for a couple of pieces of fire-fighting/rescue equipment (mid cost option), or b) renovate the building to serve as a staffed satellite station serving the north end of Town (most expensive option), or c) dispose of the property (generating revenue).

In these financially challenging times, it is difficult to justify inefficient use of expensive properties; expensive to maintain and to heat in the winter. Using the questions about Fire Station #1 as a preliminary exercise, we developed an overall picture of the future use of various Town buildings, which we believe will best serve the needs of the Town in a fiscally responsible manner, and balancing the objectives of Historic Preservation. All three of the options for Fire Station #1 have been included in the 15-Year Capital Budget Plan.

With regard to questions about the Center & Sylvester Schools, the 15-Year Capital Budget Plan has been written to suggest that an addition might be constructed onto the Center Elementary School, so that this single building can also house the older elementary grades now located at the Sylvester School. When vacated, the Sylvester School building would then undergo a complete historic renovation for a new use: perhaps as senior citizen housing, or another need to be identified.

We have also recommended that three small dilapidated structures at the B. Everett Hall recreation site should be demolished and replaced with a new structure designed to meet the needs of the programs located there.

We recommend significant improvements be made to the DPW yard and buildings, in order to support the essential functions of that department.

And for the school buildings in general, we have outlined a general guide for budgeting for roof replacement projects, asbestos tile removal, HVAC and energy-savings improvements, and general ongoing maintenance needs.

6. Conclusion

The 15-year budget of anticipated capital expenses is presented after the 18 individual building reports, at the end of volume 1. The budget is in spreadsheet format with a summary sheet which totals all of the anticipated expenditures for all of the 18 buildings in the study. The budget should be updated on an annual basis in order to maintain usefulness as a decision-making tool for the Town.

The Town of Hanover has taken a wise step in developing this conditions assessment and 15-year budget plan for capital improvement projects. This forward-looking effort will pay-off in future years in terms of efficiency of expenditures on maintenance and improvement of town-owned properties. This, in turn, will contribute to an overall high quality of life and satisfaction with Town services among the town tax-payer residents.

As of the date of this report in 2011, the budget anticipates the need to expend a total of approximately fifty-three million dollars over the next fifteen years to maintain existing buildings and to implement the recommendations of this study.

End of Executive Summary

Section 01 - FIRE STATION 1

Locus Map - Town of Hanover

Building Summary

Address: 1160 Main St.
Gross Area: 2,295 sq.ft.
Description of Site: Flat, residential-sized lot on one of the main north-south crosstown roads, in a primarily residential neighborhood.
Description of Building: 1-1/2 story; brick front, white vinyl 3 sides, residential style, two equipment bays, kitchen on 1st floor; lounge area and dorm room upstairs.
Function of Facility: Equipment storage for Fire Department. Satellite facility manned only during emergency events.
Agency or Department: Fire Department
Technical Construction Description: Wood framed building; residential type construction.
Valuation: $219,083 (estimated replacement cost)

Immediate Needs:
(assuming maintaining existing use)
- Remove asbestos-containing floor tile and replace with new resilient tile.
- Remove deteriorated perimeter fence around property.
- Install handrails at stairs.
- Install security system with protection at ground floor doors and windows.
- Install emergency lighting.
- Install improved exhaust air system at vehicle bays.

Near Term Needs:
(assuming maintaining existing use)
- Replace 3 exterior ground-level doors with new; including secure hardware.
- Replace and upgrade data/telephone service and wiring.
- Exterior painting of wood trim.
- Re-roofing needed in year 6.
- New floor drains in vehicle bays with oil traps. (Year 4)

Conditions Summary:
The primary issue for this building concerns its use. Currently the building is used as a satellite fire station, serving the north end of the town. However, due to inherent problems with the size and interior layout of the building, it is unable to fulfill this use properly. The station is normally un-manned due to accessibility and other building issues, and the size of the vehicle bays are inadequate for the type of fire-fighting equipment that is needed. As a result, this facility is reported to be ineffective in the desired objective of reducing response time to fire incidents in the northern part of town, as the essential response comes from the central Fire Headquarters building. This facility in reality is used as a storage facility for supplemental equipment that could respond to a large emergency event anywhere in town. A rescue boat is also stored at this location on occasion.

Building Summary (continued)

There is no cost-effective way to renovate this facility to make a proper satellite fire station. The structural elements of the building are not large enough to accomplish a re-fit without a complete re-build. Members of the community have asked if the building could be 'jacked up' (lifted) onto a taller foundation wall in order to accommodate the height of the fire apparatus. While this is technically possible, it is not economically feasible. A project of that magnitude would automatically trigger the need for full accessibility compliance renovations under current regulations, and our opinion is that the cost of such a project would exceed the value of the building. It may be feasible to construct a new building on this site, following demolition of the existing. This feasibility is dependent upon developing a program of spaces for the building.

This facility could feasibly be converted to use as a single-family residence; this feasibility is dependent upon a more thorough investigation of any potential oil products in the soils around the building, or other hazardous materials. Assuming no unusual hazardous materials, this building would be a candidate for sale on the open market for residential conversion or reconstruction, at normal market rates.

The town could retain this building and renovate it for use for some other purpose, other than as a fire station. Any public use would require a full renovation for accessibility, including an elevator to the second level.

In general, the building is in Fair condition overall. It appears to be about 40-50 years old, and appears to have benefited from ongoing minimal-but-adequate maintenance over the years. The building does not provide accessibility for persons with physical limitations. Parking is adequate for current use.

Recommendation:

Dispose of the property by selling on the open market as-is, for redevelopment as residential property. Consider re-zoning for multi-family use prior to sale, to make the property more attractive to developers. Use revenue from sale to support construction of a new satellite fire station serving the north end of town, at an alternate location.

Other options considered included:

a) Maintaining existing use as an un-staffed storage facility.
b) Renovate for use as a staffed satelite fire station.

Both of these options, as well as the recommended option, are illustrated with 15-year expenditure plans.

Conditions Assessment

Site/Architectural

SITE

Short apron drive for fire-fighting equipment. Paved areas at south side and rear of property, for general vehicle parking. Small grass areas at sides and rear. Grass is fair. Paving is fair. No striping for parking. Parking capacity is adequate for current use. Fencing is in poor condition and should be repaired or, if not needed, removed (fencing is at perimeter of property to side and rear.) No issues noted with existing site utilities. No signifacant drainage issues observed.

ARCHITECTURAL

Exterior:

- Vinyl siding in good condition
- Brick masonry on front of building in good condition
- Crack in cement at front of building
- Missing shutter on front window
- Paint on front columns is chipping
- Roof leaks; minor and in spot locations reported by Owner. Shingle roof appears to be in fair condition overall based upon ground level visual observations. Will require full replacement within 4-7 years.
- Site needs new fence; or removal of existing.
- Inadequate clearance of doors and overhead beam for current fire equipment. Building cannot be utilized without dealing with this issue. Wood trim over vehicle doors has been cut to allow vehicles to pull under.

Interior:

- Ground floor has two vehicle bays, and toilet room with shower.
- Upper floor has bunk room, recreation room, and toilet room.
- Interior finishes are generally in fair condition, but aged and tired.
- Kitchen cabinets need to be replaced for accessibility and due to general age.

Structural:

- Concrete slab on grade
- Roof and walls are residential-grade wood frame construction
- No observed general structural settlement or cracking. Roof ridge line is straight, and there is no significant foundation settlement or cracking.
- Beam supporting 2nd floor over equipment bay is too low for apparatus storage.

Building Code:

Building is assumed to have met the codes in force at the time of construction. Does not meet current codes for new construction, but has not been cited for any unsafe condition by the local authority.

- Non-accessible: both toilet rooms, stairs, and kitchen. Entrances and exit doors are non-accessible.
- Stairs have no handrails; this safety item of concern needs correction
- Resilient floor tile may be asbestos-containing; should be tested.

Conditions Assessment — Architectural

Accessibility:

- Rear door; rusted, has 10" step up, and has a knob instead of lever
- Non-accessible main entry; 2" step and slope.
- Non accessible side entry to driveway; knob instead of lever, 8" step up.

Energy & Environmental Sustainability:

- Judging from the general appearance and age of the building, it seems likely that it has a minimal amount of insulation in the exterior walls. Snow-melt pattern on the roof indicates added insulation at the attic roof rafters.
- Due to the fact that this is an un-staffed facility and temperatures inside are assumed to be kept at minimal levels during the winter to protect equipment; changes to the building envelope to achieve energy savings are not recommended at this time.

Hazardous Materials:

- The building and site were not surveyed for hazardous materials. General observations indicate that lead paint and asbestos-containing floor tile may be present.

Historical/Aesthetic:

- The building does not have any significant historic value.
- Aesthetically the building is 'average'; it has the appearance of being a residential property in fair condition.

Other Issues:

- The Fire Department reports that this location is not ideal to cover the north Hanover area; it is too close to the northern border of the town to deliver the quickest response time to the most residents.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

Plumbing Utilities:

- Existing Domestic Water Service:
  The existing building is currently served by a domestic water service which enters the boiler room. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the building's domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- Existing Natural Gas Service:
  There is currently a natural gas service to the building serving the boiler, hot water heater and generator. This service enters the rear of the building at the boiler room.
- Existing Sanitary Service:
  The station's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the Station. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the building's sanitary waste system.
- Fuel Oil:
  There is currently no on-site fuel storage.

Plumbing Fixtures and Specialties:

Existing plumbing fixtures are as follows:

- Water closets are floor mounted; tank type, vitreous china.
- Lavatories are recess counter mounted vitreous china. Faucets are a combination of single lever handle and two lever handles.

Domestic Hot Water Systems:

Existing Domestic Hot Water System:

- The facility's domestic hot water is generated by a Bradford White gas fired water heater which feeds all the building's hot water needs. The water heater is in good condition.

Fire Protection Service:

- There is no fire protection coverage (sprinklers) currently at the facility.

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems (continued):

EXISTING MECHANICAL SYSTEMS

- The existing building is heated by a steam boiler. The steam boiler is H.O. Smith with burner currently operating on Natural gas. This equipment is of a residential size, appears to be of the appropriate size for the facility with no problems noted and is in good condition.
- The present Heating and ventilating system consists of steam radiators in the living and common areas of the first and second floor and gas fired unit heaters in the apparatus bay.
- Exhaust systems servicing the apparatus bays were noted as insufficient by operating personnel for vehicles.
- The existing temperature control is via wall mounted electric residential type thermostats.
- There is no central A/C system for air cooling, and no window units were observed. Users report this lack of cooling is an issue obstructing the potential to have overnight or full-time personnel at the station.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 120/240volts, single-phase, 3-wire electrical service; capacity was noted as being150 amp main circuit breaker. The service equipment is located on the ground level of the building. The service equipment is in good condition.
- The lighting throughout the facility consists primarily of surface mounted 1' x 4' wraparound fluorescent fixtures. The lighting throughout the facility is in good condition. The light levels appear to be within recommended levels.
- The fire alarm system is a Firelite Miniscan 4024 four zone FACP. There are manual fire alarm pull stations and ADA horn strobes located throughout the building. Heat detectors are located throughout the building including the apparatus bay for detection and alarm. The system and devices appear to be newer and in very good condition.
- Site lighting is accomplished via building mounted residential type incandescent fixtures.
- There exists an Onan standby generator to power the facility during a power outage. This unit is natural gas fired and manual transfer. The unit appears to be in good condition.
- Life safety emergency lighting was not noted and should be provided via Emergency battery units with unit mounted emergency light heads.
- There is currently no security or controlled access system at the facility. It was noted by personnel that the addition of a security system is desired.
- There exists an Onan standby generator to power the facility during a power outage. This unit is natural gas and manual transfer. The unit appears to be in good condition.

NOTE FYI: The existing generator is a stanby unit in that it needs to be manually started and does not meet the requirements of life safety and thus the emergency lighting battery units are required.

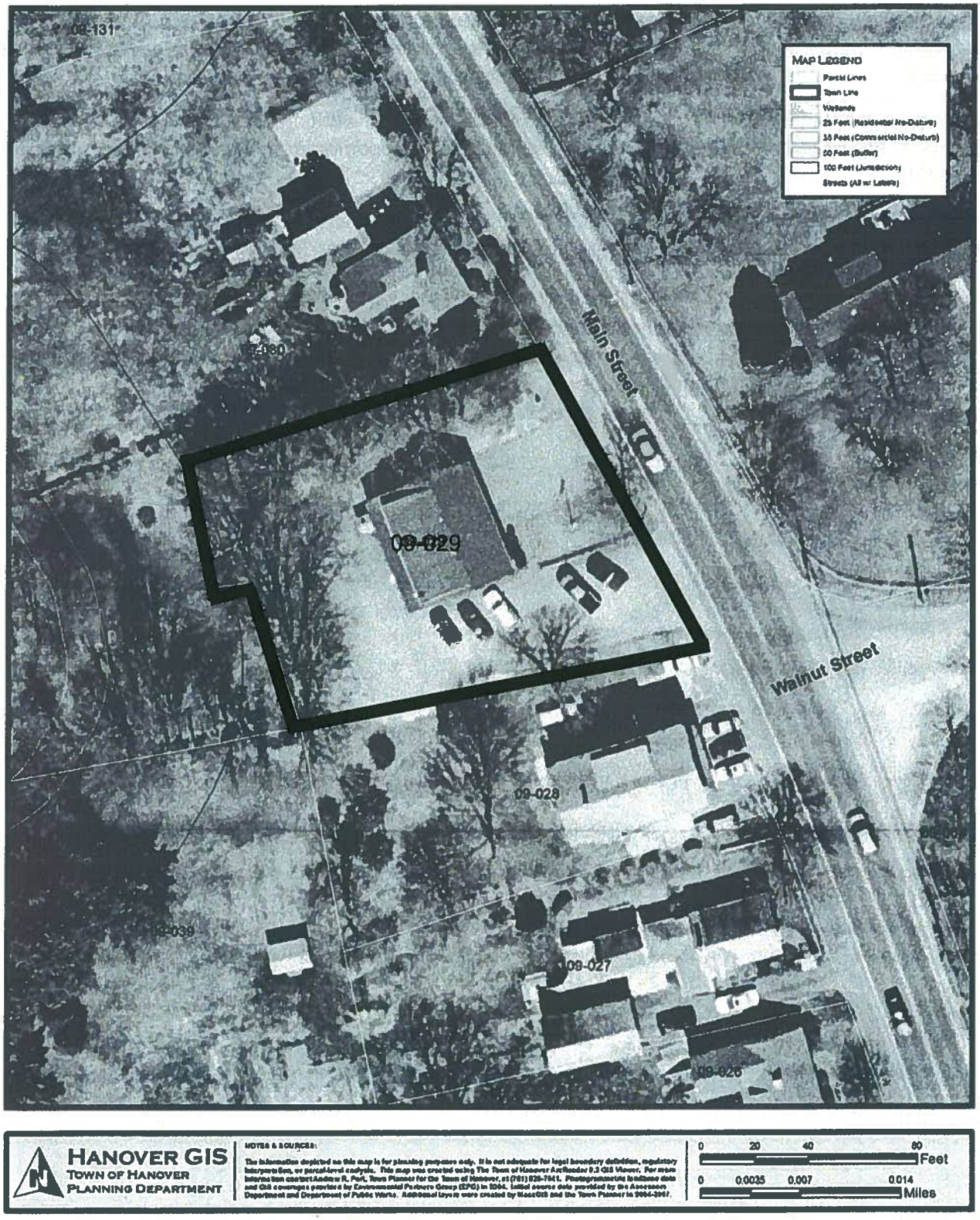
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. Most equipment is in good condition and meets the needs of the residential nature of the facility. Upgrade of the vehicle exhaust system in the bays should be implemented.

Plumbing systems throughout seem to be in good physical and working condition. The desire was expressed to expand the second floor bath to a full bath to accommodate the 24 hour operation of the facility.

The electrical systems appear to be in good condition and operating without issues. The lighting systems are newer and in good condition, the addition of automated lighting controls in select areas should be implemented in order to meet current energy codes and to save on energy costs. Fire alarm system and emergency power generation are in good condition. Replacing the existing exterior fixtures with energy efficient units should be implemented to save on energy costs. Addition of a security system as well as the addition of emergency battery units should be implemented for both protection of personnel and equipment.

AERIAL PHOTO



HANOVER GIS
TOWN OF HANOVER
PLANNING DEPARTMENT

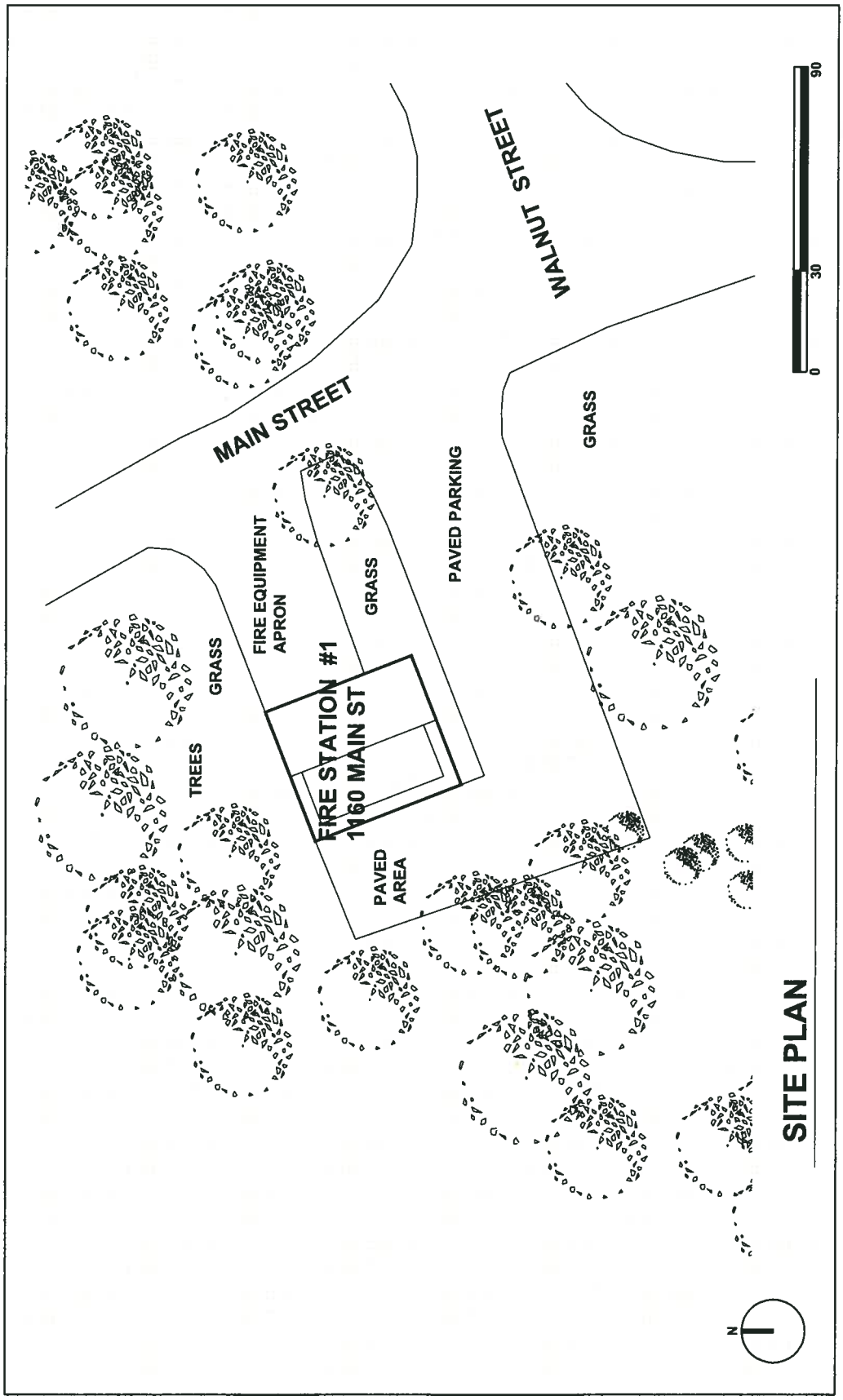
NOTES & SOURCES:
The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. This map was created using The Town of Hanover ArcReader 9.3 GIS Viewer. For more information contact Andrew R. Port, Town Planner for the Town of Hanover, at (781) 826-7941. Photogrammetric baseline data and GIS coverages provided by Environmental Partners Group (EPG) in 2004. Initial source data provided by the Assessors Department and Department of Public Works. Additional layers were created by MassGIS and the Town Planner in 2004-2007.

0 20 40 80 Feet
0 0.0035 0.007 0.014 Miles

Fire Station 1 is the building in the center of the photo, labeled 09-029.
(Source: Hanover GIS)

D·R·A

SITE PLAN



D·R·A

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FIRE STATION 1
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

Town of Hanover - MUNICIPAL FACILITIES ASSESSMENT - 2010

Section 01- Fire Station 1

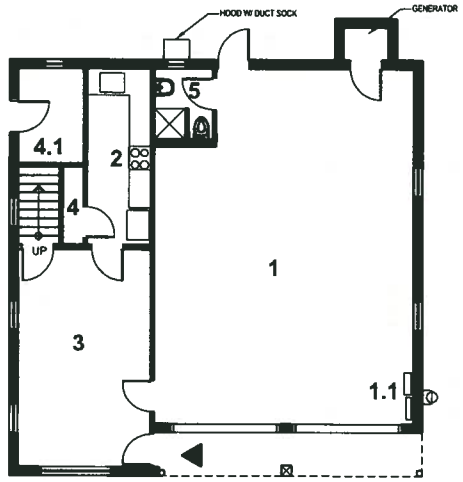
FLOOR PLANS

ROOM LEGEND

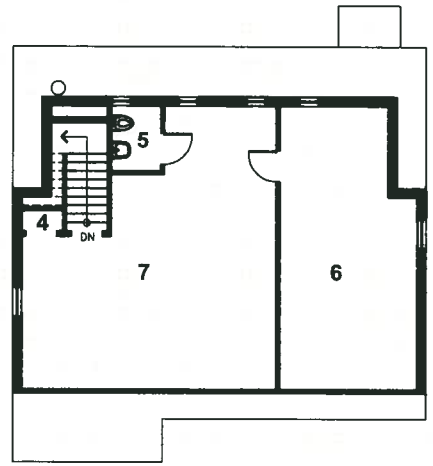
1. FIRE ENGINE GARAGE — 1.1 ELEC. PANELS AND METER
2. KITCHEN
3. COMMON ROOM
4. CLOSET — 4.1 BOILER ROOM
5. TOILET ROOM
6. DORM ROOM
7. RECREATION ROOM

GRAPHIC LEGEND

▶ - MAIN ENTRANCE LOCATION



FIRST FLOOR PLAN



SECOND FLOOR PLAN

0 5 15 30

D·R·A

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FIRE STATION 1
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE

Drawn by: CHM

Job# 09017.00

D·R·A 01-10

Conditions Assessment

Exterior Photos

Exterior, main front entrance; fair condition, missing shutter at bay window. Snow melt pattern on roof indicates added insulation.

Exterior, east corner of building; vinyl siding; fair condition. Electrical meter.

Conditions Assessment

Exterior Photos

Exterior, detail of downspout drainage. Loose data/phone wiring.

Exterior, back northwest facing facade. The "doghouse" structure houses the emergency generator.

Conditions Assessment

Exterior Photos

Exterior, back northwest facing facade; paved parking area. Rusted Door.

Exterior, west corner; paved parking area.

Conditions Assessment

Exterior Photo / Interior Photo

Exterior, southwest facade

Interior, fire engine garage, view of rescue boat in north bay, and door to generator.

Conditions Assessment

Interior Photos

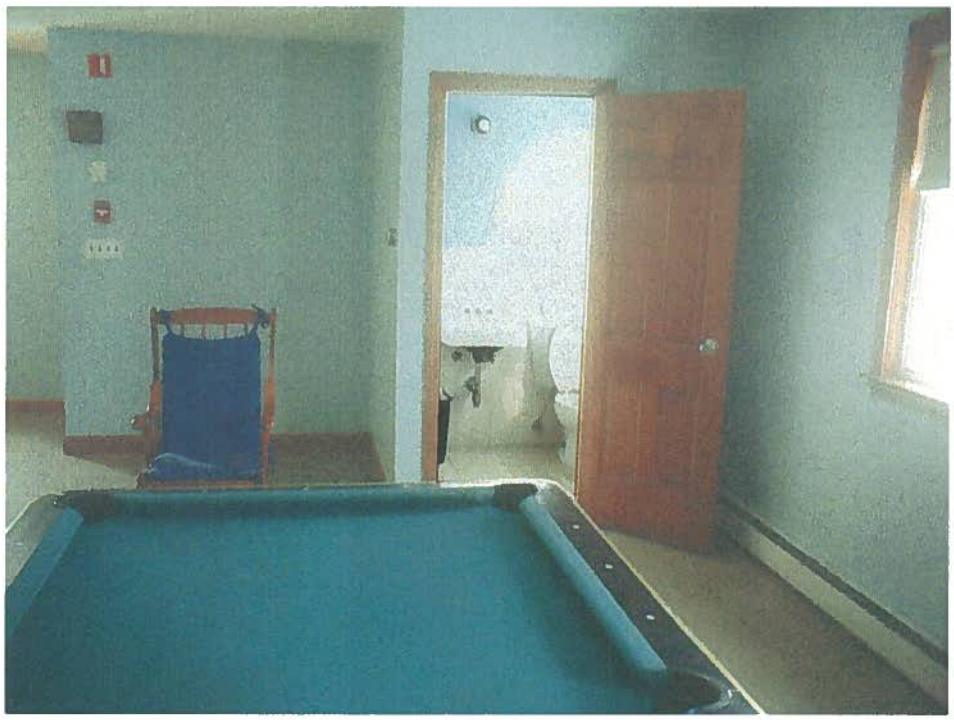
Interior, bathroom on first floor; non-accessible.

Interior, common room in first floor. Kitchen is on the right, non-accessible.

Conditions Assessment

Interior Photos

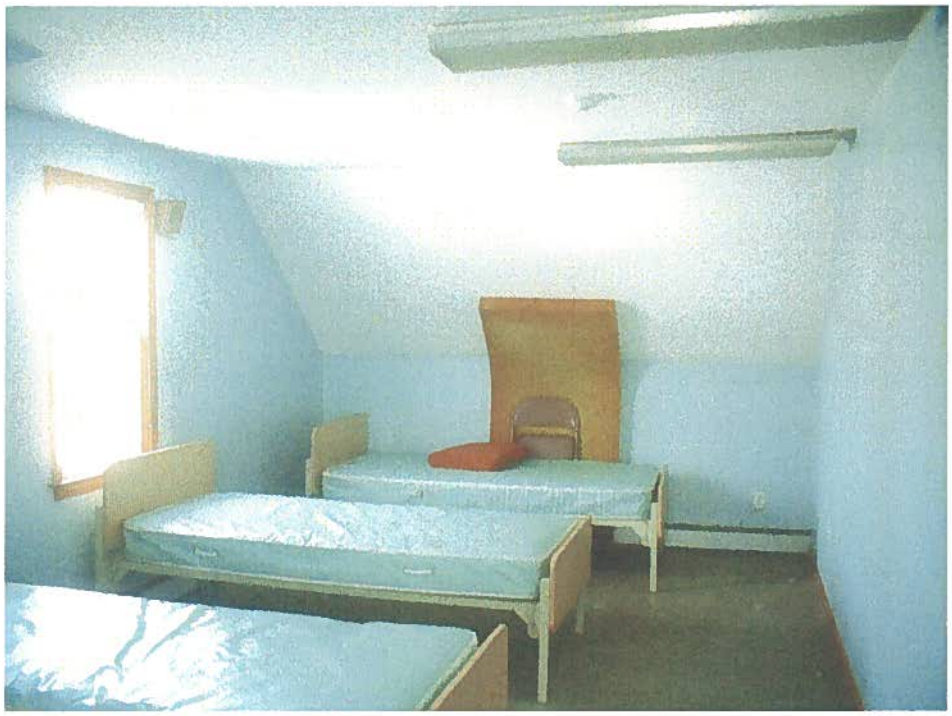
Interior, looking down stairway from second floor; no handrails.



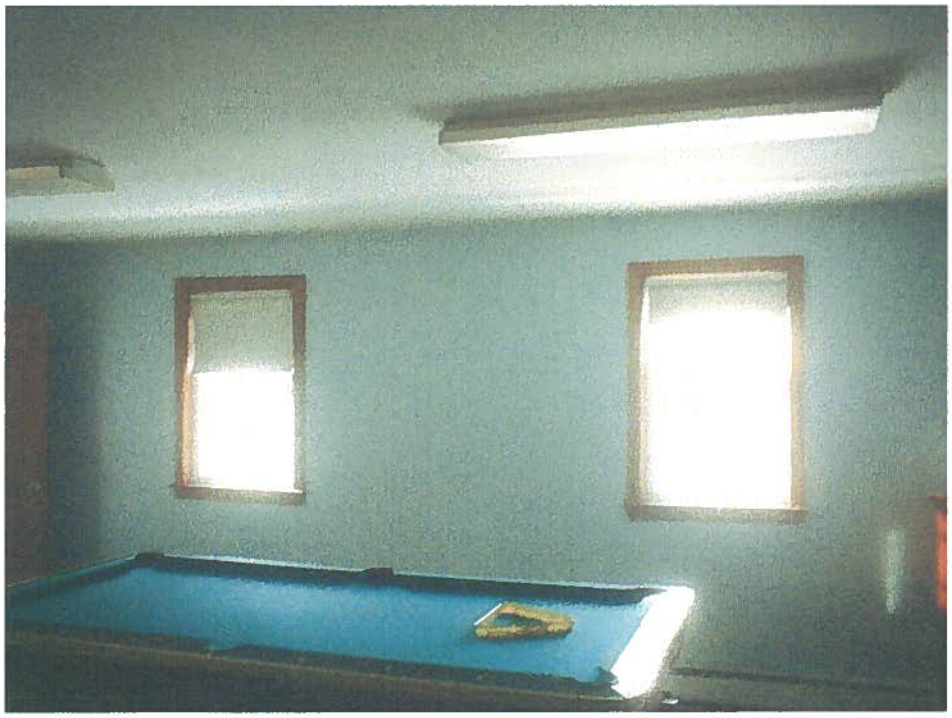
Interior, recreation room on second floor; non-accessible half-toilet.

Conditions Assessment

Interior Photos



Interior, dorm room



Interior, recreation room

Section 02 - FIRE STATION 2
Building Summary

Locus Map - Town of Hanover

Address: 207 Broadway St.
Gross Area: 1,507 sq. ft.
Description of Site: Near busy intersection. New paving at front and side; short apron to street. Small lot size, slopes to rear.
Description of Building: 2 story, cedar shingle siding and nice period detailing; an attractive building, not part of 'historic' group per contract, but is considered historic by the Hanover Historic Resources committee. The architect was J. Williams Beal, local. Single equipment bay. Substatial renovations made about 10 years ago.
Function of Facility: It serves as an unmanned satellite station, storing less-used fire-fighting apparatus.
Agency or Department: Fire Department
Technical Construction Description: 2 story, Cedar shingle siding, wood frame building; residential type construction.
Valuation: $171,395 (estimated replacement cost)

Immediate Needs:
(assuming maintaining existing use)
- Install improved exhaust air system at vehicle bays.
- Make the building accessible for persons with disabilities.
- Install security sytem.
- Update fire alarm panel.
- Install sprinkler system.
- Repair minor roof leaks.

Near Term Needs:
(assuming maintaining existing use)
- Repair side door heater.
- Replace windows.
- Exterior painting of wood trim.
- Redirect roof's run off drainage pipe away from neighboring property.

Conditions Summary:
Similar to Fire Station #1, the primary issue with this building is its use. With only one equipment bay and no accessibility for persons with disabilities, this building has limited functionality as a satellite fire station. It serves as an unmanned station, storing less-used fire-fighting apparatus. Parking on-site is limited. The building interior upstairs has been modified and appears to be in the process of having the kitchen area upgraded. The main space upstairs seems to serve occasional use for fire-department fundraising functions and training videos, etc. In discussions with Town personnel, the need for a manned satellite station in this area of town, seemed to be of a lesser concern than the need at the North end of Town, in the vicinity of Fire Station 01.

Building Summary

Conditions Summary (continued):
This building was not listed by the town within the group of 5 buildings noted as 'historic', in the scope of work description for this study. However, in subsequent discussions with the Town Historic Commission, it was clear that they consider this to be an 'historic' building and a valuable town resource from an architectural character point of view. The architect for the building was a local designer, Mr. J. Williams Beal, who exercised care and skill in the detailing of the building, and reportedly had a career with some acclaim; further research into the history of the structure was not conducted for this report.

Overall, the building is in Fair condition. The original windows have been replaced with new thermally insulated glass units. (Except for three front historic windows.) The old foundation and wood framed first floor was removed about 10 years ago, and a new concrete slab foundation was installed. The building is an attractive structure, with cedar shingle siding that is in good condition. Painted wood trim is sound, but needs to be repainted with minor carpentry repairs to areas of localized deterioration. Paving around the building is new, but the apron in front of the vehicle door, to the street, is very short. Site drainage seems to have been modified recently with a discharge pipe directing roof run-off water towards the neighboring commercial property.

Similar to Fire Station No. 1, and for similar reasons, this property does not appear to be a candidate for full re-construction as a satellite fire station. At this location, there is no strongly expressed need for such a satellite station, and the limited site size would prevent such a project, and there would be a loud protest from historic preservation advocates if the building were to be demolished. Also similar to Fire Station No. 1, this building would be a candidate for re-sale on the open market as a potential conversion to a single-family residence. It might be possible to first place certain restrictions on the deed that would serve to protect the exterior appearance of the building, while still allowing for conversion to residential use.

Recommendations:

Although this is an attractive building, it has little utilitarian purpose for the Town as it is now configured. There is only one bay for storage of fire-fighting equipment, and, without an elevator, there is no reasonable way to utilize the upper level for any public purpose. The addition of an elevator would be costly, and would significantly alter the appearance of the building.
Therefore, our recommendation is to sell the property for conversion to single-family residential use, with a restricted deed to ensure that the historic appearance of the building is maintained by the new Owners.

Conditions Assessments — Site/Architectural

SITE

- Landscaping is poor; recent work has left the un-paved areas devoid of grass or other plantings. New paving is in good shape, but does not have any edging. There is no striping delineating parking areas. No particular issues were noted with regard to site utilities, except, as noted above, the site drainage seems to have been modified recently with a discharge pipe directing roof run-off water towards the neighboring commercial property. This condition requires correction.
- Unpaved parking on side North

ARCHITECTURAL

Exterior:

- Roof brackets (decorative rafter tails) are generally in good condition, and only need minor repairs at a couple of locations.
- New paint needed on rafter tails, underside of roof boards, and rake board at roof.
- New paint needed at wood trim around garage door, windows, and clapboard.
- Foundation wall at the corner of garage door elevation needs minor repairs to minor cracking.
- The Second floor roof has a water stain on ceiling South side, at East corner.
- Non-accessible entry door.
- The windows are recently manufactured vinyl windows with thermally insultated glass, double-hung, with no storm panels, with screens on the larger windows but not on the smaller units. The center 3 windows on the front of the building were not replaced, probably because these windows have the most 'historic' detailing. These older windows either need extensive refabrication, or should be replaced with new thermally insulated units designed in the same style as the originals.

Interior:

- The carpet in the main hall upstairs and painted walls are in Fair condition.
- Some windows are in poor condition and need repair or replacement. Single pane wood windows are source of heat loss.
- The kitchen area has relatively new cabinets, but is in the process of renovation and un-serviceable at the time of this survey, and has no provisions for accessibility for persons with physical limitation.
- The single toilet room is located on the inaccessible 2nd floor level, and is also not large enough or equipped properly for accessibility.

Structure:

- Wood frame is in apparently good condition, with no evidence of bowing or sagging of the roof lines observed.
- Foundation is a combination of concrete slab, and split-face concrete block (simulated stone) walls. The foundation is also in generally good condition with no evidence of general failure. There is some cracking at the southeast corner that has been patched and should be reconstructed.

Building Code:

- The building appears to be Type 5B construction, unprotected wood frame. It is not clear if there is an adequate fire separation between the vehicle bay below, and the living space above. This is a significant code issue that would make any occupancy of the upper level problematic.
- Needs new Fire Alarm panel.
- No sprinklers in the building

Conditions Assessments — Architectural

Accessibility:
- Door to storage/mechanical room is not accessible from exterior.
- Guardrail at entry door is not per code.
- Second floor is not accessible.
- No elevator.

Energy & Environmental Sustainability:
- The amount of insulation in the exterior walls is unknown.
- The utility bay is kept at minimal heat levels.
- The three front historic single-pane windows are a source of significant heat loss. They appear to have been fitted for interior 'storm' windows, but these panels were not in place when the property was visited.The remaining widows are thermally efficient units.
- The main equipment bay overhead door is a newer thermally insulated door.

Hazardous Materials:
- There are no known hazardous materials. Lead paint should be suspected in the older portion of the building. For any future work that might disturb painted surfaces, lead testing should be carried out, and protocols should be used to prevent lead dust from being released.

Historical/Aesthetic:
- No formal Historic Structures Survey has been conducted on this property, to our knowledge. The Town Historic Commision views this as an important building to protect for the heritage of the Town. Also see comments in introductory paragraphs, above.

Other Issues:
- This fire station is a generally under-utilized facility. It is near a very busy intersection and high traffic; multi-lane roadway.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:
- **Existing Domestic Water Service:** The existing building is currently served by a domestic water service which enters the boiler room. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the buildings domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- **Existing Natural Gas Service:** There is currently a natural gas service to the building serving the boiler, hot water heater and generator. This service enters the rear of the building at the boiler room.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

- **Existing Sanitary Service:** The building's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the facility. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the building's sanitary waste system.
- **Fuel Oil:** is currently no on site fuel storage.

Plumbing Fixtures and Specialties:
Existing plumbing fixtures are as follows:

- Water closets are floor mounted; tank type, vitreous china.
- Lavatories are recess counter mounted vitreous china. Faucets are a combination of single lever handle and two lever handles.

Domestic Hot Water Systems:
Existing Domestic Hot Water System:

- The facility's domestic hot water is generated by a 40 gallon A.O. Smith gas fired water heater which feeds all the building's hot water needs. The water heater is in very good condition.

Fire Protection:

- There is no fire protection coverage (sprinklers) currently at the facility.

Mechanical Systems:

APPLICABLE CODES AND STANDARDS
The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing building is heated by a hot water boiler. The boiler is Weil Mclain with burner currently operating on Natural gas. This equipment is of residential size 110 MBH, appears to be of the appropriate size for the facility with no problems noted and is in good condition.
- The present Heating and ventilating system consists of hot water baseboard radiation in the living and common areas of the first and second floor and hot water unit heaters in the apparatus bay.
- Exhaust systems servicing the apparatus bay were noted as insufficient by operating personnel for vehicles.
- The existing temperature control is via wall mounted electric residential type thermostats.
- Notes from interview with the Owner indicate that the statement was made: "Heating unit at side entrance appears not to be working".

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems:
APPLICABLE CODES AND STANDARDS
The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

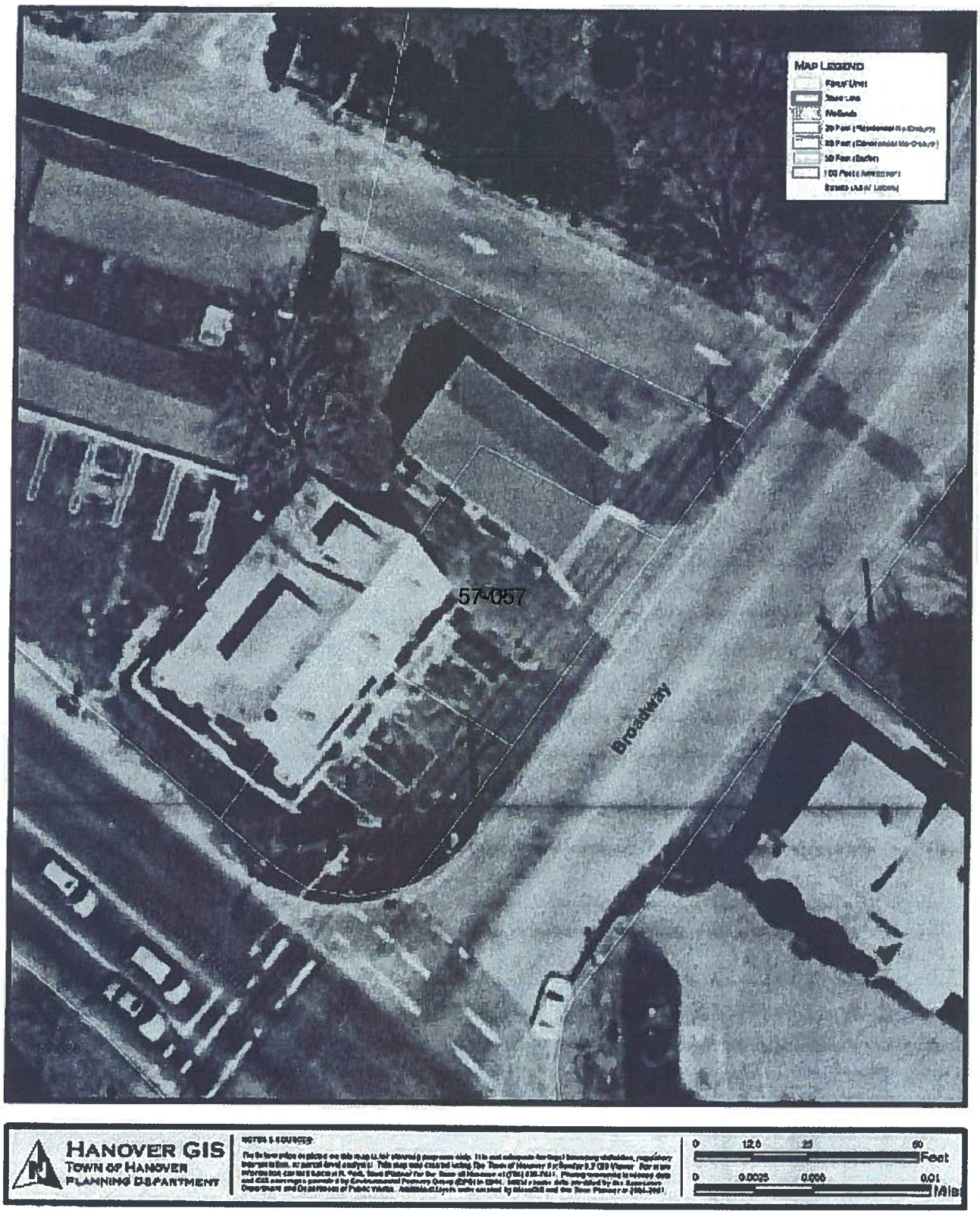
EXISTING ELECTRICAL SYSTEMS
- The building is served by a 120/240volts, single-phase, 3-wire electrical service; capacity was noted as being 100 amp main circuit breaker. The service equipment is located in the exterior only entry boiler room at the rear of the building. The service equipment is in good condition.
- The lighting throughout the facility consists primarily of residential type incandescent fixtures. The lighting throughout the facility is in good condition. The light levels appear to be within recommended levels.
- There currently is no fire alarm system located in the facility.
- Site lighting is accomplished via building mounted residential type incandescent fixtures.
- There exists a 15KW standby generator to power the facility during a power outage. This unit is natural gas fired and manual transfer. The unit appears to be in good condition.
- Life safety emergency lighting was not noted and should be provided via Emergency battery units with unit mounted emergency light heads as well as exit signs.
- There is currently no security or controlled access system at the facility. It was noted by personnel that the addition of a security system is desired.

MEP SYSTEMS CONCLUSION
In general, the systems vary in age from original to the building, to as recent as 3-5 years old. Most equipment is in very good condition and meets the needs of the residential nature of the facility.

Plumbing systems throughout seem to be in good physical and working condition.

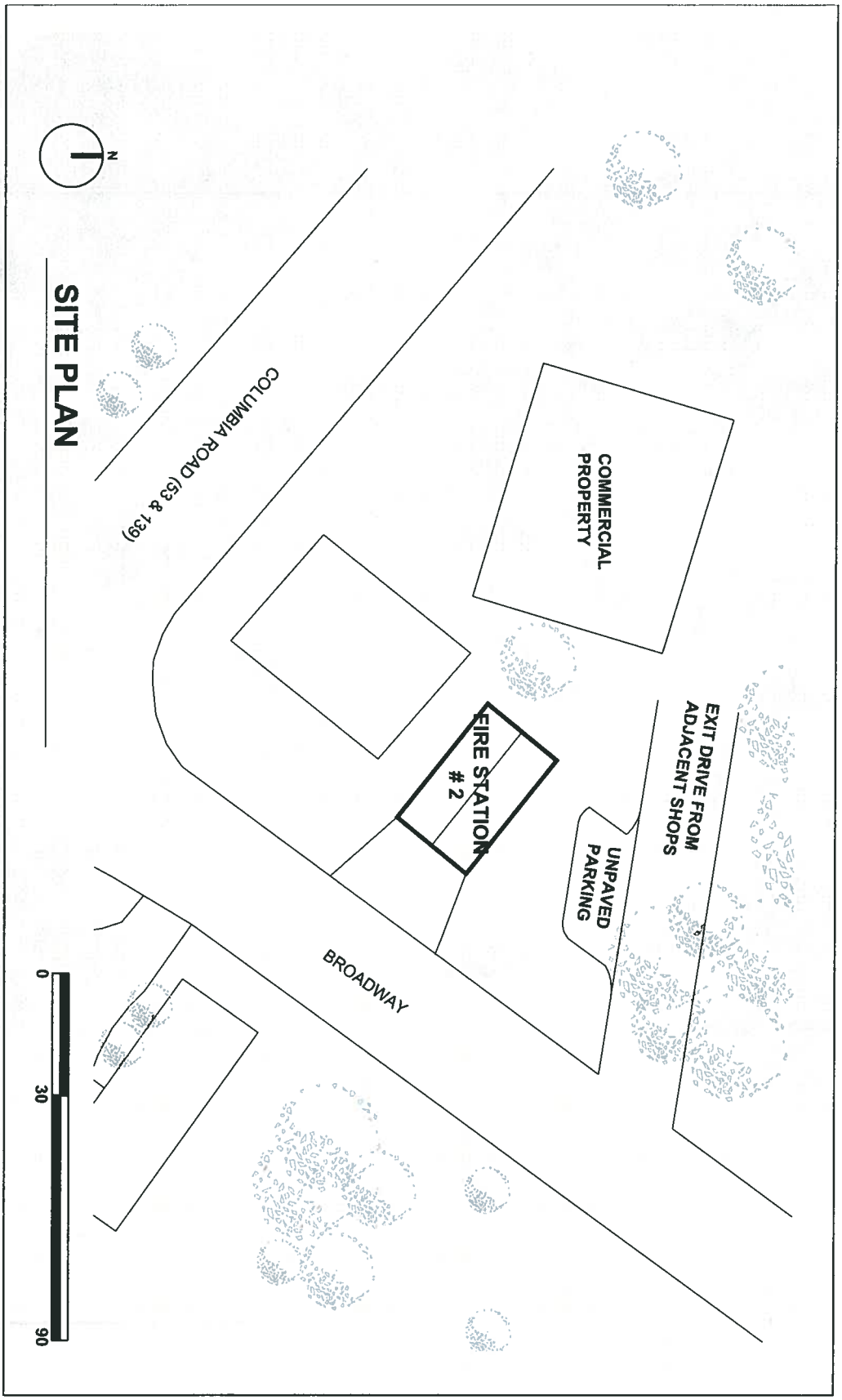
The Electrical systems appear to be in good condition and operating without issues. The lighting systems are appropriate for the facility and in good condition, the addition of automated lighting controls in select areas should be implemented in order to meet current energy codes and to save on energy costs. Exterior building mounted fixture should be replaced with higher efficiency units. Fire alarm system should be added along with a security system and both should be tied into a notification system. The emergency power generation unit is in good condition. Replacing the existing exterior fixtures with energy efficient units should be implemented to save on energy costs. Addition of emergency battery units and exit signs should be implemented for protection of occupants.

AERIAL PHOTO



Fire Station 2 is the building in the center of the photo, labeled 57-057.
(Source: Hanover GIS)

SITE PLAN



SITE PLAN

D·R·A

Drummey Rosane Anderson Inc.
Architecture
Interior Design

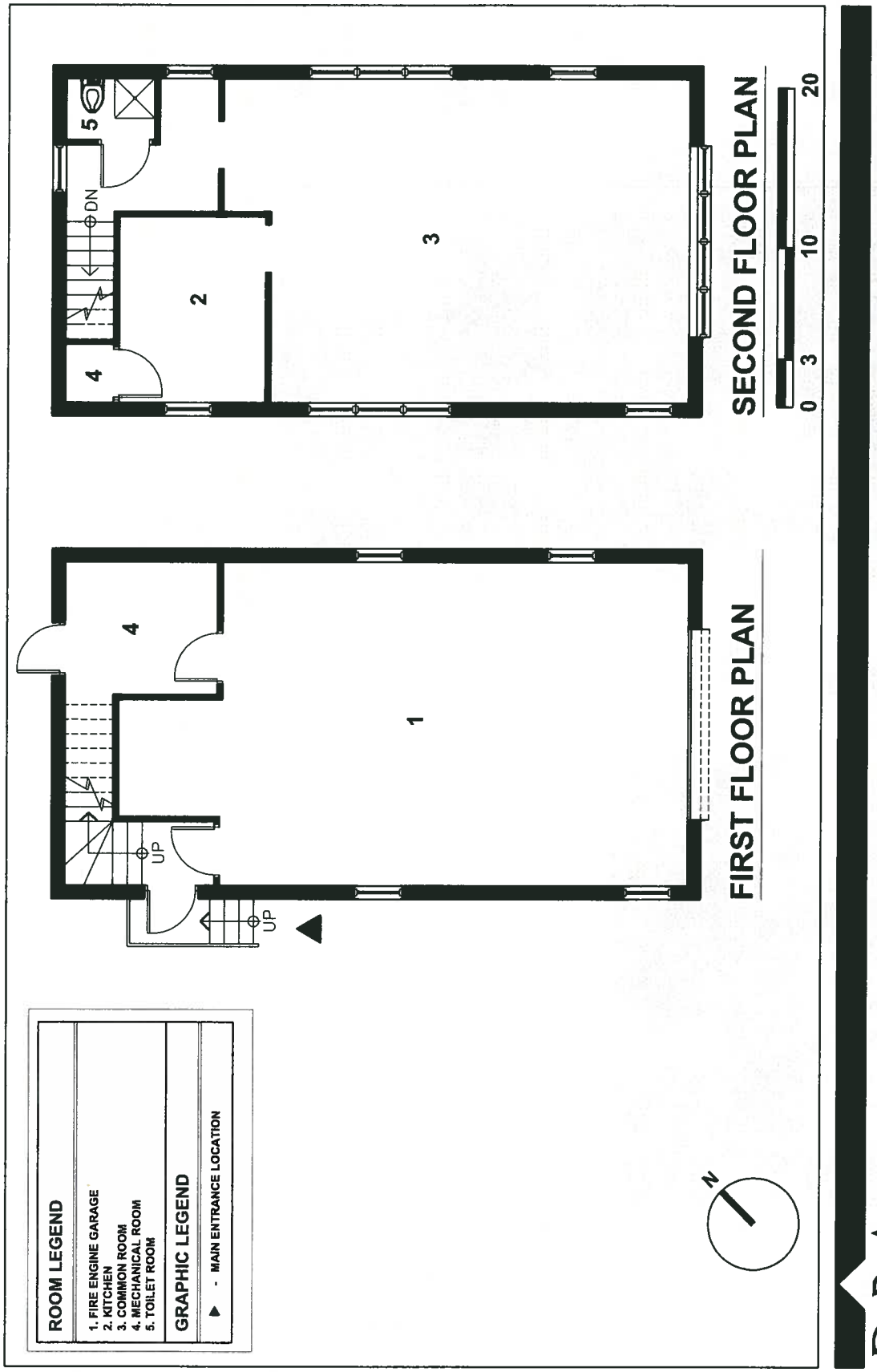
Colby Hall
141 Herrick Road
Newton Centre, MA
02459

617-964-1700
617-969-9054 fax

FIRE STATION 2
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLANS



D·R·A

Drummey Rosane Anderson Inc.
Architecture Interior Design

Colby Hall
141 Herrick Road
Newton Centre, MA
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617-964-1700
617-969-9054 fax

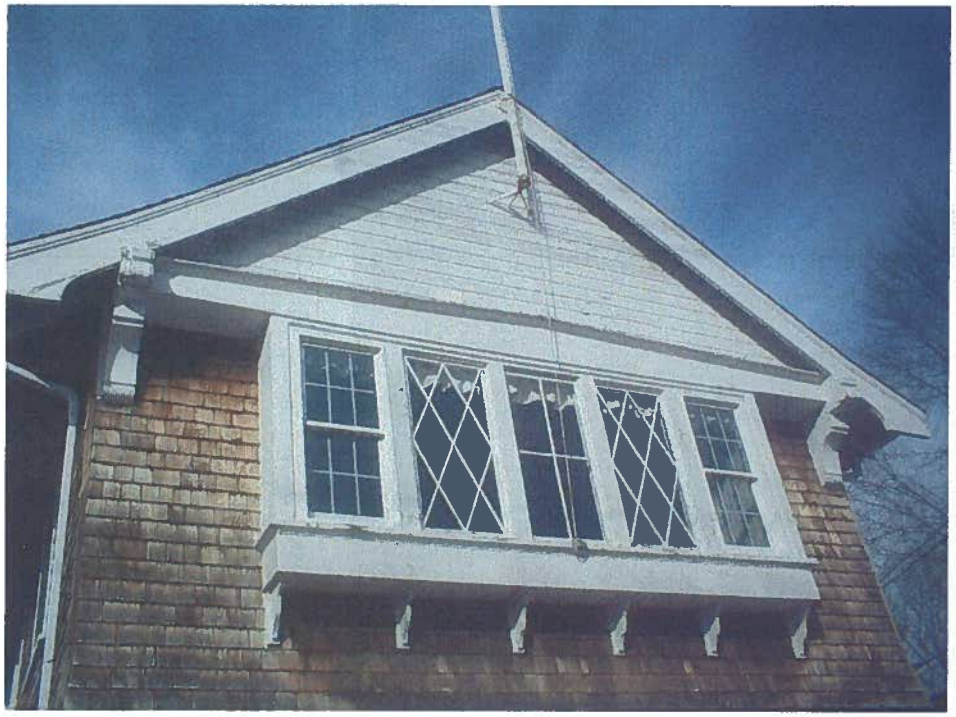
FIRE STATION 2
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

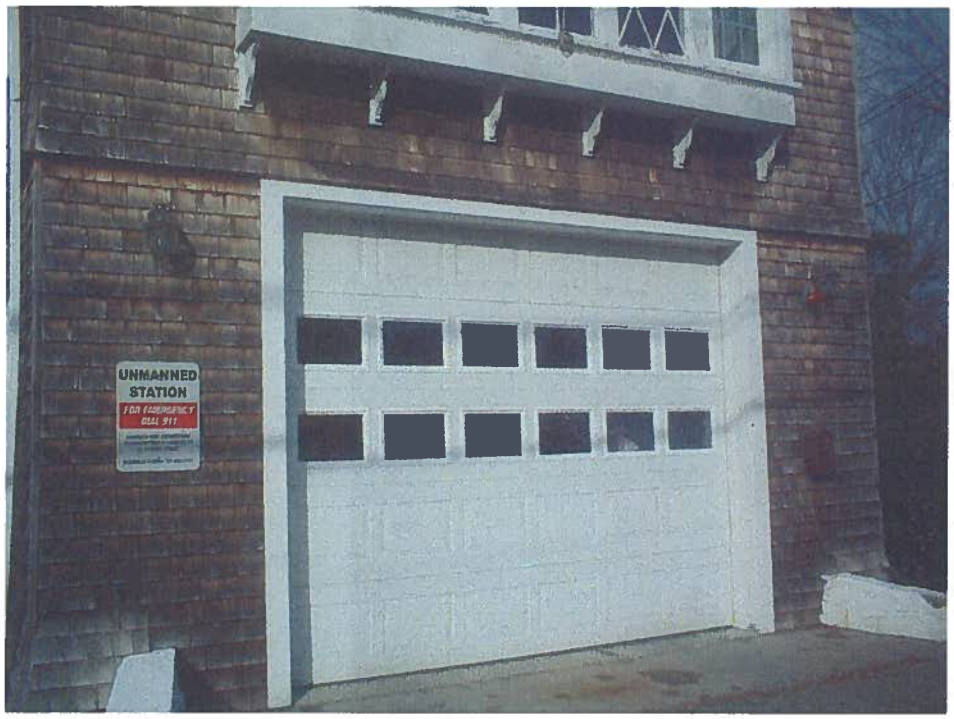
EXTERIOR PHOTOS

Exterior view from northeast direction.

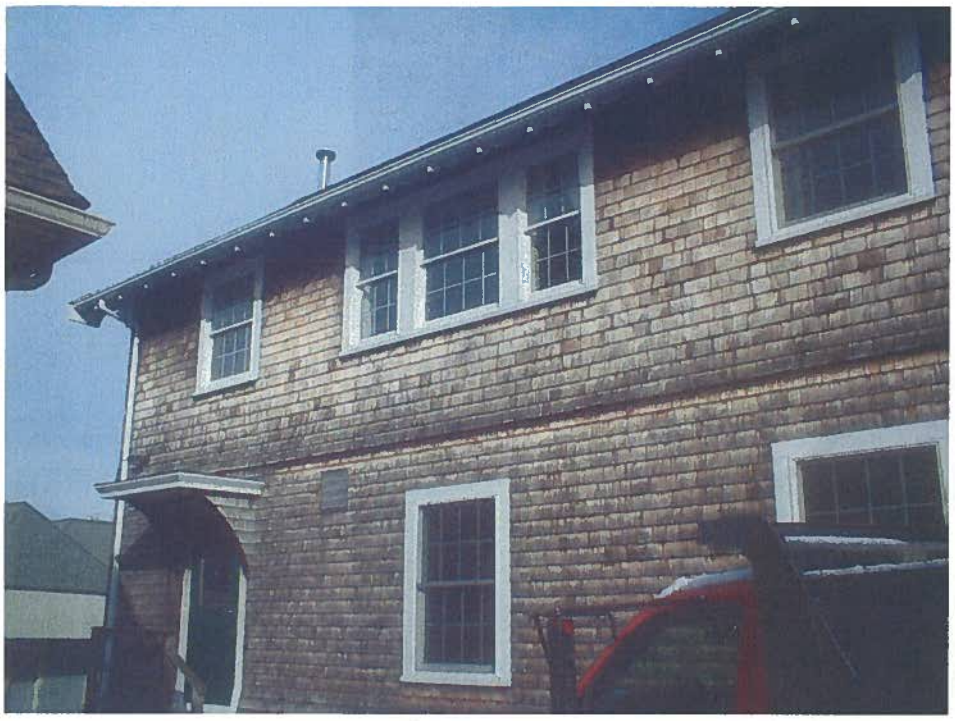
Exterior view of front elevation (facing street); single equipment bay.



Detailed view of upper windows, above fire apparatus bay. Three historic windows at center.

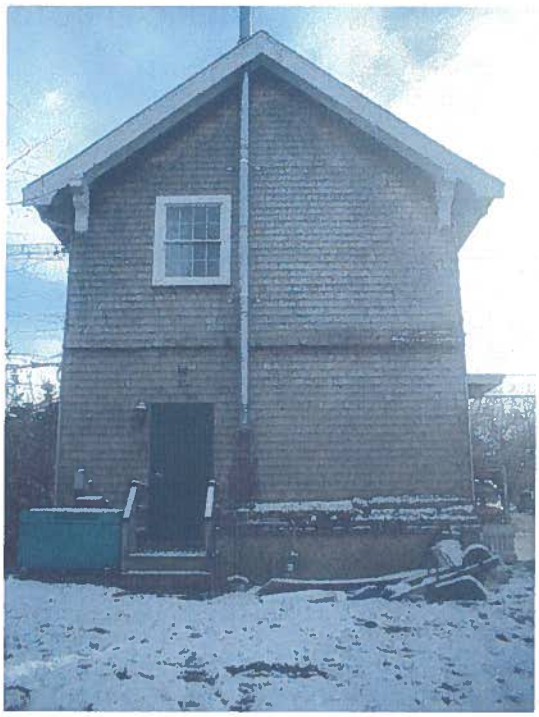


Detailed view of overhead door for fire apparatus, insulated.



Exterior view of southwest facade.

Detail view of main entrance for personnel on southwest facade.



Exterior view of back facade, west direction.

Exterior view of north facade.

INTERIOR PHOTOS

Interior view of kitchen area - upper level.

Interior view of upper level common room looking out of windows in southeast direction.

Interior view of common room - upper level.

Interior view of common room looking toward kitchen and bathroom area.

Detailed interior view of east facing, historic windows.

Section 03 - FIRE STATION 3

Building Summary

Locus Map - Town of Hanover

Address: 325 Circuit St.
Gross Area: 1,356 sq. ft.
Description of Site: Flat open site, near intersection of major cross-town road, but located on a residential side street. Bordered by wooded wetlands and open space.
Description of Building: This is a single story, concrete-block structure with a flat roof. The vehicle bays are adequate for smaller sized equipment. The building has no functional capacity for overnight personnel use; with no shower, no kitchen, no accessible elements, and no sleeping facilities. A wood frame temporary enclosure has been constructed inside one vehicle bay, towards the rear of the building, with couches and TV for instructional video use for fire-fighter training.
Function of Facility: Building is used as a supplemental equipment location for the Fire Department.
Agency or Department: Fire Department
Technical Construction Description: : Concrete block and flat roof building, on concrete foundation. Roof framed with open web steel bar joists and ribbed metal deck.
Valuation: $125,675

Immediate Needs:
(assuming maintaining existing use)
- Install improved exhaust air system at vehicle bays.
- Replace all windows.
- Install missing downspout at front elevation.
- Install new gutter.
- Replace residential exterior door with comercial grade door and security hardware..
- Install floor drains in apparatus bays (with code oil catch system).
- Install sprinklers, fire alarm system, and security system.
- Add insulation to the exterior walls and roof, for energy savings.

Near Term Needs:
(assuming maintaining existing use)
- Remove old bolt anchors at front elevation.
- Replace old suspended ceiling
- Reset one loose block at top of pipe chase at rear side of building.
- Repaint rear exterior door and remove early rust.
- Paint exterior.
- Relocate power pole in center of front apron; it is a problem for equipment to
- maneuver around.

Building Summary (continued)

Conditions Summary:
This is a generally outdated building that does not suit the needs of the Fire Department. It is an unattractive, energy inefficient building, poorly located, and is in generally poor condition.

This is a single story, concrete-block structure with a flat roof, and is used as a supplemental equipment location for the Fire Department. The vehicle bays are adequate for smaller sized equipment. The building has no functional capacity for overnight personnel use; with no shower, no kitchen, no accessible elements, and no sleeping facilities. A wood frame temporary enclosure has been constructed inside one vehicle bay, towards the rear of the building, with couches and TV for instructional video use for fire-fighter training.

Although the building is adequate for supplemental apparatus storage, is not located well for the needs of the Fire Department for use as a satellite facility serving the North end of Town.

The simple concrete-block and single-pane window construction of this building make it an 'energy hog'. Although, as an un-manned building, internal winter temperatures can be kept very low for only the needs of the equipment.

Recommendation
The building has no value for conversion to any other town use other than vehicular storage or service, and has no value for conversion to residential use. The site should be sold on the open market after demolition of the building and removal of any waste, for residential or commercial redevelopment. Funds from sale of the site could help support the construction of a new satellite Fire Station in a different location more suited to the needs of the Fire Department.

If the building is kept in service as a fire-department satellite storage building, consideration should be given to removing the non-code compliant temporary employee lounge area, and to replacing the windows and adding insulation to the exterior walls and roof, for energy savings.

Conditions Assessment — Site/Architectural

SITE
Plantings are in poor condition.
Paving is in fair condition; Power pole in side paved area make maneuvering apparatus a challenge. Parking area is adequate for current usage.

ARCHITECTURAL
Exterior:
- Power pole in side paved apron is a problem for equipment and pavement is deteriorating in one section.
- Desire for windows to be replaced; now are single-pane metal.
- Downspouts missing at front elevation
- Remove old bolt anchors at front elevation
- Residential-grade exterior door with knobs
- Reset one loose block at top of flue at rear side of building
- Replace sagging gutter
- Needs insulation of exterior walls and perhaps roof also.

Conditions Assessment

Architectural

Interior:

- No Kitchen; no staff overnight living area; cabinets at rear counter area are old and worn and should be refinished or replaced.
- Sink in counter at rear is non-accessible.
- temporary construction enclosing lounge area interferes with potential to store larger vehicles, and is constructed of combustible materials and without proper consideration for power, lighting, and ventilation
- Suspended ceiling is old
- Paint is generally old and in poor condition

Structural:

- No observed evidence of general structural failure; foundation, walls and roof structure all appear to be generally sound.

Building Code:

The building is presumed to have met the codes in force at the time of construction. The building type appears to be the equivalent of Type III A construction according to the current Code, with the exception of the temporary lounge area.

Accessibility:

- Non-accessible: toilet, thresholds and step at doors, kitchenette sink.
- Non-compliant door operating hardware.
- If there is no public function located here, and if there are no physically limited staff persons assigned to this location, then accessibility may not be an issue. However, a candidate for employment could file a complaint (under Federal ADA laws), if that person felt that the lack of accessibility was effectively discriminatory towards them, by preventing them from performing essential job functions, and thereby preventing them from being hired.

Energy & Environmental Sustainability:

- This building appears to have no, or minimal, insulation in the exterior walls. The windows are original steel single-glazed. Although the building is kept at minimal heat levels during the winter months as needed only to protect the equipment from freezing, there is still certainly a significant amount of energy being wasted through the poorly insulated building envelope. The amount of insulation on the roof deck is unknown.

Hazardous Materials:

- There are no hazardous materials known to exist in the building or on the grounds. However, due to the age of property, it is likely it is likely to have lead-based paint; this was not specifically
- investigated. For any future work that might disturb painted surfaces, lead testing should
- be carried out, and protocols should be used to prevent lead dust from being released. Lead content in window caulking and sealants should also be suspected.

Historical/Aesthetic:

- No historic value. Aesthetically in need of improvements.

Other issues:

- None

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:

- **Existing Domestic Water Service:** The existing building is currently served by a domestic water service. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the buildings domestic water needs. The water distribution system is original to the building and each subsequent renovation.
- **Existing Natural Gas Service:** There is currently a natural gas service to the building serving the gas fired unit heaters and the generator. This service enters towards the rear of the building.
- **Existing Sanitary Service:** The Stations sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the Station. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- **Fuel Oil:** There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:

- Water closets are floor mounted; tank type, vitreous china.
- Lavatories recess counter mounted vitreous china. Faucets are a combination of single lever handle and two lever handles.
- Apparatus bay floor drains are clogged and should be routed out to ensure adequate drainage. And verified to have oil-catch traps installed.

Domestic Hot Water Systems:

- The facilities domestic hot water is generated by a Rheem 30 gallon, 6 KW electric water heater which feeds all the buildings hot water needs. The water heater is in good condition.

Fire Protection Service:

- There is no fire protection coverage (sprinklers) currently at the facility.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems:
APPLICABLE CODES AND STANDARDS
The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS
- The existing building is heated by gas fired unit heaters. This equipment appears to be of the appropriate size for the facility with no problems noted and is in good condition.
- There is no exhaust system servicing the apparatus bay for vehicles.

Electrical Systems:
APPLICABLE CODES AND STANDARDS
The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS
- The building is served by an overhead 120/240volts, single-phase, 3-wire electrical service; capacity was noted as being100 amp main circuit breaker. The service equipment is located on the ground level of the building. The service equipment is in fair condition.
- The lighting throughout the facility consists primarily of a mix of surface mounted fluorescent and incandescent fixtures and metal halide fixtures in the apparatus bays. The lighting throughout the facility is in good condition. The light levels appear to be within recommended levels.
- There currently is no fire alarm system in the facility and one should be added.
- Site lighting is accomplished via building mounted photocell controlled wall pack type fixtures these fixtures appear newer and are in very good condition.
- There exists a standby generator to power the facility during a power outage. This unit is natural gas fired 6KW manual transfer by Winco. The unit appears to be in good condition.
- Life safety emergency lighting was not noted and should be provided via Emergency battery units with unit mounted emergency light heads.
- There is currently no security or controlled access system at the facility. It was noted by personnel that the addition of a security system is desired.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

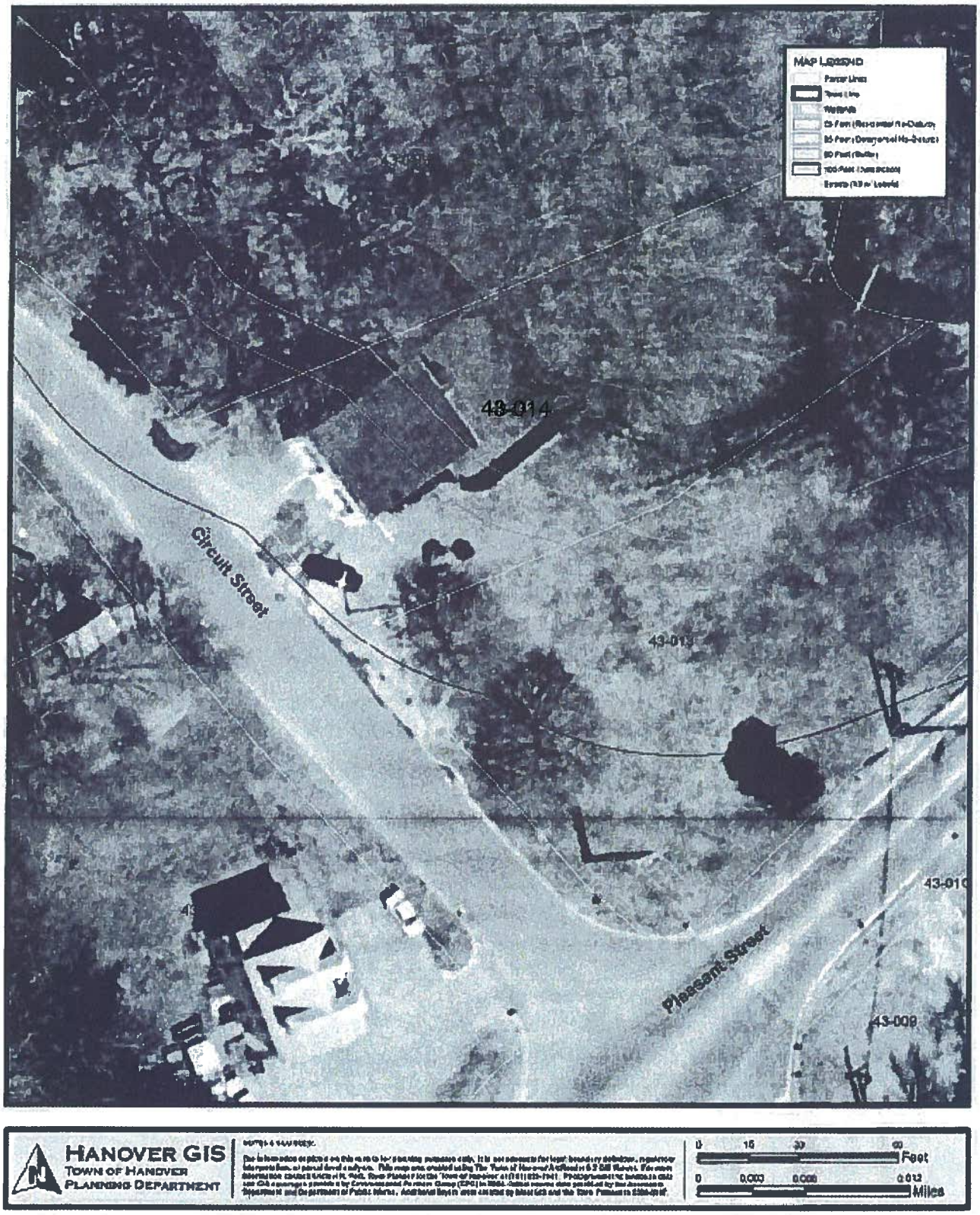
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. Most equipment is in good condition and meets the needs of the facility.

Plumbing systems throughout seem to be in good working condition however fixtures are older and in fair/poor condition and should be replaced.

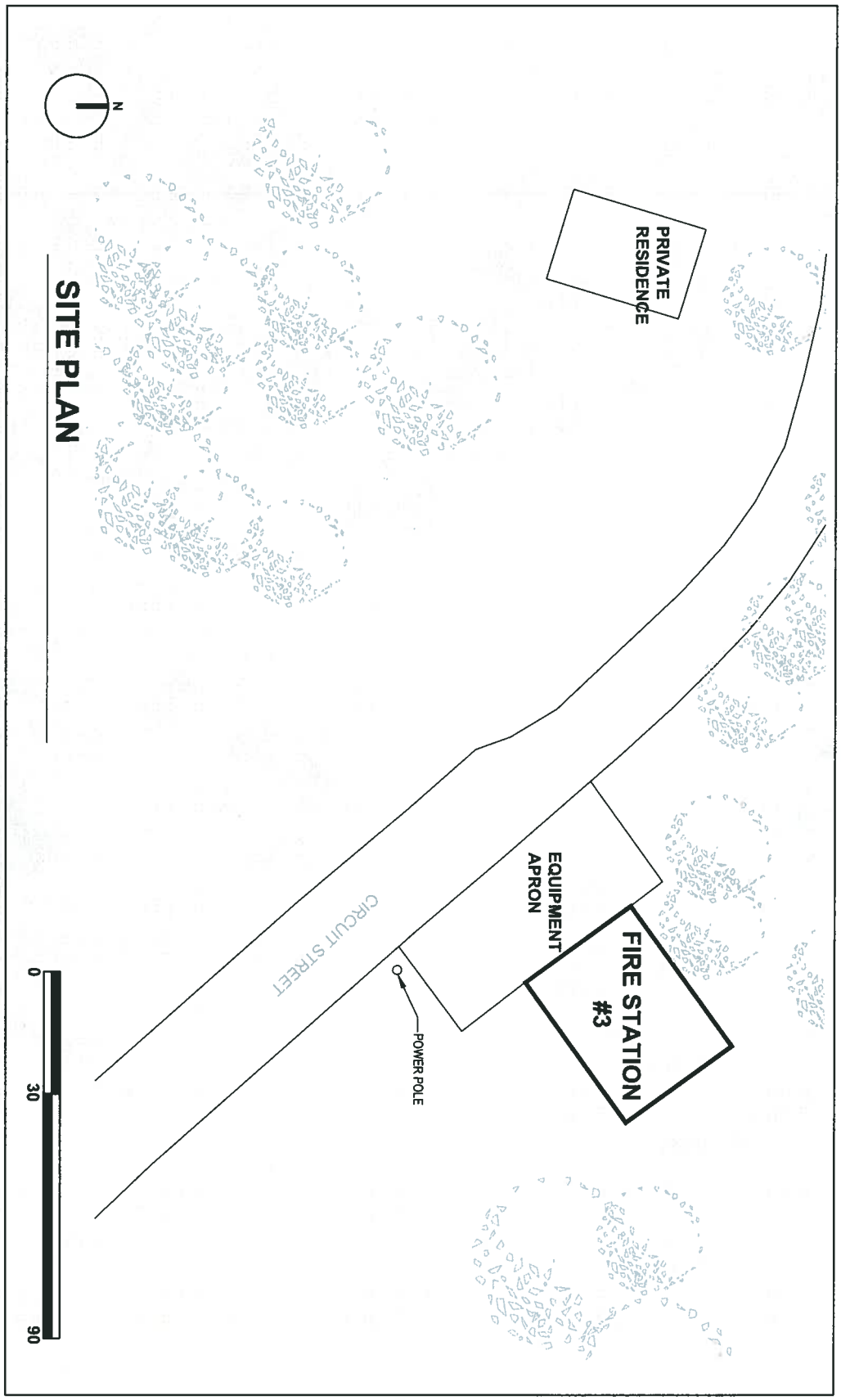
The Electrical systems appear to be in good condition and operating without issues. The service entry panelboard however is older and should be replaced. The lighting systems are in good condition, the addition of automated lighting controls in select areas should be implemented in order to meet current energy codes and to save on energy costs. Fire alarm system should be added as there is currently none in the facility. The emergency power generator is in good condition. Addition of a security system as well as the addition of emergency battery units should be implemented for both protection of personnel and equipment.

AERIAL PHOTO



Fire Station 3 is the building in the center of the photo, labeled 43-014.
(Source: Hanover GIS)

SITE PLAN



D·R·A

Drummey Rosane Anderson Inc.
Architecture
Interior Design

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141 Herrick Road
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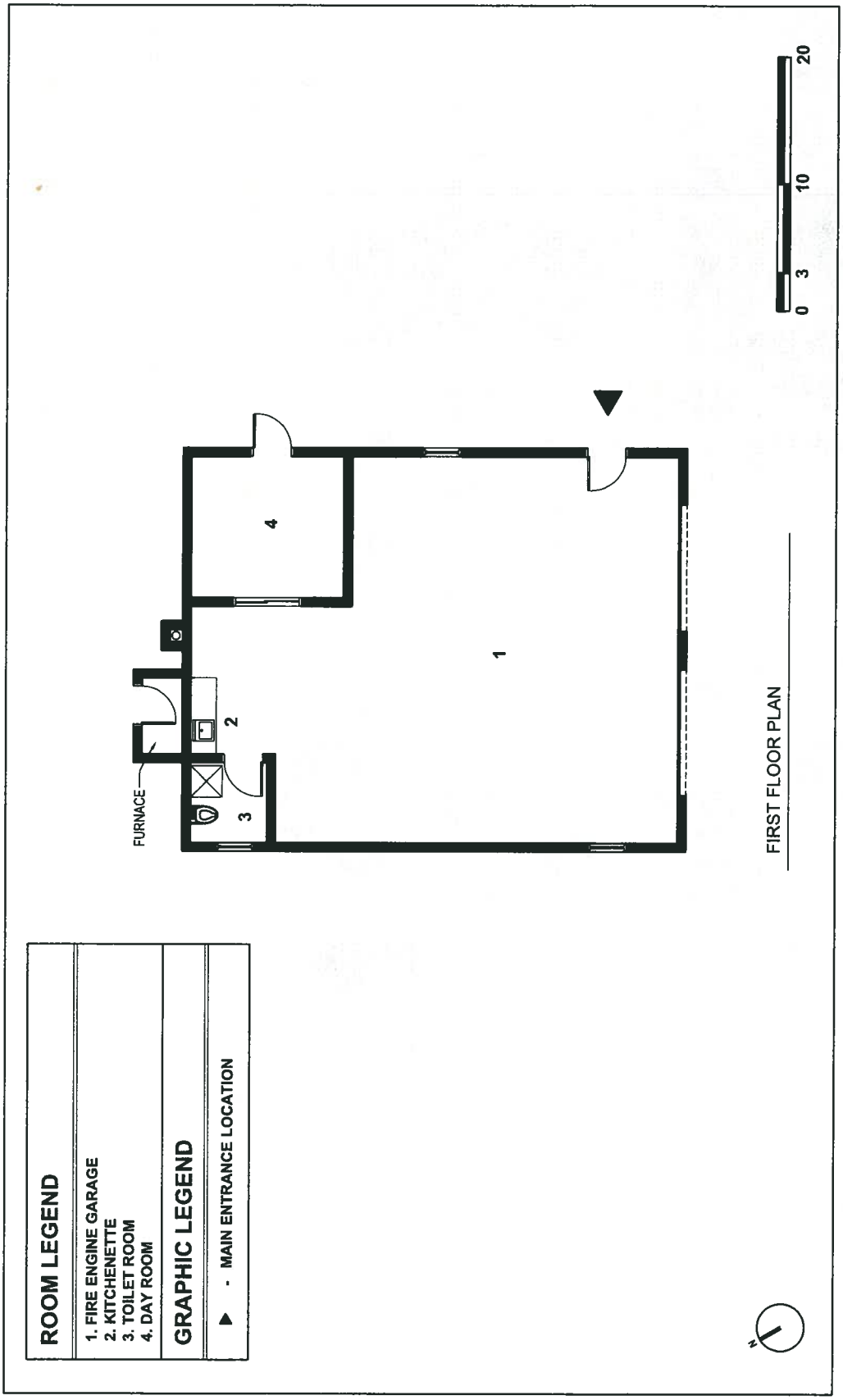
02459

617-964-1700
617-969-9054 fax

FIRE STATION 3
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLANS



D·R·A

Drummey Rosane Anderson Inc.
Architecture Interior Design

Colby Hall
141 Herrick Road
Newton Centre, MA
02459

617-964-1700
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FIRE STATION 3
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: CHM
Job# 09017.00

EXTERIOR PHOTOS

Exterior view of west corner.

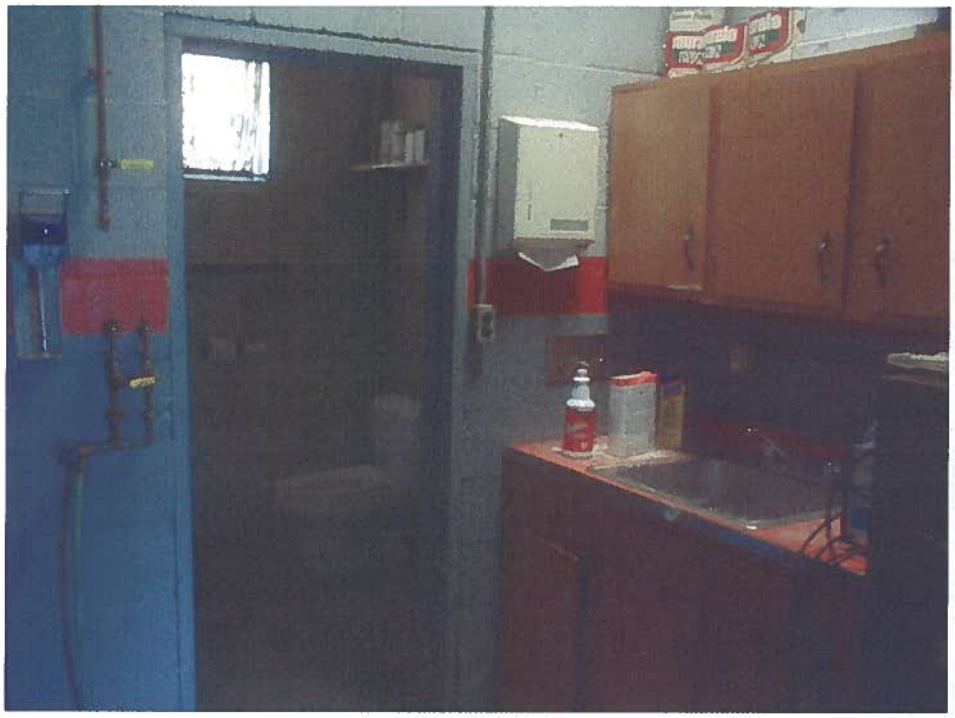
Exterior view of south corner - utility pole position causes problems.

Exterior view of southwest facade.

Exterior view of back facade, northeast direction.

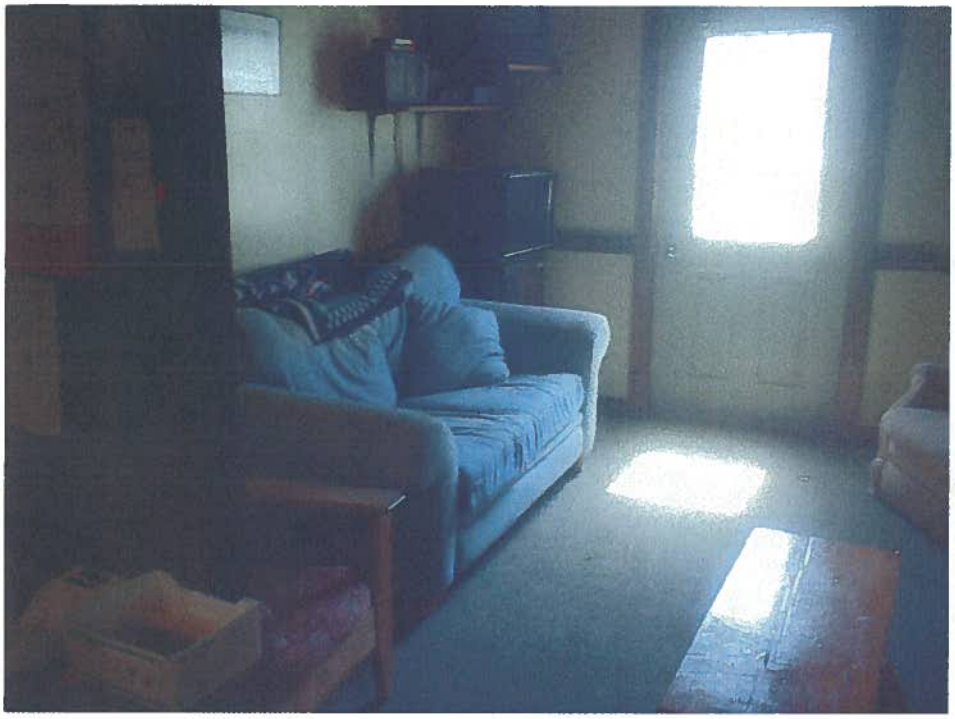
Detailed view of northwest facade.

INTERIOR PHOTOS



Interior view looking from kitchen towards the bathroom-non accessible.

Detailed interior view of ceiling.



Interior view of common room.

Detailed view of ceiling, electrical, and underside of roof structure.

Interior view of back of engine garage.

Section 04 - FIRE STATION 4, HEADQUARTERS

Locus Map - Town of Hanover

Building Summary

Address: 32 Center St.
Gross Area: 13,234 sq. ft.
Description of Site: Open site with adequate parking and large paved areas for fire-fighting equipment, adjacent to Town Hall. Flat topography.
Description of Building: 2-1/2 story (over tall bays), pitched shingle roof, large building in historic town center area. White vinyl 'wood' siding installed 1987. Recently renovated; 3 large-door equipment bays. Living spaces upstairs, communications on first floor, partial basement for mechanical equipment. Windows recently replaced.
Function of Facility: The main Fire Department building serving the Town of Hanover
Agency or Department: Fire Department
Technical Construction Description: Wood framed building. Type V-A construction
Valuation: $1,152,000

Immediate Needs:
- Install electronic keyless entry security control systems at all ground level doors, with data logging capability, activated by swipe card or other similar system.
- Replace the overhead doors
- Replace two broken windows in middle bay overhead door at the back.
- Re-insulate entire attic floor.
- Add additional air-cooling capacity for the upper level living spaces.
- Install sprinklers; desired, particularly in equipment bay area. Desires auto-extinguishing system on stovetop in dayroom upstairs.
- Verify ability of emergency generator to perfomr adequately in an emergency situation.
- Add fire detectors in the attic.
- Add two additional cameras to the security system.
- Additional heating at the first floor bathrooms needed.

Near Term Needs:
- Brace exhaust flue.
- Repair siding in damaged areas.
- Repair catch basin to prevent ponding on west side of entry drive.

Building Summary (continued)

Conditions Summary:
This is the main Fire Department building serving the Town of Hanover. It includes three large apparatus bays, equipment storage and maintenance facilities, offices, dispatch center, and sleeping and living spaces for on-duty fire-fighters. The building is relatively recently constructed, and appears to meet all current codes and regulations, with the exception of accessibility issues noted below.

The Fire Department maintains 3 other satellite buildings, with various equipment items located at those un-manned facilities; all response calls are dispatched from this main building, which is geographically centrally located within the Town, and is near to the Town Hall.

There is no elevator in the building, and there is a large meeting room on the upper mid-level. Public meetings should not be held in this space, due to the inability of some people with physical limitations to use the stairs. Lower-level spaces are accessible to the public and to staff. If a person is hired by the Town to work in this building, and if that person's 'essential job functions' would normally require them to use spaces on the upper levels, then an accommodation would need to be made in order to allow that person to perform their job role adequately, under the rules of the American with Disabilities Act (ADA). Such modification could even require that an elevator be installed, if other means do not make a reasonably effective 'accommodation'.

There are two 'most important' issues at this building that should be addressed:

First, there is evidence of moisture damage from above the upper floor. The assumption is that this damage is from a leaking roof. However, it was also noted that ventilation louvers have been blocked up at the attic level in response to wind-blown rain penetration during occasional storms. This may have caused a condensation problem on the underside of the existing roof, due to inadequate fresh air ventilation.

Second, the Fire Department reports over-heating of the upper floor level during the summer months, resulting in very uncomfortable conditions for on-duty fire-fighters. A supplemental A/C unit has been installed in the day room. Again, this could be caused by blocked ventilation in the attic space.

Recommendation:
Complete removal of all fiberglass batt insulation from the attic, and from vertical upper level walls, where accessible from behind. Replace attic insulation with a system of baffling to hold the insulation in place, and new blown-in cellulose, or other suitable products. Inspect ventilation system for proper performance and make any necessary repairs. Replace vertically oriented fiberglass batts with properly installed foam-in-place insulation, for superior energy performance. Schematic Design for air-cooling on the upper level, and preliminary pricing.General on-going maintenance, following the 'immediate needs' repairs as noted above.

Conditions Assessment

Site/Architectural

SITE

- Paving is in generally good condition.
- Parking capacity is somewhat restricted for visitors.
- Front Parking Lot: The bituminous concrete berm that delineated a landscaped island over the below grade irrigation well was removed to improve site circulation. The landscaped area now consists of crushed stone. The Fire Department should confirm that the well structure is capable of supporting vehicle loads. If it is, the area should be paved with bituminous concrete and incorporated into the formal parking lot. If the structure is not capable, and cannot be modified to support vehicle loads, the area should be protected from vehicles to prevent vehicles from parking/driving over the well. The well should also be inspected to ensure no damage has occurred to date.
- Trench at Driveway: The Fire Department reports that the pavement over a utility trench at the fire apparatus' driveway periodically settles. Should the trench continue to settle, the utility trench should be exposed and covered with an H-20 loading compliant concrete cap. This should mitigate future settlement concerns.
- Catch Basin Puddles: In several areas of the parking lot, there are depressions in the pavement several feet from catch basins. This is likely a result of poor soil compaction near the structures. Presently, this does not appear to be a significant issue. However, should the parking lots be resurfaced, care should be taken to address these depressions prior to placing the new pavement.
- Light Poles: The ornamental bases on the light poles are rotted and the bolts within the bases are beginning to rot. The ornamental bases should be repaired/replaced to ensure further damage to the light poles is mitigated.
- Flag Pole: The flag pole requires repainting.
- Pavement Berm: The pavement berm is damaged throughout the driveway and parking lots. The berm should be repaired to ensure that the stormwater management system can function per design. Stormwater is likely breaching the broken berm and flowing into unintended areas.
- Parking Lot Grading: The Fire Department reports that the flat grades in the side/rear parking areas hold water and cause minor ponding and icing conditions. When the parking lot is resurfaced, care should be taken to address the flat areas prior to placing the new pavement.
- Catch Basin Frame & Grate Settlement: There is a catch basin in the rear parking area that has settled. The frame and grate should be repaired and reset. The areas around the catch basin may require some regrading.

Exterior:

- Vinyl 'wood' siding was installed in 1987.
- Windows were replaced over recent years and new windows are energy-efficient and in good condition.
- Missing gutters in multiple area on both left and right sides
- Exhaust unit with dented top piece on right side
- Two broken windows in middle bay overhead door at the back
- Exhaust flu not adequately braced
- A little damage to side of 1st bay at front
- Flapping siding on 2nd bay at front

Conditions Assessment — Architectural

Exterior (continued):

- Damaged siding on right side of 3rd bay at front
- Sagging section of roof on right side (small area; minor, non-structural)
- Loose vinyl siding piece at front
- The Fire Department reports that the overhead doors consistently malfunction, are worn-out. and need to be replaced.
- Roof leaks. Ice dams, and possible condensation in attic. Roofing replaced 6 years ago; some attic vents covered due to storm infiltration.
- Trench in driveway (by phone company) keeps collapsing; DPW fixes it annually.
- Some ponding on west side of entry drive; catch basin not functioning.
- Some tired finishes in various areas.

Roof:

- The existing roof is asphalt shingles, and was entirely replaced only 6 years ago, and appears to be in good condition when viewed from ground level. The building appears to have been designed to have gutters along the roof edges. The gutters have been removed, and rain apparently just drips over the edges. This does not appear to be causing moisture problems around the perimeter of the building, and so may not be a problem, and eliminates the need to maintain gutters against damage from sliding snow and ice. It was reported that gutters that remain on the building have been fitted with heating elements; this was not observed during our site visit

Interior:

- General interior conditions of finishes is good, with some local areas where painting should be done on walls and ceilings, and where some floor tile shows signs of wear.
- Some tired finishes in various areas.
- Some minor water stains at ceilings in localized areas. See notes below about attic insulation and ventilation.
- There is no elevator in the building.
- The residential upper floor level is properly designed to accommodate both male and female fire-fighters.
- Upper level living spaces get hot in the summer, need to add additional air-cooling capacity.
- No Sprinklers; sprinkler system is desired in the equipment bay area, and an automatic extinguishing system on the stovetop in the day room upstairs.
- Verify ability of emergency generator to perform adequately in an emergency situation.
- Fire alarm system has no detectors in attic; needs to be expanded.
- Security system needs two additional cameras.
- Additional items noted: apparatus bay drains cleaned; older lighting throughout building, and inadequate heat at first floor bathrooms.
- The attic and eave areas of the building were observed to have fiberglass batt insulation. The attic is truss framed, with about a 9-10" space below the bottom chord of the trusses, and the suspended ceilings below. The friction-fit insulation batts are in very poor condition, having slipped out of position or been moved in several locations, leaving large gaps through which heat, and moisture-laden warm air, can escape into the attic area. This is the likely source of condensation on the underside of the cold roof deck, which then drips back down and appears to be 'roof leaks' on the inside of the upper level of the building.

Conditions Assessment (continued) Architectural

Interior (continue):

This same insulation problem is probably also a partial cause of the overly hot upper floor during the summer, allowing overheated attic air to impact upon the living spaces below. At the eaves, the same fiberglass batt was observed, in the vertical orientation of the outside of the inner walls, with the outer wall of the building uninsulated. These fiberglass batts are sagging in many locations, again leaving uninsulated gaps in the thermal envelope. (Fiberglass is a poor insulation choice when compared to newer products that do not have the same propensity to leave uninsulated gaps.)

Structure:

- The structural frame of the building appears to be in good condition, with no observed evidence of any general structural failure.
- Surprisingly, the areas of the building away from the equipment bay appear to be totally wood framed, and the building therefore seems to be Construction Type V-A.
- The equipment bay has a poured concrete foundation and partial basement.
- The administrative side of the building is on a slab-on-grade foundation.

Building Code:

- No code deficiencies noted. See discussion below about the lack of an elevator with regard to ADA workplace regulations.

Accessibility:

- The building does not have an elevator. Public functions on the ground level are accessible, with accessible public toilets provided.
- Upper levels of the building are not accessible, and public meetings should therefore not be held in the upper level meeting room. This should be reflected in a policy statement in the permanent files of the Town. Also included in such an accessibility policy plan, should a statement confirming the willingness and ability of the town to make reasonable accommodations for any employee whose 'essential job functions' might require them to utilize resources located in non-accessible upper or lower levels of the building.

Energy & Environmental Sustainability:

- As noted above, there seems to be a good opportunity to improve the energy efficiency of this building by re-insulating the attic and upper level exterior walls. It is likely that the lower level exterior walls are also insulated presently with fiberglass batts, however these wall spaces are hidden from view, and re-insulation would not be possible without removing all of the interior finishes. This work would not be cost effective at this time. However, we would recommend that a thermal scan be done of the building this winter, while the heat is on, to document the existing conditions and find sources of unusual heat loss. At some specific location, it may prove wise to disturb the interior wall surfaces in order to make specific thermal envelope repairs. If the re-insulation of the attic proves successful, then it may be that, with the attic fans operating at night in the summer time, added cooling of the upper level may not be necessary. This would also prove to be a significant energy-savings.
- Windows are thermally efficient, and in good condition.

Conditions Assessment (continued) — Architecture

Historical/Aesthetic:

- The building is finished on the exterior with white vinyl fake-wood siding, in an attempt to make it blend in with the historic building district in the Town Center location. This building has no particular historic value, and the aesthetics of the building are acceptable but undistinguished, and the scale of the building is too large to really look like an historic clad wooden building, so that the vinyl siding looks somewhat inappropriate to the scale of the building.

Other issues:

- Central location is good for fire-fighting response times.
- Central location near Town Hall is good for administrative needs.
- Access to main roads is adequate.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:

- **Existing Domestic Water Service:** The existing building is currently served by a domestic water service which enters the boiler room. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the Station's domestic water needs. The water distribution system is original to the building.
- **Existing Natural Gas Service:** There is currently a natural gas service to the building serving the boiler, hot water heater and generator. These services enter the rear of the building at the boiler room.
- **Existing Sanitary Service:** The facilities sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the facility. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- **Fuel Oil:**There is currently one on site above ground oil storage tank utilized for waste oil.

Plumbing Fixtures and Specialties:

Existing plumbing fixtures are as follows:

- Water closets are wall mounted; with auto flush valves, vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung vitreous china. Faucets are a combination of single lever handle and two lever handle type.

Domestic Hot Water Systems:

Existing Domestic Hot Water System:

- The buildings domestic hot water is generated by a gas fired water heater which feeds all the stations hot water needs. The water heater is in good condition.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):
Fire Protection:
- There is no fire protection coverage (sprinklers) currently at the facility.

Mechanical Systems:
APPLICABLE CODES AND STANDARDS
The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS
- The existing building is heated by a single hot water boiler. The hot water boiler is a Burnham with its burner currently operating on Natural gas and a capacity of 313 MBH. This equipment is approximately 22 years old and in good condition. Despite its age and condition it was expressed by building personnel that this equipment has been problematic for a number of years in its ability to supply adequate heat to some areas of the building. It is not known if this is due to the equipment, controls or distribution.
- The present Heating and Ventilating systems consist of finned tube radiation, unit ventilators, roof top units, ceiling mounted split systems and exhaust systems.
- Unit Ventilators are approximately 20 years old manufactured by Carrier. They have begun to fail and repairs are becoming more frequent as they are at the end of the useful life. It has also become difficult to obtain repair parts for repairs when needed, obtaining these parts may become more of an issue as more units fail and require replacement parts.
- A number of areas within the building are served by independent split systems including the day room and watch room. The dorm area is served by overhead A/C system. The office area HVAC unit has been problematic with frequent breakdowns.
- Additional cooling capacity is requested on the upper floor level; it should be verified that ventilation of the attic is sufficient before undertaking this measure.

Electrical:
APPLICABLE CODES AND STANDARDS
The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements, including the Bureau of School Facilities.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical (continued):

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 208/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 600 amps. The service equipment is located on the ground level of the building. The service equipment is in very good condition.
- There are a number of electrical panels located throughout the facility. These panel boards all are in good condition.
- The lighting throughout the facility consists primarily of 2' x 4' acrylic lens recessed fixtures. The lighting throughout the facility is in good/fair condition. The light levels appear to be within recommended levels.
- The fire alarm system is a Honeywell Silent Night 5 zone system. There are manual fire alarm pull stations and horn strobes located throughout the building. Heat and smoke detectors are located in select areas in the building. It was noted by building personnel during the walk-thru that the system had been operating problem free.
- Site lighting is accomplished via building mounted lights and a number of pole mounted flood lights.
- There exists a 60KW standby generator at the facility that covers all the life safety items within the building. This unit is complete with automatic transfer switch and distribution panel. The generator operates on natural gas as a fuel source. The Fire Department requests independent testing to verify that the main emergency generator is adequately sized to handle the loads that will be imposed upon it in the event of a long-duration emergency situation in the Town. (The town reports experiencing a high occurrence of power outages)
- Broken Security light at front door.
- Life safety emergency lighting is provided via lighting throughout the facility being wired to the emergency generator as well as battery powered exit lighting units.
- There is currently no controlled access or security system installed at the facility. The front door has an electronic strike and buzzer at the inner door activated by a release switch in the adjacent dispatch office to limit access into the facility. Concerns were expressed that the facility is not always staffed, and both controlled access and security cameras would provide the needed security. The fire department administration desires to have electronic-controlled access devices at all ground-level doors, with data-log monitoring. Cameras are needed at each of the three building access doors and one across the bays for monitoring as the apparatus bay doors are often left open on summer evenings to help cool the building.

MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. Some equipment such as the unit ventilators have begun to experience problems due to their age and should be replaced. The boiler although still having some life left has been problematic and should be examined along with the overall HVAC systems in order to determine the causes of ongoing heating and air conditioning problems.

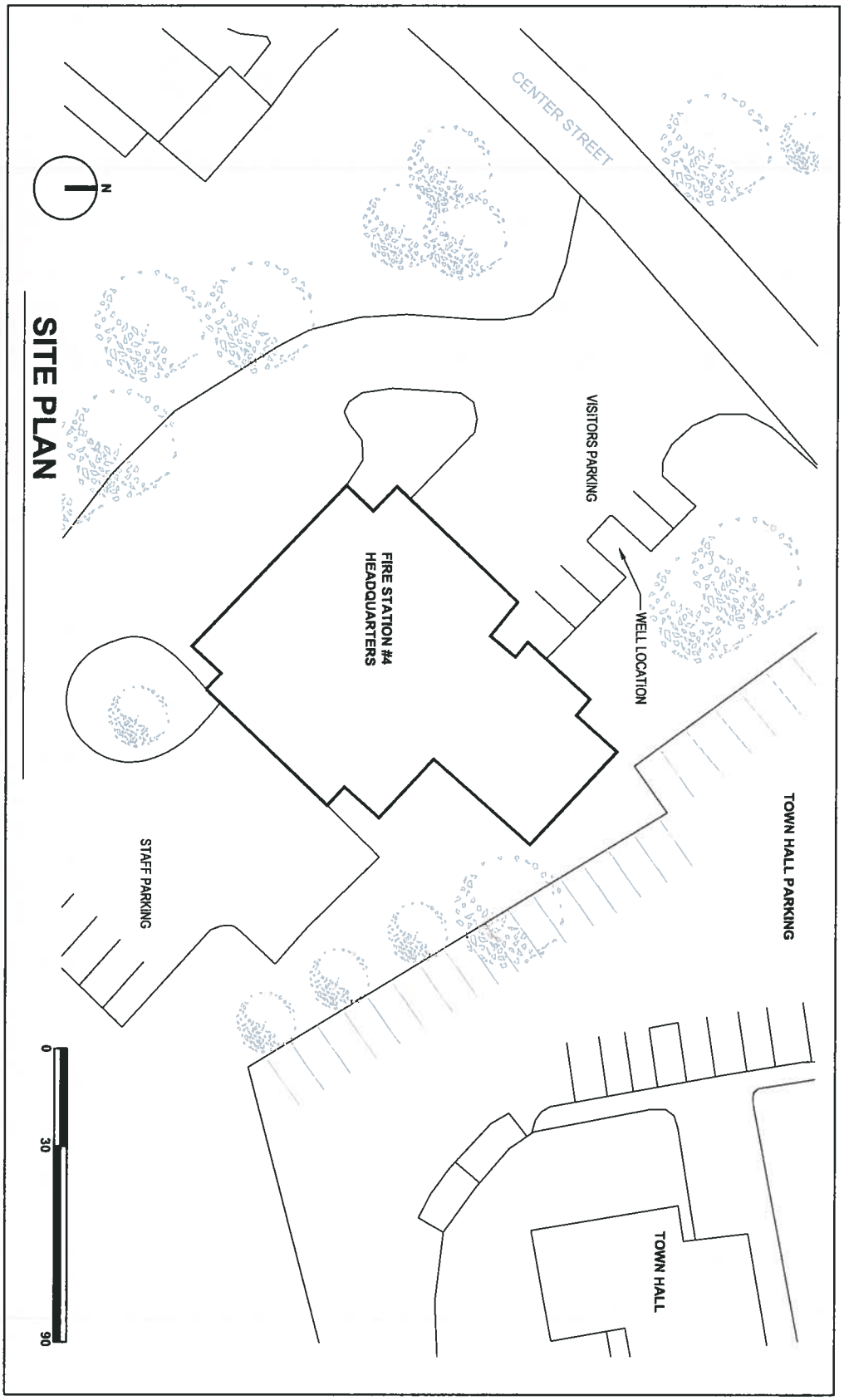
Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure.

The Electrical systems appear to be in good condition and operating without issues. The lighting systems are in good condition, the addition of automated lighting controls in select areas should be implemented in order to meet current energy codes and to save on energy costs. Fire alarm system, emergency power generation and exit lighting systems appear to be in good condition. A new security system should be installed as none currently exists.

AERIAL PHOTO

Fire Station 4, Headquarters is the building in the left of the photo, labeled 54-089.
(Source: Hanover GIS)

SITE PLAN



SITE PLAN

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TOWN BUILDING STUDY
Hanover, Massachusetts

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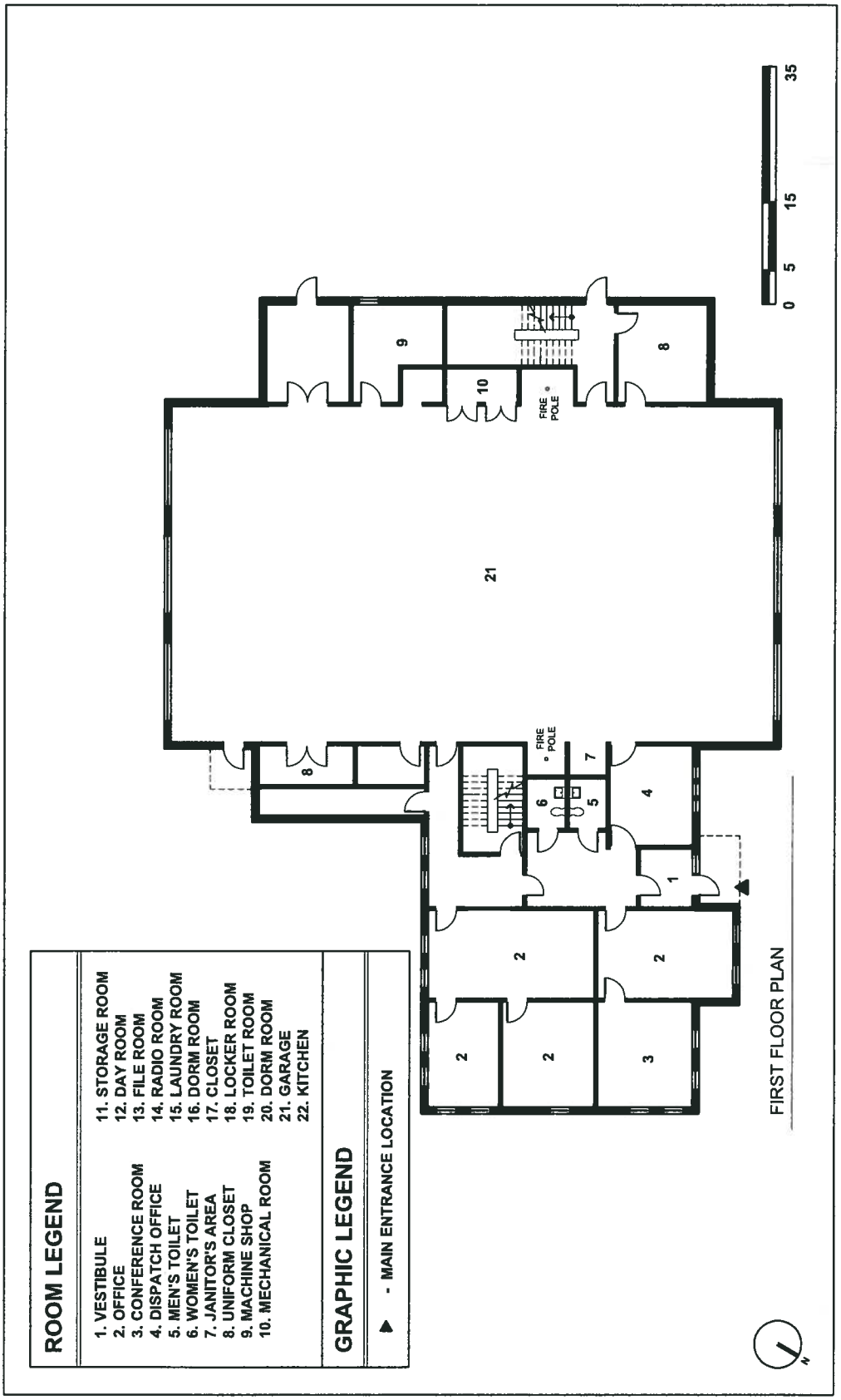
ROOM LEGEND
1. VESTIBULE
2. OFFICE
3. CONFERENCE ROOM
4. DISPATCH OFFICE
5. MEN'S TOILET
6. WOMEN'S TOILET
7. JANITOR'S AREA
8. UNIFORM CLOSET
9. MACHINE SHOP
10. MECHANICAL ROOM
11. STORAGE ROOM
12. DAY ROOM
13. FILE ROOM
14. RADIO ROOM
15. LAUNDRY ROOM
16. DORM ROOM
17. CLOSET
18. LOCKER ROOM
19. TOILET ROOM
20. DORM ROOM
21. GARAGE
22. KITCHEN
GRAPHIC LEGEND
- MAIN ENTRANCE LOCATION
FIRE POLE
FIRST FLOOR PLAN
0 5 15 35
FIRE HEADQUARTERS
TOWN BUILDING STUDY
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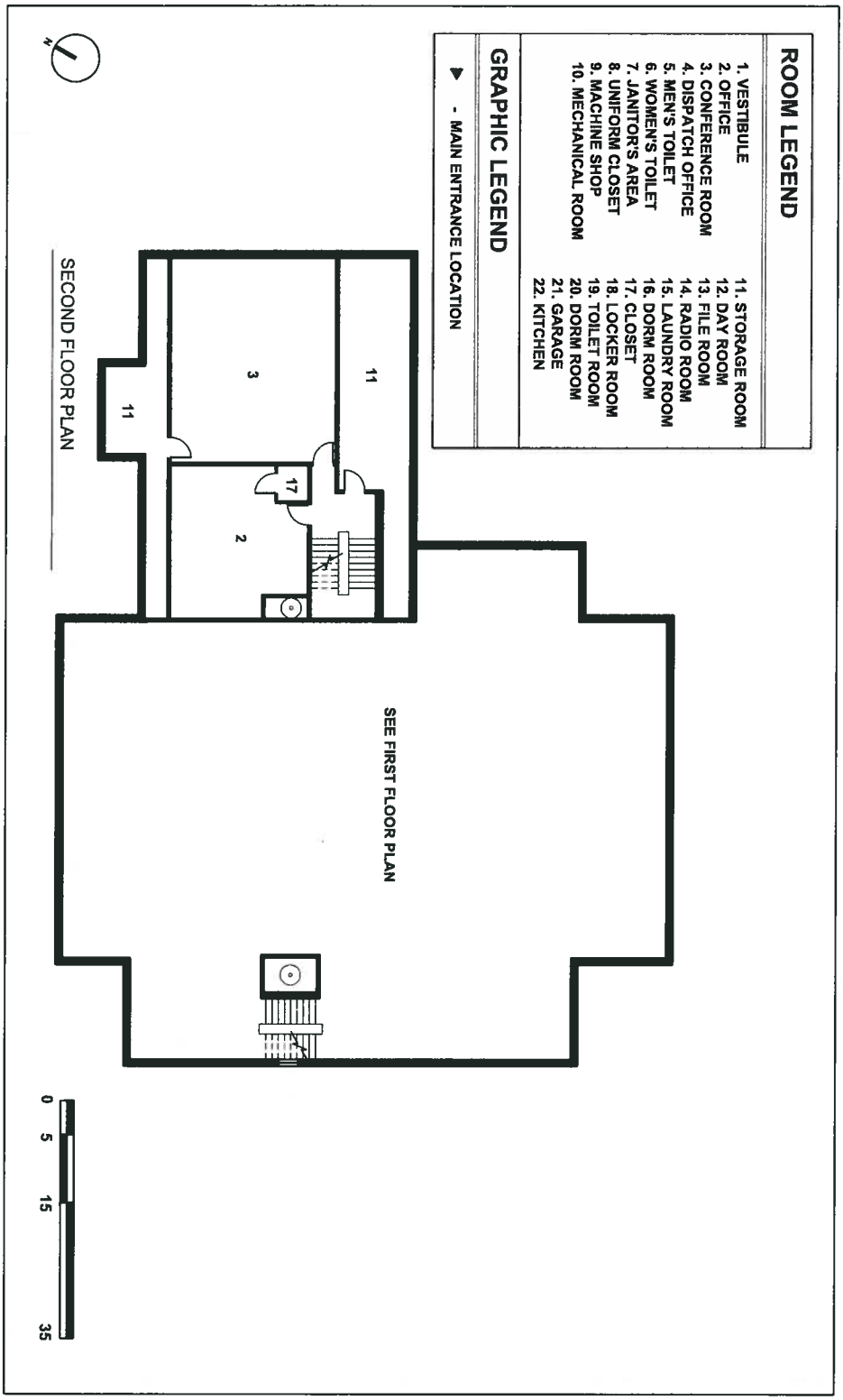

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TOWN BUILDING STUDY
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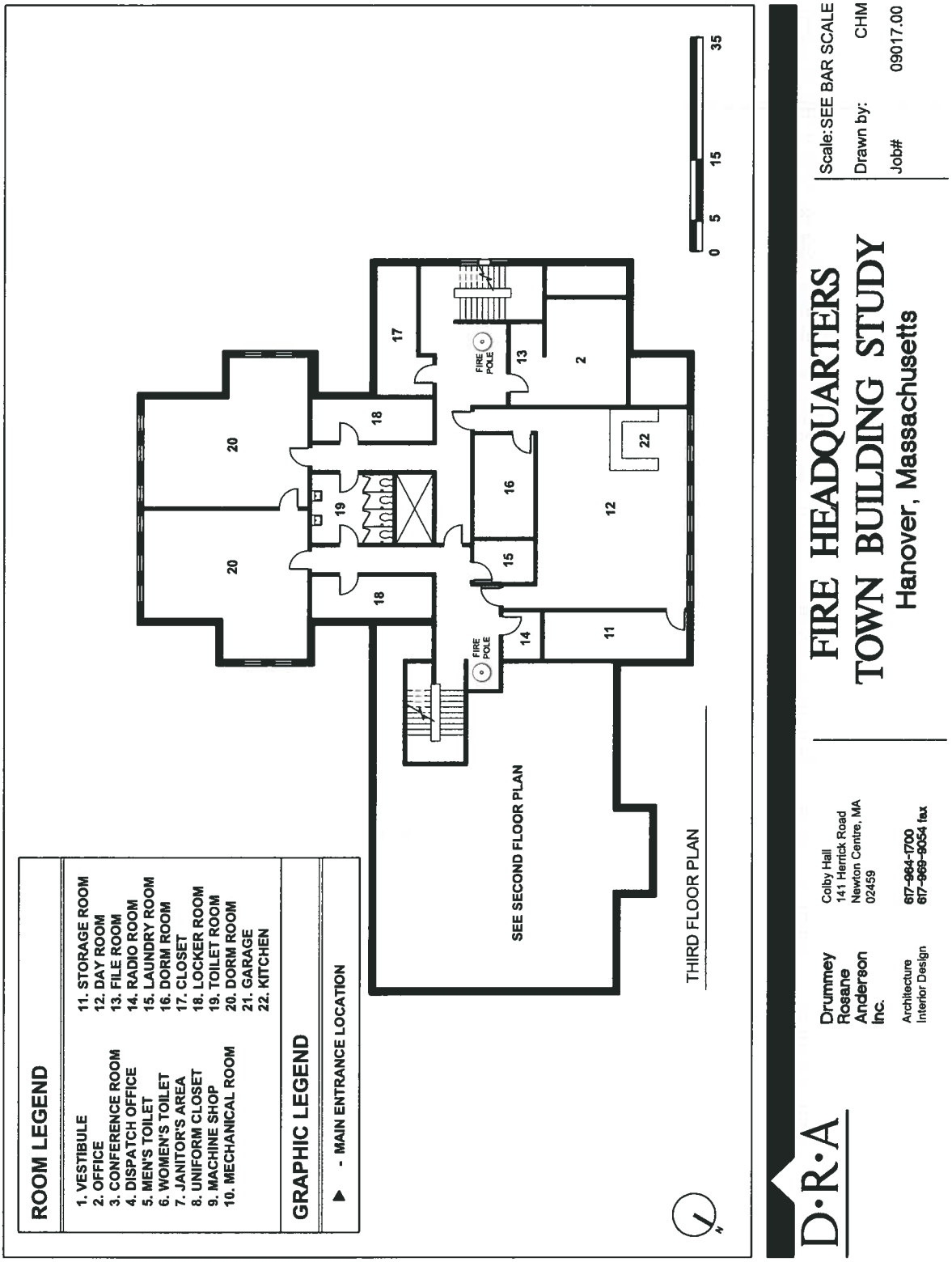
FLOOR PLAN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17. CLOSET
18. LOCKER ROOM
19. TOILET ROOM
20. DORM ROOM
21. GARAGE
22. KITCHEN
GRAPHIC LEGEND
- MAIN ENTRANCE LOCATION
SEE SECOND FLOOR PLAN
FIRE POLE
FIRE POLE
THIRD FLOOR PLAN
0 5 15 35
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FIRE HEADQUARTERS
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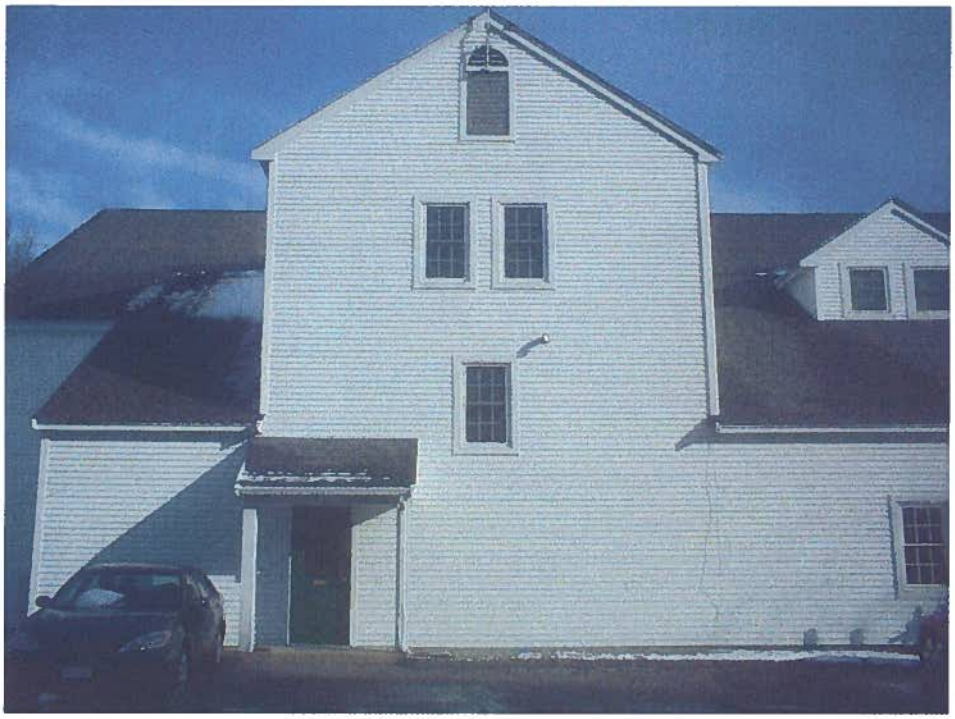
EXTERIOR PHOTOS

Exterior view of north corner.

Detailed view of main entrance of northwest facade.

Detailed view of entrance to apparatus bay.

Exterior view of west corner.



Exterior view of southwest facade.

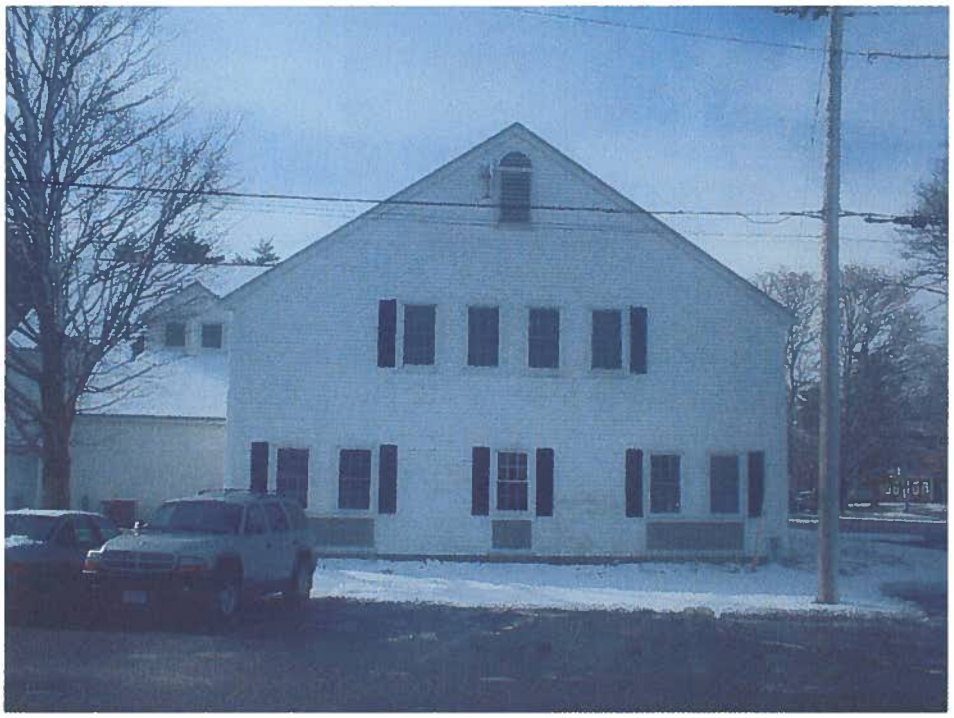
Exterior view of southwest facade.

Exterior view of back entrance to apparatus bay.

Exterior view of back southeast facade.

Detailed view of exterior east corner,heat vent needs bracing.

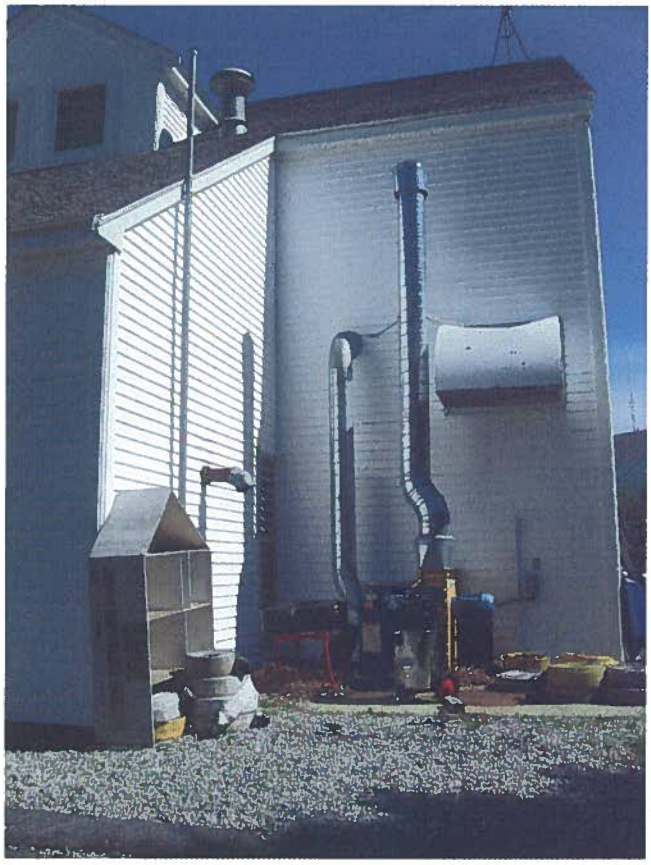
Detailed view of exterior east corner.



Exterior view of northeast facade.

Detailed view of main entrance.

Detail at vent pipes-heat pipe needs bracing.

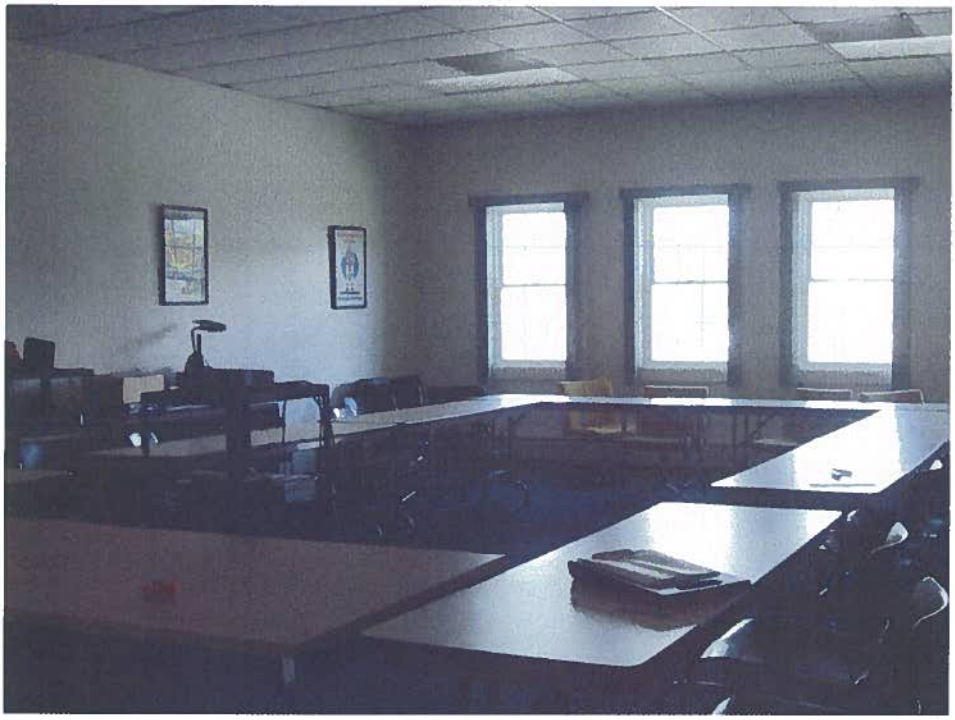


Exterior view of south corner.

INTERIOR PHOTOS

Interior view at exposed insulation.

Interior view of storage space, wood frame construction is visible.



Interior view of conference room.

Interior view of storage space.

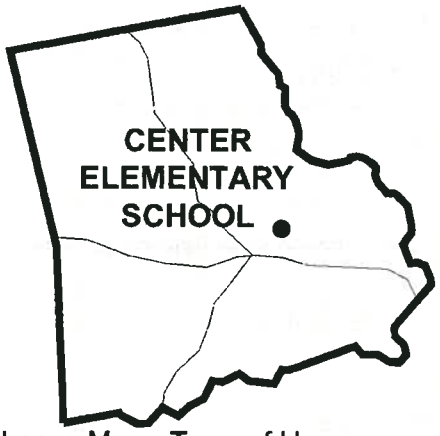
Interior view of kitchen.

Interior view of fire pole.

Interior view of Day Room and Kitchen on third floor.

Interior view of Day Room on third floor.

Section 05 - Center Elementary School



Locus Map - Town of Hanover

Building Summary

Address: 65 Silver St.
Gross Area: 49,894 sq.ft.
Description of Site:
The building is located near, but not within, the center historic district. It is adjacent to a religious building, and located on a two-lane street with moderate to heavy traffic. The site is bordered by a combination of open recreational space, and wooded areas, with a large cemetery across the street.

Description of Building: Single story elementary school with two-story classroom wing, near town center historic district. Constructed 1954. Addition 1962. Roof re-done in 1991. Gymnasium wing addition in 2000 . Located adjacent to the Sylvester School. This school is K-2; Sylvester is grades 3-4
Function of Facility: Elementary School, Grades Pre-K through 2nd
Agency or Department: Hanover Public Schools
Technical Construction Description: Brick Masonry building on poured in place concrete foundation; single story in most areas, with two-story classroom wing. Roof and upper floor framing are assumed to be steel frame.
Valuation: $6,511,000

Immediate Needs:
- Auditorium air system improvements to fix noise problems, and to improve energy efficiency. The existing system must be turned off in order to allow any speaker to be heard in the auditorium, making school assemblies uncomfortable.
- Improved and expanded parking and vehicular circulation.
- Intercom and clock system upgrades.
- Building HVAC management system updating.
- Roof replacement.
- Accessibility improvements.
- Repair exit door at gymnasium; see 'building code' section of this report.
- At room #12, investigate inside wall to see if there is a clogged or split roof drain leader in this location. Then make finish repairs. (outside pointing and sealing of cracks was done in the summer of 2010.)

Near Term Needs:
- Exterior brick masonry repairs at certain locations.
- Asbestos floor tile and mastic removal.
- Repair basketball hoops and related play areas.

Building Summary (continued)

Conditions Summary:
The Center Elementary School serves 350 students from Pre-K through 2nd grade, and is administratively partnered with the Sylvester School. (Sylvester serves grades 3 and 4, and is located adjacent.)

The building was originally constructed in 1954, has seen periodic renovations and additions, with the most recent large gymnasium, classroom and music rooms addition on the rear (east) of the building completed in 2000. Re-roofing of the building was completed in 1999, just prior to the new addition.

The Center School is in overall Good to Fair condition, considering all aspects of the interior, exterior, and site. The building is in need of some repair work in specific areas, as noted below.

Recommendations:
Continue with normal building maintenance needs, following completion of the 'immediate needs' issues noted above.

Consider a major building addition to accomodate the students currently attending the Sylvester School. An expanded and renovated Center School seems to be the best overall solution for the Town when considering: the needs of the Sylvester School, the proximity of the two properties, and the curently combined nature of their educational programs.

Conditions Assessment — Site/Architectural

SITE

- Play areas appear to be adequate, with one recently constructed play structure for younger children. There are existing basketball hoops that are bent out of alignment and should be repaired or removed.
- Cracks in pavement in parking lot. Paving requires repairs with particular attention to curbs and edges to prevent parking on grass.
- Rotten wood timbers at edge of paving next to the Fire Lane
- Inadequate parking; cars park on grass and at non-parking areas.

ARCHITECTURAL

Exterior:

- Rust at bottom of columns
- Paint on front entrance roof edge
- Repoint brick work on front entrance
- Chip in window sill (second window from left) next to parking lot
- Ivy on brick wall in west facing wing, on exterior of the special education classroom
- Gate next to special education room sticks when shut and scrapes along the ground
- Efflorescence on brick wall next to special education room
- Re-point brick along south side of the west wing
- Crack at door head on west side of auditorium
- Chip in far left window sill on west side of auditorium
- Sealant on window sill peeling off on left side of the front entrance
- Organic growth on wall at north side of auditorium
- Dented cover at north side of auditorium
- Recent window and precast window sill sealant work was completed during the summer of 2010, after deficiencies were noted in a draft copy of this report earlier in the year (Maintenance personnel should be advised of the function of existing weep holes and should be instructed not to seal weep holes shut. Additionally, weep holes should be periodically inspected to ensure that they are clear of debris).
- Weathered mortar needs pointing on bottom right at west side of south wing
- Rusted enclosure at alarm bell or speakers at the end of the south wing
- Needs re-pointing at the end of the south wing
- No visible weep for length of lintel on top of window at west side of south wing
- 6" step at doorway at east side of south wing
- No weeps - must be solid construction at east side of south wing
- Open joints at pre-cast sills at east side of south wing
- Efflorescence on east side of the south wing
- Remove nail in concrete foundation by the left corner of the music room
- Very large weeps, should add insect screens, full length?
- Damaged screen on the exterior of art room
- No apparent weeps in this window system on second floor classroom above the library
- Small area of failing mortar on exterior of the pre-kindergarten classroom on the east side
- At unit ventilators, all of the screens are missing screws to secure them in place at the 2000 addition; east wing
- Hole in screen to the far right on the end of the east wing
- Moss in joints at the top step needs sealant at north side of gym

Conditions Assessment — Architectural

Exterior (continued):

- Cracks in concrete steps needs epoxy repair at north side of gym
- Scrape and paint wood trim, typical for this age of area of bldg on roof edge above kitchen and auditorium
- Shed (probably for mowing equipment) should be removed or re-built out of matching brick masonry (fair condition) at end of the north wing. Adjacent to the shed is an improperly constructed cover over a mechanical system areaway, with a deteriorated cover. The level of deterioration of this unit poses a potential hazard, and it should be removed or properly reconstructed.
- Paint vertical pipe at end of the north wing
- Flaking paint at lover at end of the north wing
- Broken light over door in areaway at end of the north wing
- 6" step leading to entrance at end of north wing
- Missing boards at cover over areaway unsafe and unsecured at end of the north wing
- Small area damaged mortar outside auditorium.

Windows:

- All of the windows in the building have been replaced with thermal insulating glass units. One set of windows on the Southwest wing of the building, was replaced approximately 15 – 17 years ago (per discussion with maintenance staff). These windows are darker brown aluminum, with 5/8" insulating glass, with outswinging awning style operable windows below fixed glass units. The outswing operation forces the screens to be on the inside of the window, with clumsy operable screen sections where the window operation handles are. These windows appear to be in good condition.
- The other set of replacement windows, in the remainder of the building, were reportedly installed about 10 years ago, are lighter cream colored, and appear to the same type of windows installed at other schools in Hanover, and are in very good condition.

Roof:

- At the Southwest classroom wing, there is no obvious visual source of the leak which is causing damage to the interior of the building in this area below. Also no obvious masonry damage, of the extent that would cause this leak, in this area of the exterior wall. There is an existing vent pipe in this area, which appears to pass down in the area of the leak. Suggest water testing to find source of leak.
- No fall protection at 4 skylights (this is a 'grandfathered' building code issue but could also be an OHSA compliance issue.)
- Significant ponds on south, east, and west wings
- Ponding around J-vent
- Bubble and small pond over seam
- Small pond – over patched area
- Very large ponding above auditorium; water does not get to the only drain on this roof, several days after rain
- Broken ladder to gymnasium roof level at second access hatch
- No cages on ladders over 20'
- Smoke ventilators above stage – frozen blades, tremendous heat loss, does not look very waterproof (pivoting blades of the device appear to be stuck in the open position. These should normally be closed and protected by a fusible link)
- Overall, this roof is in poor condition and is ready for full replacement at this time.

Conditions Assessment (continued) Architectural

Interior:

First Floor, North Wing:

- Missing wall trim piece separating paint types at wainscot height
- A few ceiling tiles in rough shape
- No HC sink
- Hardwood floors need refinished

First Floor, East Wing:

- Grab bars non-compliant @ 24" in bathrooms by teacher room
- No hardware at toilet door stalls outside no pulls
- No mirror in bathrooms by teachers room
- Sticky door leading into bathrooms
- Door sticks leading into art room
- Movable risers in music room
- Unit ventilator bottom plate off
- Insulated trap in kindergarten room
- Sticky door to storage rooms in kindergarten room
- Uncovered electrical outlet in gym
- Missing cage

First Floor, South Wing:

- Cabinets and shelving could use new paint, chipping at the bottom
- Some molding under the vinyl siding in staff room
- Missing ceiling panels in bathroom on left
- Chipping on cabinet doors
- Door needs paint
- Carpet bubbles
- Water damage in ceiling
- Missing ceiling panel near elevator
- Carpet stains
- Carpet needs replacing
- Ceiling water damage
- Water damage in corridor
- Cracks in wall
- Vinyl siding pealing away from lockers in corridor
- Ceiling panel mold in classroom
- Mice falling apart
- Need new carpet in special education room
- Water and wall damage in bathroom
- Needs new paint in the library
- Floor molding in storage room

Conditions Assessment (continued) Architectural

Interior (continued):

Second Floor, South Wing:

- HC sink needed in all three bathrooms
- Wall tile sagging in the first two classrooms to the left
- Wall tile with water damage last classroom on the left
- Paint needed in last classroom on the left
- HC sink needed in all seven classrooms
- Wall tile with water damage in corridor
- Vinyl base peeling off base of wall in corridor
- Crack in wall at the end of the corridor
- Old floor tile needs to be replaced (asbestos related work) in first and last classroom on right
- Base cabinets could use a coat of paint in last classroom on right
- Paint needed in second bathroom on right
- Why no mirrors above sink in bathrooms?
- Chipped paint in first bathroom on right
- Dirty floor tile near entrance of the first two classrooms on right
- Carpet at transition strip fraying in second classroom on right
- Wall tile with water damage on first classroom on right
- Wax build up along edge of floor in most classrooms

Structure:

- The building structure is in good condition; no structural defects were observed in any general structural building systems: foundations, walls, floors, or roofs.

Building Code:

- Door leading to exterior from gym does not open due to astragal on adjacent leaf; requires repair.
- Accessibility improvements are needed, and full compliance will be triggered in the event of any major renovation project. The current features of the building provide a reasonable level of accessibility, and are presumed to have been in full compliance with the requirements in force at dates of previous renovations.
- With the exception of the gym exit door, we are not aware of any existing conditions in the building that are currently not in compliance with the applicable codes and regulations, although many conditions would not meet the standards of the current MA building code.

Accessibility:

See notes above, under "Building Code".

- The auditorium is not properly accessible to persons with limited mobility; the lift to the stage is from an outside corridor, and handrails to the stage from the seating area do not comply with accessibility standards.
- Sinks in the new classrooms in the new wing are properly designed for accessibility.
- The elevator is apparently recently installed, and the controls appear to be correct for accessibility.
- Classrooms in older sections of the building have non-accessible sinks.
- Non accessible side door located to the right of the art room
- Non accessible side door to the right of the kindergarten classroom on the north side
- Inadequate level space outside door left of auditorium
- No handrails on "ramp" in east wing
- Sinks in kindergarten rooms to the right not accessible

Conditions Assessment (continued) Architectural

Energy & Environmental Sustainability:

- At time of next comprehensive re-roofing, tapered insulation should be installed on the older sections of the building, to sufficient depth to both improve drainage flow towards drains, and to reduce heat-loss through the roof. Existing roofing in these areas appears to have code-minimum insulation. Windows are in good condition and do not need any additional work at this time.

Hazardous Materials:

- As required by Massachusetts regulations, a full program of asbestos survey, remediation, monitoring and reporting has been conducted by the Town of Hanover for all school buildings, and a current updated report is on file with the Public School department. Further detailed investigations of hazardous materials, was beyond the scope of this study. Known work that remains to be completed, includes the removal of existing asbestos-containing floor tile in various areas of the building. For all schools that need this work, the Public Schools Department has estimated a cost of $1,720,000, and has requested funding of this amount from the Capital Improvement Committee. This would include work at the Middle, Cedar, Salmond and Center Schools (the HS and the Sylvester do not require tile removal). According to documents provided to us by the School department, the value of the tile abatement work proposed at this Center School, is approximately $293,000

Historical/Aesthetic:

- There is no particular historic value to this building; although it is located near to the historic town center district.

Other issues:

None

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities
- **Existing Domestic Water Service:** The existing building is currently served by a 2" domestic water service which enters the basement at the boiler room. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the School's domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- **Existing Natural Gas Service:** There is currently a natural gas service to the building that enters the building adjacent to the sprinkler service in the basement. This service serves the boilers and the hot water heater.
- **Existing Sanitary Service:** The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- **Fuel Oil:** There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:
- Water closets are wall mounted; vitreous china with flush valves.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung vitreous china. Faucets are a combination of single lever handle and two lever handles.
- Drinking fountains are surface mounted stainless steel units. The units are in good condition.
- Janitor's mop sinks are wall mounted basins with some floor mounted units all with 2-faucets and vacuum breakers. These basins are in good condition.
- Typical classroom sinks are counter top, 2-lever gooseneck faucets and are in good condition.

Domestic Hot Water Systems:
- The Schools domestic hot water is generated by gas fired water heater 125 gallon which feeds the schools hot water needs. The water heater is in good condition.

Fire Protection Service:
- There is complete fire protection system coverage (sprinklers) currently at the facility. A 6" fire protection service line enters the basement of the school complete with isolation valves and fire alarm system monitoring. No backflow preventer was noted.
- The kitchen hood is supplied with a fire suppression system within the hood and is in good condition.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems:
APPLICABLE CODES AND STANDARDS
The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

Existing Mechanical Systems

- The existing building is heated by two hot water boilers. The two hot water boilers are Burnham with burners currently operating on Natural gas and a capacity of 2957 MBH each. This equipment is approximately 15 years old and in very good condition.
- The present Heating and Ventilating systems consist of finned tube radiation, unit ventilators in the classrooms and exhaust systems. The auditorium is served by two closet mounted H & V units which were noted by personnel as being very loud when operating. They had been told that the units were oversized. The cafeteria was noted as also being served by ceiling mounted H & V units without any noted issues. Both the cafeteria and the auditorium systems included a supply air component.
- Unit Ventilators in classrooms appear newer and are in very good condition with no noted problems.
- Exhaust systems servicing the classrooms utilize a single exhaust grille. Exhaust grills are located in the ceilings opposite the exterior walls containing the unit ventilators.
- The existing temperature controls in the school are newer Honeywell controls. Some pneumatic controls still exist and have been problematic. The temperature control system air compressor is located in the Boiler Room and includes an air dryer; this unit is older in fair condition.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 208/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 1200 amps. The service equipment is located in the basement of the building. The service equipment switchboard is in very good condition.
- There are a number of electrical panels located throughout the facility. These panel boards are a mix of newer and older having been added and/or replaced at the time of various building additions and/or on an as-needed basis. The condition of these panel boards range from very good to fair/poor. The majority of the older panel boards do not have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 2' x 4' fluorescent acrylic lens troffers fixtures in the classrooms and 2' x 4' acrylic lens troffers in the corridors. The lighting throughout the facility is in good condition during a follow-up walkthrough it was noted that the upgrade of ballasts and lamps was being implemented per the 2009 National Grid energy audit recommendation. The light levels appear to be within recommended levels.
- The fire alarm system is a Harrington main FACP with manual fire alarm pull stations, horn strobes and smoke detectors located throughout the building. All devices appear to be ADA compliant including booster panel for driving strobes.
- Site lighting is accomplished via building mounted wall packs and flood lights.
- There is no standby emergency generator at the facility
- Life safety emergency and exit lighting is provided via Emergency battery units with unit mounted emergency light heads, units are newer and in good condition.
- The existing clock system is functioning but old, with some clocks not keeping correct time.The existing paging system is older but was noted as functional in most areas of the building after recent repair. Capacity should be added to cover all areas of the building.
- There is currently a controlled access system by Magnum Alert at the main front entry including a CCTV camera. All systems were noted as functioning without any issues.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

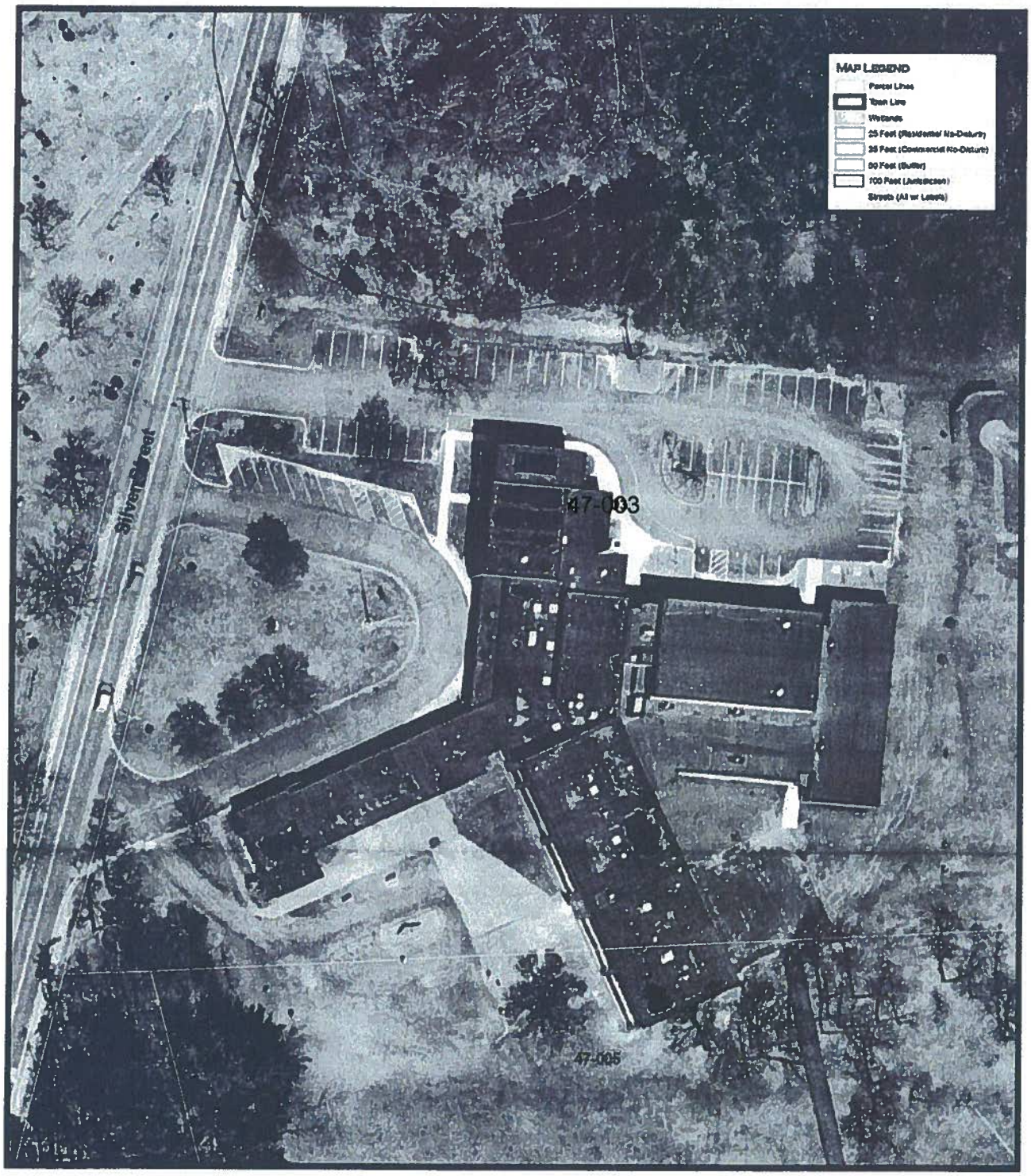
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as a year old. Some equipment such as the H & V units serving the auditorium should be investigated to determine the cause of the excessive noise and in order to determine a resolution to the problem. The existing pneumatic controls should be replaced to correct the ongoing problems.

Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure.

The Electrical systems appear to be in good condition and operating without issues. The older distribution equipment (panelboards) should be replaced with newer equipment with additional breaker spaces added to meet any future needs and to alleviate the possibility of overloading individual circuits when new equipment and or devices are added to existing circuitry. The lighting systems are newer and in good condition. Fire alarm system, emergency lighting and exit lighting systems are newer and appear to be in good condition. Existing paging, clock and security system are in good working order.

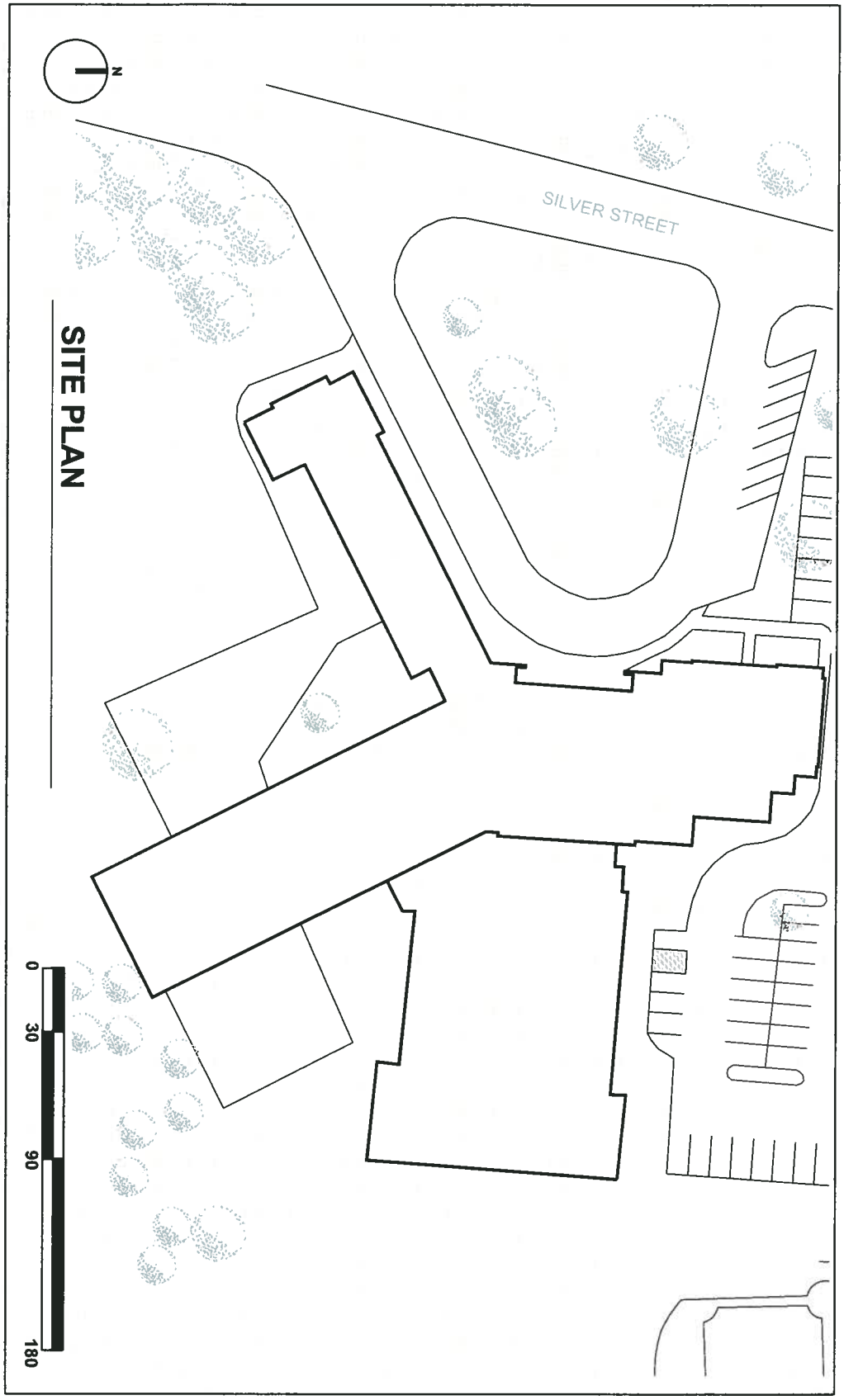
AERIAL PHOTO



Center Elementary School is the building in the center of the photo, labeled 47-003.
(Source: Hanover GIS)

D·R·A

SITE PLAN



D·R·A

Drummey Rosane Anderson Inc.
Architecture
Interior Design

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141 Herrick Road
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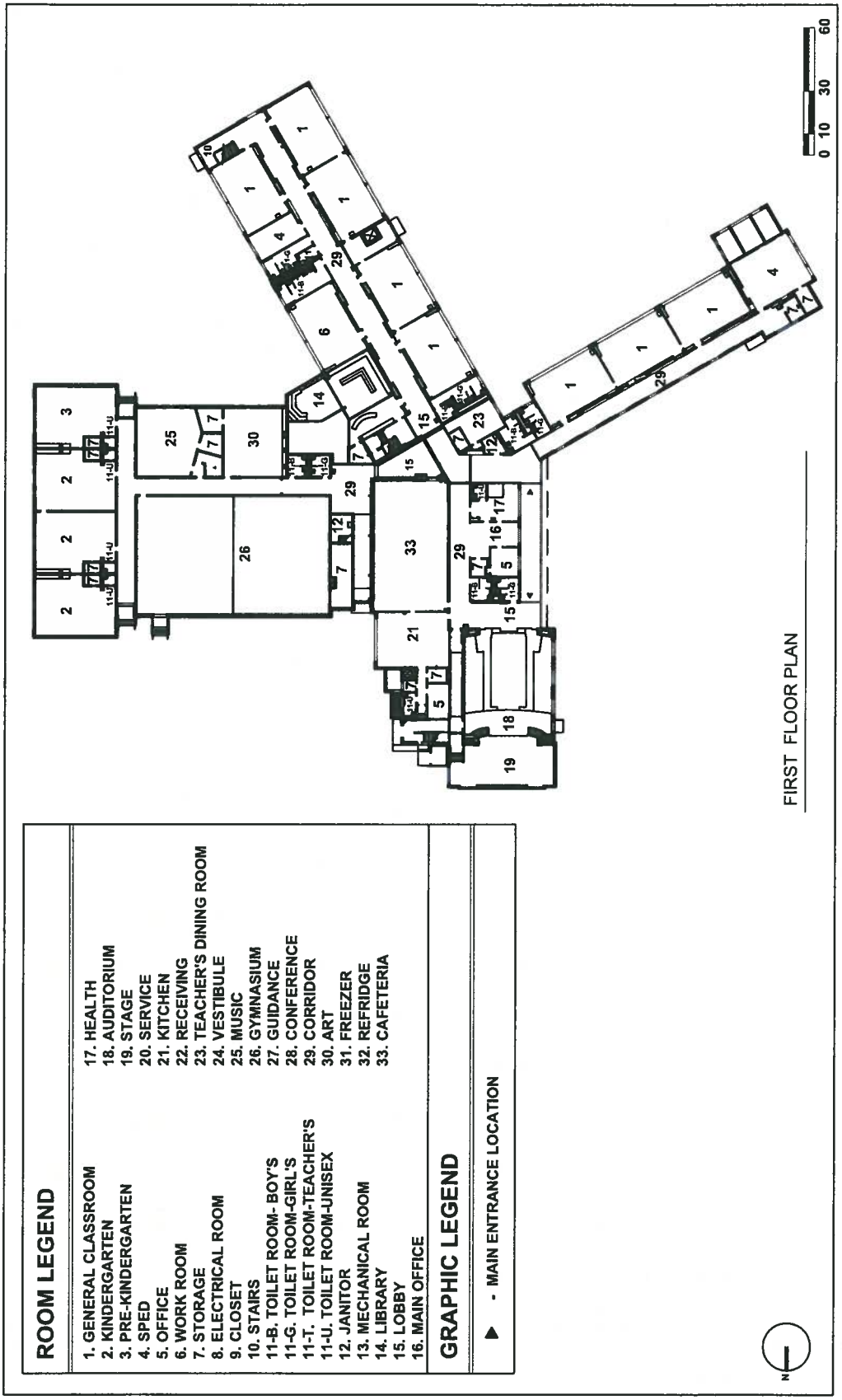
02459

617-964-1700
617-969-9054 fax

CENTER ELEMENTARY SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLAN



D·R·A

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CENTER SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

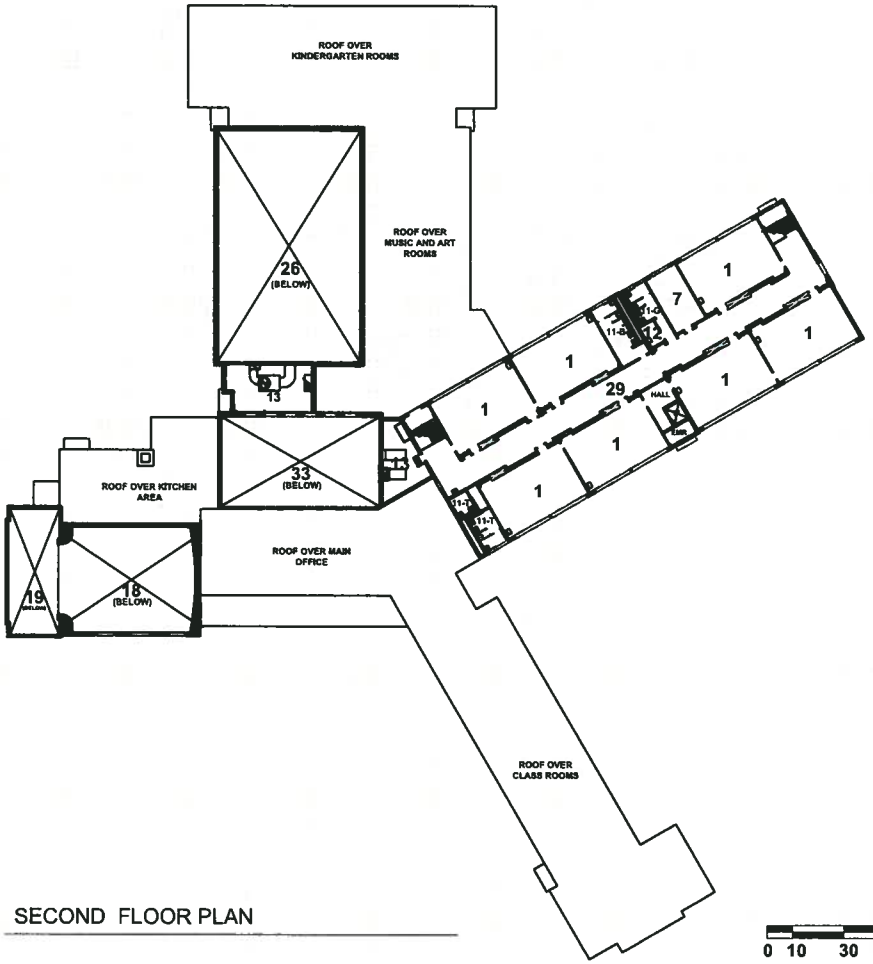
Scale:SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

ROOM LEGEND

1. GENERAL CLASSROOM
2. KINDERGARTEN
3. PRE-KINDERGARTEN
4. SPED
5. OFFICE
6. WORK ROOM
7. STORAGE
8. ELECTRICAL ROOM
9. CLOSET
10. STAIRS
11-B. TOILET ROOM- BOY'S
11-G. TOILET ROOM-GIRL'S
11-T. TOILET ROOM-TEACHER'S
11-U. TOILET ROOM-UNISEX
12. JANITOR
13. MECHANICAL ROOM
14. LIBRARY
15. LOBBY
16. MAIN OFFICE
17. HEALTH
18. AUDITORIUM
19. STAGE
20. SERVICE
21. KITCHEN
22. RECEIVING
23. TEACHER'S DINING ROOM
24. VESTIBULE
25. MUSIC
26. GYMNASIUM
27. GUIDANCE
28. CONFERENCE
29. CORRIDOR
30. ART
31. FREEZER
32. REFRIDGE
33. CAFETERIA

GRAPHIC LEGEND

▶ - MAIN ENTRANCE LOCATION



SECOND FLOOR PLAN

FLOOR PLAN

D·R·A

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CENTER SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

EXTERIOR PHOTOS

Exterior view of main entrance.

Pavement deterioration at fire lane.

Deteriorated wood, landscape timber

Deteriorated and patched paving.

Detail at brick and window.

Deterioration at window lintel.

Damaged brickwork.

Mold on wall.

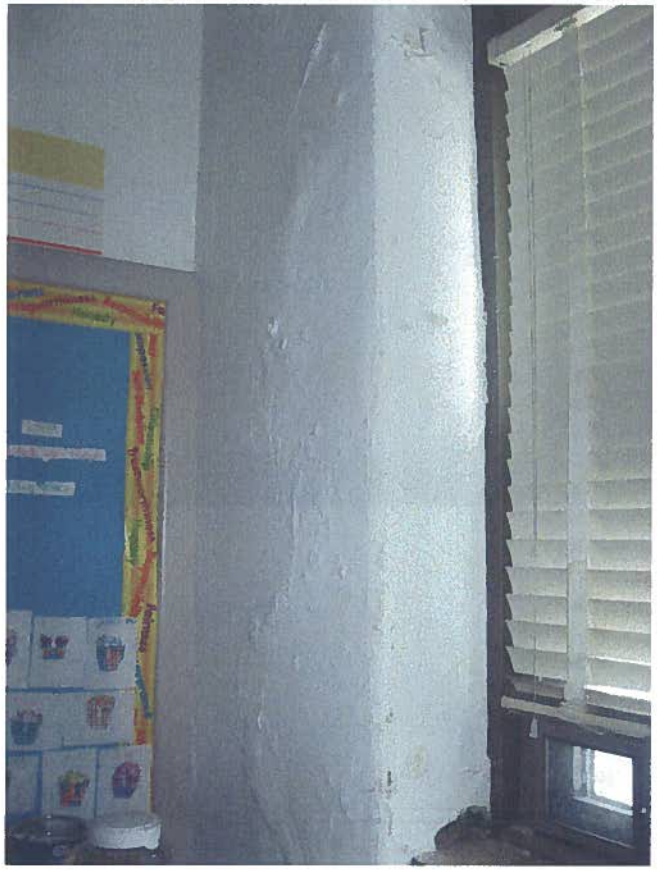
Detail at areaway.

Broken cover.

Ponding water on roof.

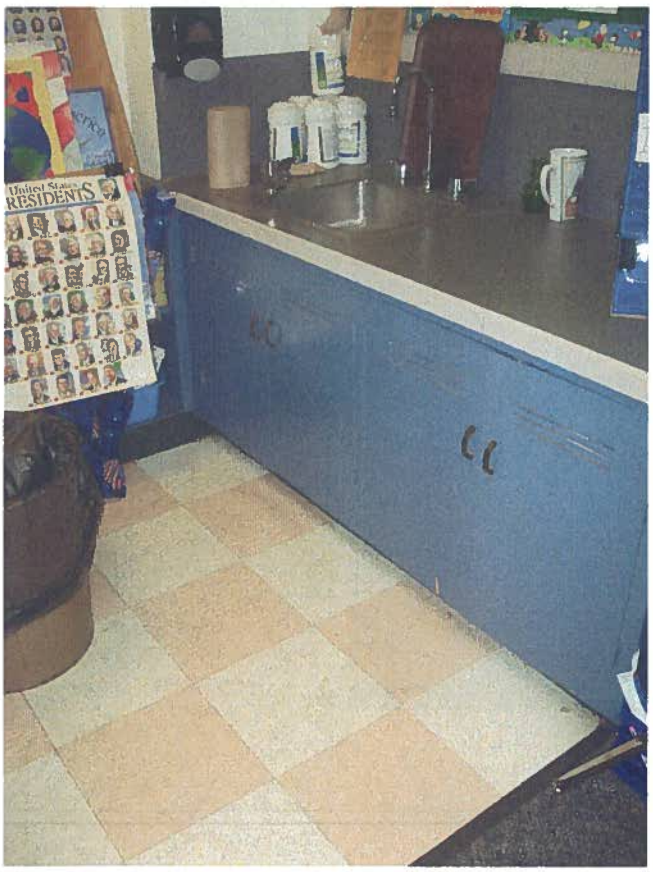
INTERIOR PHOTOS

Deterioration near window, water damage



Wall with water damage.

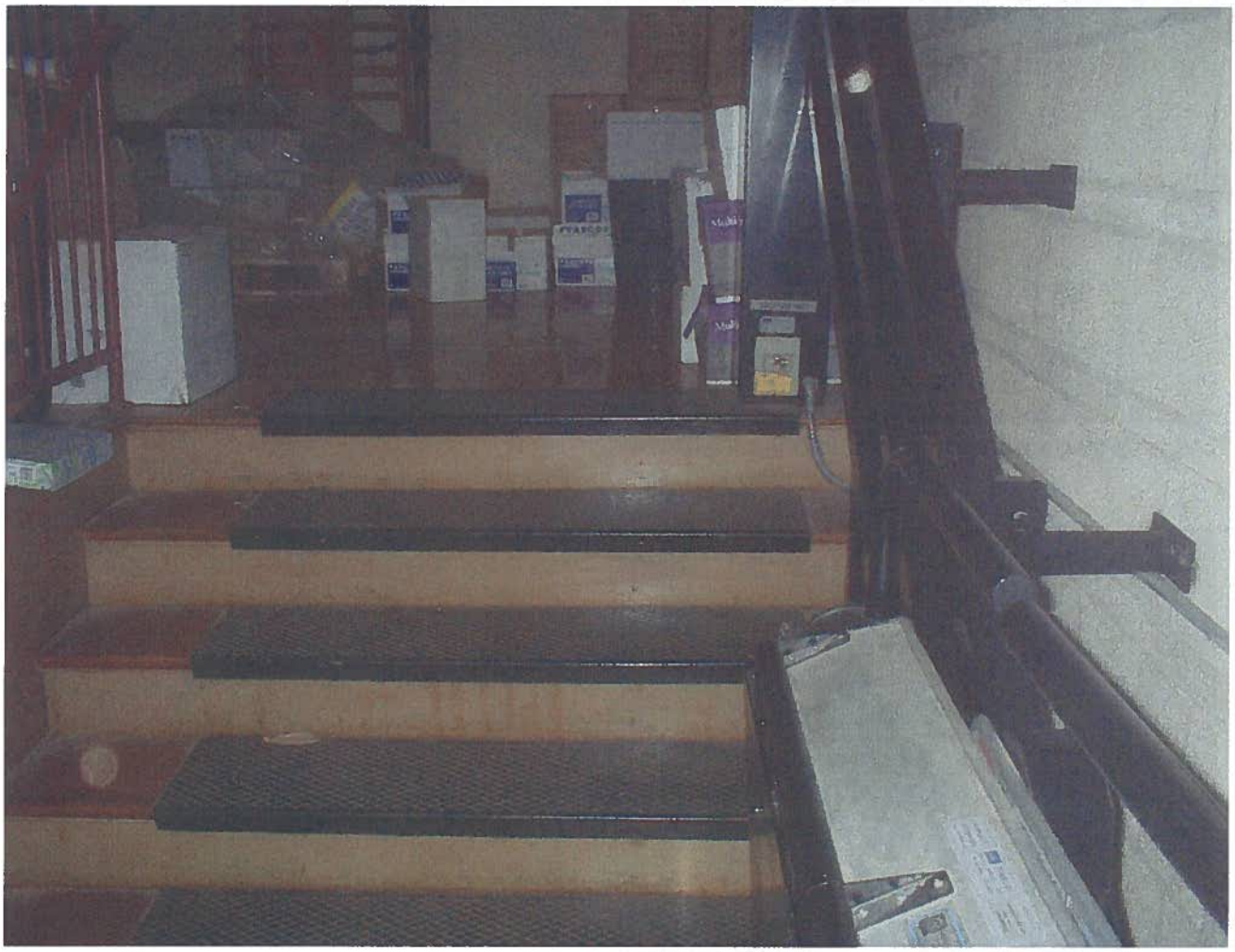
Damaged cabinets.



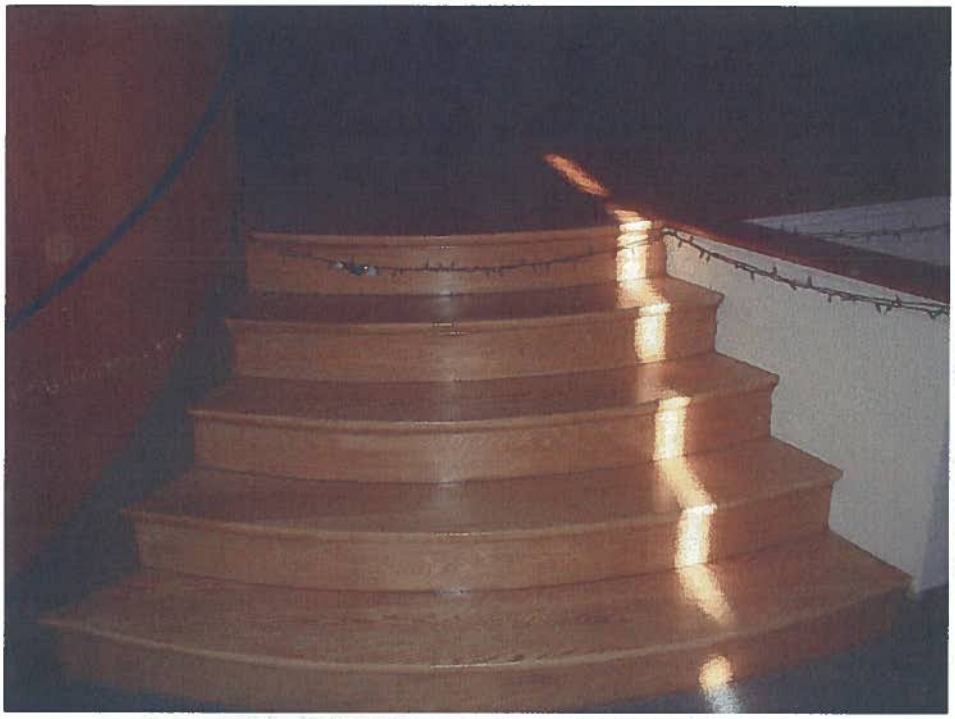
Interior, kitchen area. Non-accessible sink

Ceiling showing signs of water damage.

Window detail, cracked plaster.



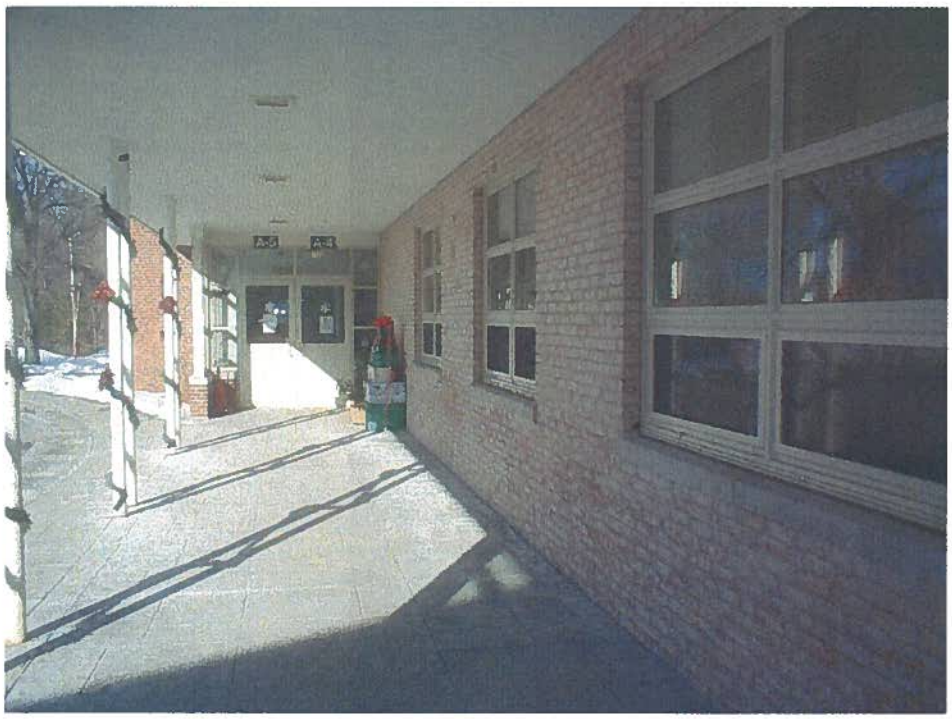
Stair lift to auditorium stage, not accessibility compliant; must go outside auditorium to use lift.



Steps to stage with non-compliant handrails.

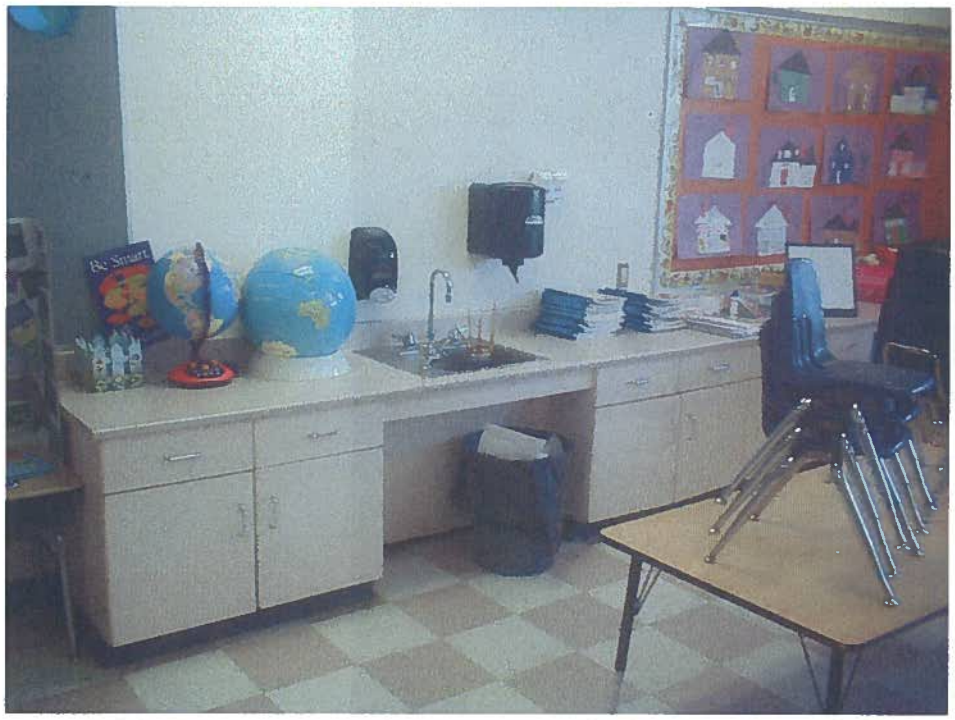
Smoke relief dampers above stage.

Sink not up to accessibility code requirements.



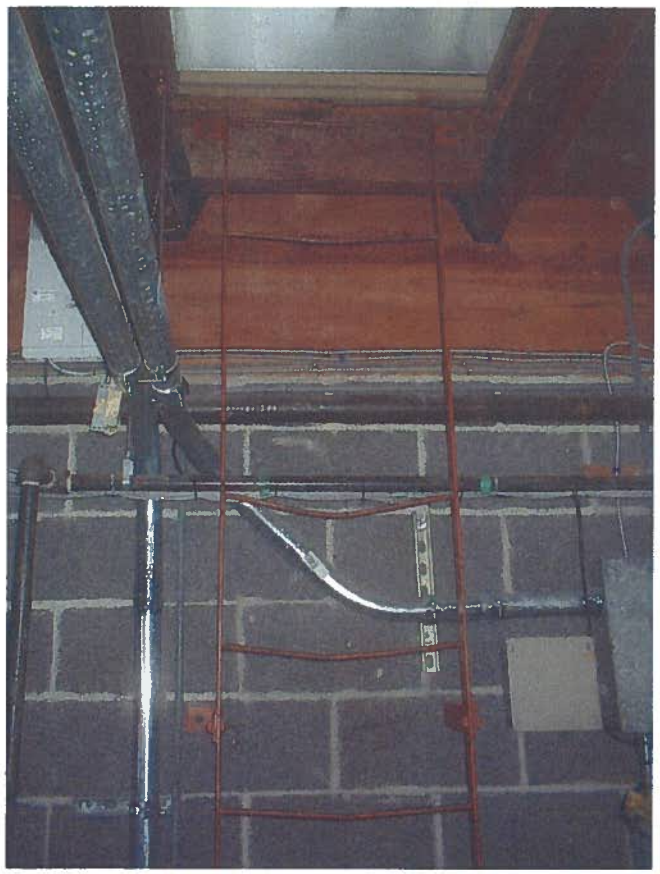
Exterior, main entrance, two like this.

Energy management system.



Accessible sink in 2000 wing classroom. Good.

Accessible elevator controls OK.



Wood roof deck in mechanical room; bad ladder, with broken rung, non OSHA-compliant. Replace ladder.

Section 06 - CEDAR ELEMENTARY SCHOOL

Locus Map - Town of Hanover

Building Summary

Address: 265 Cedar St.
Gross Area: 62,677 sq. ft.
Description of Site: Flat, open topography, with parking in front and play fields to the side and rear. Located behind the High School.
Description of Building: Adjacent to new High School. Constructed 1966. Addition 1968. Gymnasium wing constructed 2000. Low slope roof over single-story classroom wings. Grades K-4.
Function of Facility: Elementary school
Agency or Department: Hanover Public Schools
Technical Construction Description: Technical Construction Description: Single story steel framed building with slab on grade. Masonry walls at new addition.
Valuation: $7,408,374.00

Immediate Needs
- Intercom and clock system upgrades.
- Roof repairs, particularly one problematic area adjacent to the rear entrance to the building.
- Upgrade the old HVAC building management system.
- Replace old exit signs and battery-powered emergency lights; add an emergency generator.
- Address instructor's concerns about divider curtain in gymnasium.
- Improve access for disabled persons at the main entrance, and the stage.

Near Term Needs
- Repair playground equipment
- Accessibility improvements, areas other than those noted above.
- Landscaping, plantings, pavement, and drainage improvements to the site; existing site is very open and very flat and does not drain well. Play fields should be studied to see if they could be made to be 'regulation-size'.
- Asbestos floor tile abatement.

Conditions Summary:
The Cedar Elementary School serves 500 students from Pre-K through 4th grade. It is located to the rear (north) of the High School, set back from Union St. on a long approach drive.

Building Summary (continued)

Conditions Summary (continued):
The building was originally constructed in 1966, has seen periodic renovations and additions, with the most recent large gymnasium, pre-K classrooms, music rooms and art rooms addition completed in 2000. Re-roofing of the building was completed in 1999, just prior to the new addition. The Cedar School is in overall Good to Fair condition, considering all aspects of the interior, exterior, and site. The building is in need of some repair work in specific areas, as noted herein.

Recommendations:
Continue with normal building maintenance needs, following completion of the 'immediate needs' issues noted above.

Conditions Assessment — Site/Architectural

SITE

- There is one recently constructed playscape area for younger children.
- Cracks in pavement in parking lot. Paving requires repairs with particular attention to curbs and edges.
- Parking area reportedly does not drain well for several days following precipitation.
- Parking capacity is adequate.

ARCHITECTURAL

Exterior:

- New paint on louvers at new addition; paint is chipping
- Repoint brick in front
- Cracks in walkway
- Guards around down spouts continuously loose
- In front of doorway C6-C7, raised cement is a tripping hazard at walkway
- Paint failing at louvers, cover paint not a problem
- Loose wires- need to be secured.
- Hairline crack in pavement
- All downspouts need extensions to push water away from the building.
- On section of back wall, 30% bad paint, repaint. All CMU's this way
- Grade between pavement and building pitches towards building
- Near picnic table minor bad paint along entire bottom
- Efflorescence along brick next to door A-5 and A-6
- Minor paint flaking next to doors A-1 and A-2

Windows:

- The windows in the building are in good condition, at all locations. They are fairly recently installed thermally efficient windows with 5/8" insulating glass fixed lites over operable hopper-style inswinging windows. The same windows are installed around the entire building, with the exception of the 'Kalwall' glazing system at the gymnasium.

Interior:

- The majority of older classrooms need accessible sinks
- There is carpet damaged in small locations in a few classrooms
- Chipped paint in one classroom
- Small stains on ceiling in one classroom, could use a paint touch up looks like rust

Conditions Assessment — Architectural

Interior (continued):

- Damaged carpet and small stain on ceiling in work room
- In library there is water damage, a carpet rip, and needs a wall repainted
- Damaged light cover in special education room
- One of the movable partitions in the gymnasium has ripped fabric at specific location
- Water fountain needs access
- Missing ceiling tile in work rooms

Roof:

- The basic design of this roof is unique, and somewhat problematic for the type of roofing system installed in 1999. The roof is structured with a low-slope, and then flares out at the edges to become almost flat. Perimeter drain scuppers are located in this flattened section of the roof. This results in poor drainage off of the lower perimeter areas of the roofs over the original classroom wings. The roofing system that was installed is a rubber membrane system, with small stone ballast. It is not evident whether the membrane is adhered, or loose-laid. Due to the slope of the roof, the ballast has a tendency to move down the roof and is susceptible to wind scour, and retains the moisture on the lower sections of the roof. Rain diverters have been placed on the roof at certain locations to aid drainage. At the time of the next re-roofing, the entire roofing system should be re-considered. A standing seam metal roof may be the best choice for this low-slope application.
- Problematic leak area above rear door where roof intersects sidewall; multiple patches, needs water test to locate source of problem, which is not visually evident.
- Loose wire to TV antenna
- Soft spot in roof
- Pond above main entrance.
- Failed weather station mounting pole, is leaning and will damage roof if it falls.
- Low slope on roof over kindergarten wing
- Dampness under stone ballast
- Align diverter
- Many patches
- Evidence of water accumulation, create diverters

Structure:

- The building structure is in good condition; no structural defects were observed in any general structural building systems: foundations, walls, floors, or roofs.

Building Code:

- Kitchen has no ceiling, the underside of the structure above is exposed. This is a condition which the Health Department is likely to cite for correction.
- Accessibility improvements are needed, and full compliance will be triggered in the event of any major renovation project. The current features of the building provide a reasonable level of accessibility, and are presumed to have been in full compliance with the requirements in force at dates of previous renovations.
- We are not aware of any existing conditions in the building that are currently not in compliance with the applicable codes and regulations, although many conditions would not meet the standards of the current MA building code.

Conditions Assessment (continued) Architectural

Accessibility:

- The main greeting desk at the office is accessible.
- The main front entrance has a non-compliant ramp condition constructed in the asphalt paving; a proper curb-cut should be constructed in the concrete step with detectable warning pavement features.
- The curb-cut from the main sidewalk into the parking lot also appears to be non-compliant with current regulations, as it is too steep on one side.
- The rear entrance is not accessible and has a temporary wooden low ramp over the step.
- Several doors in the older portion of the building have latch-side pull-clearance issues.
- Classrooms in the new addition have properly accessible sinks.
- Door A-6 / A-5 has a 3" step; not accessible for egress.
- No level space outside door B-1 and B2.
- Outside door C-1, C-2, non accessible, no sidewalk and 2" step up.

Energy & Environmental Sustainability:

- Windows in the building are recent replacements in good condition and appear to be energy-efficient. Depth of roof insulation is unknown. Insulation type at exterior walls is unknown. Also see engineers' report.

Hazardous Materials:

As required by Massachusetts regulations, a full program of asbestos survey, remediation, monitoring and reporting has been conducted by the Town of Hanover for all school buildings, and a current updated report is on file with the Public School department. Further detailed investigations of hazardous materials, was beyond the scope of this study. Known work that remains to be completed, includes the removal of existing asbestos-containing floor tile, in various areas of the building. For all schools that need this work, the Public Schools Department has estimated a cost of $1,720,000, and has requested funding of this amount from the Capital Improvement Committee. This would include work at the Middle, Cedar, Salmond and Center Schools (the HS and the Sylvester do not require tile removal). According to reports recently provided by the School Department, the value of the VAT replacement work planned for this building is about $352,000.

Historical/Aesthetic

- The building does not have any significant historic importance; the low slope roof is an interesting aesthetic and the building is generally attractive with a nice entry sequence and ornamental flowering trees in front.

Other Issues:

None

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:
- **Existing Domestic Water Service:** The existing building is currently served by a 2" domestic water service which enters the boiler room. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the Schools domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- **Existing Natural Gas Service:** There is currently a natural gas service to the building that enters the building in the boiler room. This service serves the boilers and the hot water heater.
- **Existing Sanitary Service:** The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- **Fuel Oil:** There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:
- Water closets are wall and floor mounted; vitreous china with flush valves.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung vitreous china. Faucets are of the single lever handle.
- Drinking fountains are surface wall mounted stainless steel units. Most are ADA compliant. The units are in good condition.
- Janitor's mop sinks are floor mounted basins units all with 2-faucets and vacuum breakers. These basins are in good condition.
- Classroom sinks are counter top stainless steel, 2-lever gooseneck faucets and are in good condition units do not appear to be ADA compliant.

Domestic Hot Water Systems:
- The School's global replacement domestic hot water is generated by gas fired water heater 125 gallon which feeds the school's hot water needs. The water heater is in good condition.
- The custodial staff reports that they have had leaks in the domestic water supply system, in the older portion of the building. Repairs have been made. The custodian reports that other areas also 'looked like they could go at any time' at the time the repairs were made.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (Continued):

Fire Protection Service:

- There is no fire protection system coverage (sprinklers) currently in most of the facility. Sprinklers are included in the most recent addition (Gym Wing) complete with incoming service, isolation valves and fire alarm system monitoring.
- The kitchen hood is not supplied with a fire suppression system within the hood.

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing building is heated by two hot water boilers. The two hot water boilers are both Weil McLain with burners currently operating on Natural gas. The boilers were installed in 1999 with a capacity of 3392 MBH each. This equipment is approximately 13 years old and in very good condition.
- The present Heating and Ventilating systems consist of finned tube radiation, unit ventilators in the classrooms and exhaust systems. The gymnasium is served by a single closet mounted H & V unit. The cafeteria was noted as also being served by ceiling mounted H & V units (2) without any noted issues. Both the cafeteria and the gymnasium systems included a supply air component.
- Unit Ventilators in classrooms appear newer and are in very good condition with no noted problems.
- Exhaust systems servicing the classrooms utilize a single exhaust grille. Exhaust grills are located in the ceilings opposite the exterior walls containing the unit ventilators in the latest addition and in the wall slightly above the floor in the original building.
- The existing temperature controls in the school are pneumatic controls these were noted as operating without problems. The temperature control system air compressor is located in the Boiler Room and includes an air dryer this unit is older in fair condition.
- In the kitchen area, shaking ductwork. Employee reported that the 'economizer cycle of the related unit stalls and re-starts' in an unpredictable manner.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems (Continued):

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 208/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 1200 amps. The service equipment is located in the basement. The service equipment switchboard is approximately 10 years old and in very good condition.
- There are a number of electrical panels located throughout the facility. These panel boards are a mix of newer and older having been added and/or replaced at the time of various building additions and/or on an as-needed basis. The condition of these panel boards range from very good to good. The majority of the panel boards have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 2' x 4' fluorescent acrylic lens troffers fixtures in the classrooms and 1' x 4' acrylic wraparounds in the corridors. The lighting throughout the facility is in good condition. The exception is that approximately 50% of the pendent wraparounds in the older classrooms are in poor condition. The light levels appear to be within recommended levels.
- The fire alarm system is a Pyrotronics main FACP with manual fire alarm pull stations, horn strobes and smoke detectors located throughout the building. All devices appear to be ADA compliant.
- Site lighting is accomplished via down lights in canopies and building mounted flood lights as well as pole mounted floods in the parking lot.
- There is no standby emergency generator at the facility.
- Life safety emergency and exit lighting is provided via Emergency battery units with unit mounted emergency light heads, units are older and in poor condition.
- The existing clock and paging systems are both older and were noted to be problematic and should be replaced.
- There is currently a controlled access system by Gemini which includes motion sensors and a CCTV camera at the main front entry. All systems were noted as functioning without any issues.

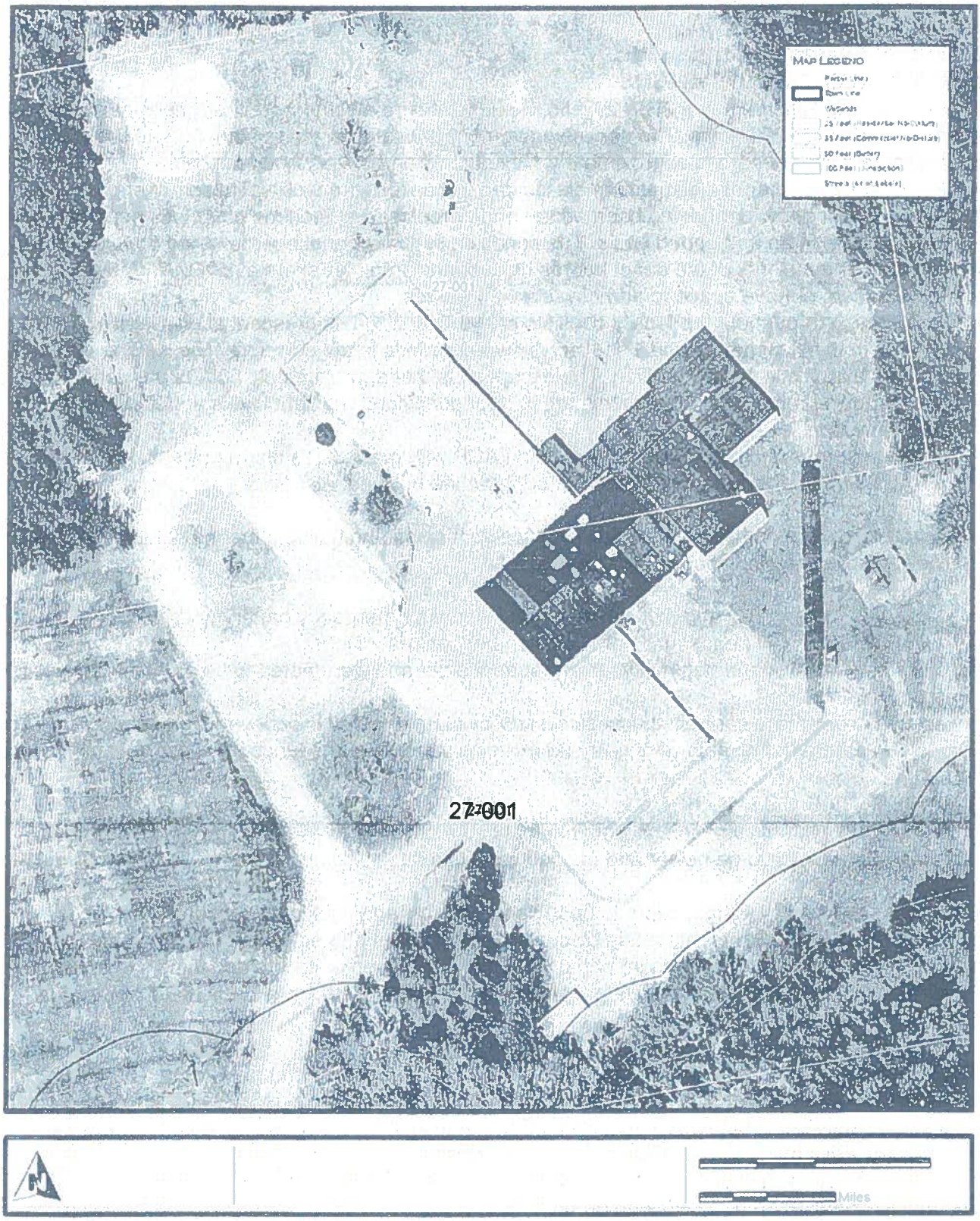
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. All HVAC systems seem to be newer and in good condition.

Plumbing systems throughout seem to be in good physical and working condition. The only question regards the comments made by custodial staff about domestic water piping in the older section of the building. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure. Kitchen hood should be provided with a fire suppression system.

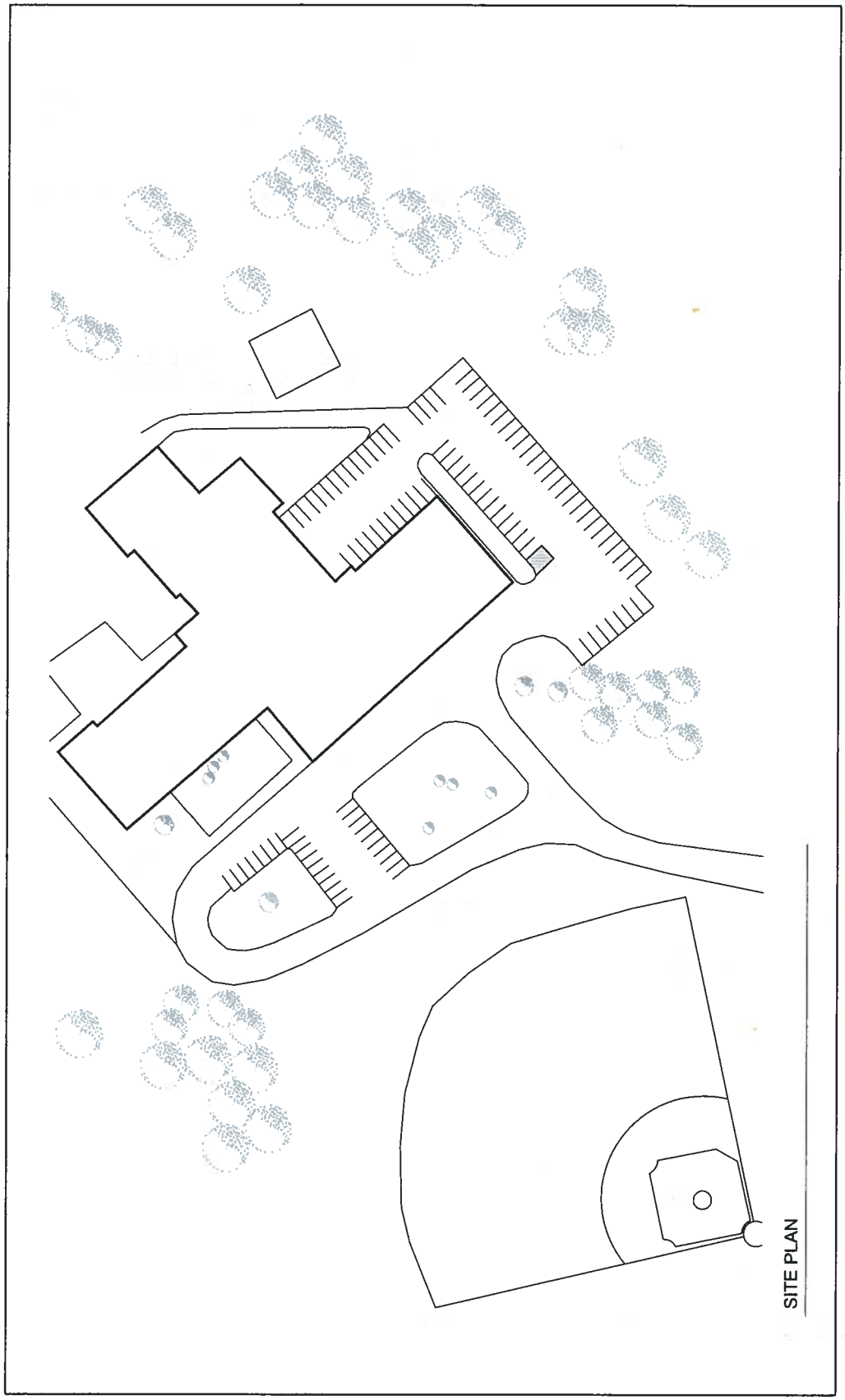
The Electrical systems appear to be in good condition and operating without issues. The lighting systems are newer and in good condition. Approximately 50% of the classroom lighting in the older classrooms should be replaced. The existing Fire alarm system is in good condition. Emergency lighting and exit lighting systems are older and in poor condition and should be replaced. Existing paging and clock systems should be replaced due to their age and ongoing problems. The existing security systems are in good working order.

AERIAL PHOTO



Cedar Elementary School is the building in the center of the photo, labeled 27-001.
(Source: Hanover GIS)

SITE PLAN



D·R·A

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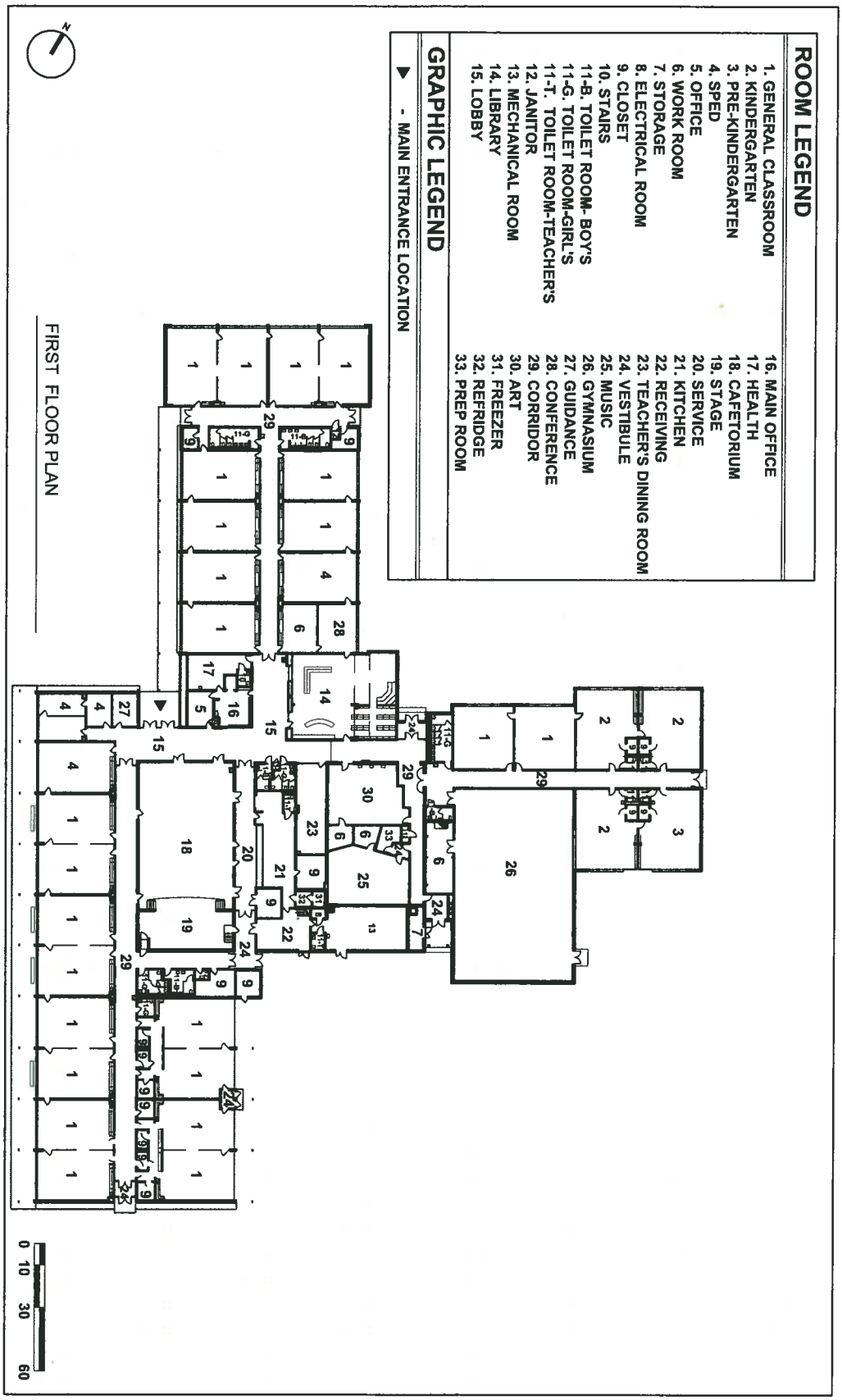
CEDAR SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

FLOOR PLAN



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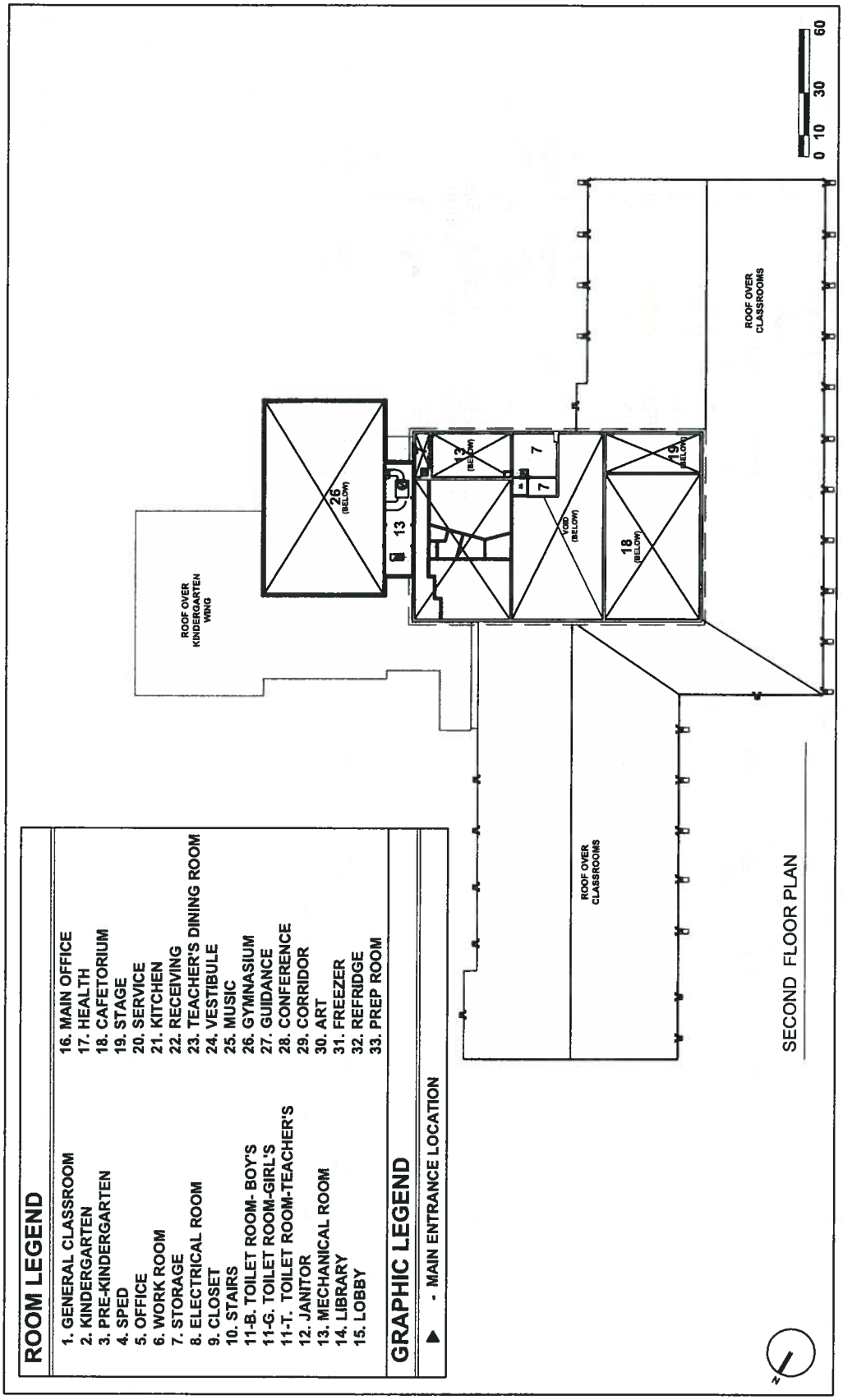
FLOOR PLAN


ROOM LEGEND
1. GENERAL CLASSROOM
2. KINDERGARTEN
3. PRE-KINDERGARTEN
4. SPED
5. OFFICE
6. WORK ROOM
7. STORAGE
8. ELECTRICAL ROOM
9. CLOSET
10. STAIRS
11-B. TOILET ROOM- BOY'S
11-G. TOILET ROOM-GIRL'S
11-T. TOILET ROOM-TEACHER'S
12. JANITOR
13. MECHANICAL ROOM
14. LIBRARY
15. LOBBY
16. MAIN OFFICE
17. HEALTH
18. CAFETORIUM
19. STAGE
20. SERVICE
21. KITCHEN
22. RECEIVING
23. TEACHER'S DINING ROOM
24. VESTIBULE
25. MUSIC
26. GYMNASIUM
27. GUIDANCE
28. CONFERENCE
29. CORRIDOR
30. ART
31. FREEZER
32. REFRIDGE
33. PREP ROOM
GRAPHIC LEGEND
- MAIN ENTRANCE LOCATION
ROOF OVER KINDERGARTEN WING
ROOF OVER CLASSROOMS
ROOF OVER CLASSROOMS
26 (BELOW)
13
12 (BELOW)
7
7
VOID (BELOW)
18 (BELOW)
19 (BELOW)
0 10 30 60
SECOND FLOOR PLAN
N
D·R·A
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Drawn by: MJQ
Job# 09017.00

EXTERIOR PHOTOS

Exterior, main entrance.

Roof overhang at sidewalk

Exterior view of classrooms on north side.

View of entrance on left side of the front facade.

Exterior, main entrance.

Exterior view of front facade.

Detail at exterior column- loose guard at downspout.

Broken pavement, tripping hazard.

General roofscape - detached support pole.

Detail of roofscape - pole mounting has failed.

Detail of water ponded on roof.

General roofscape - discoloration indicates moisture.

General roofscape.

Roof detail at base of wall - area of frequent leaks & multiple repairs.

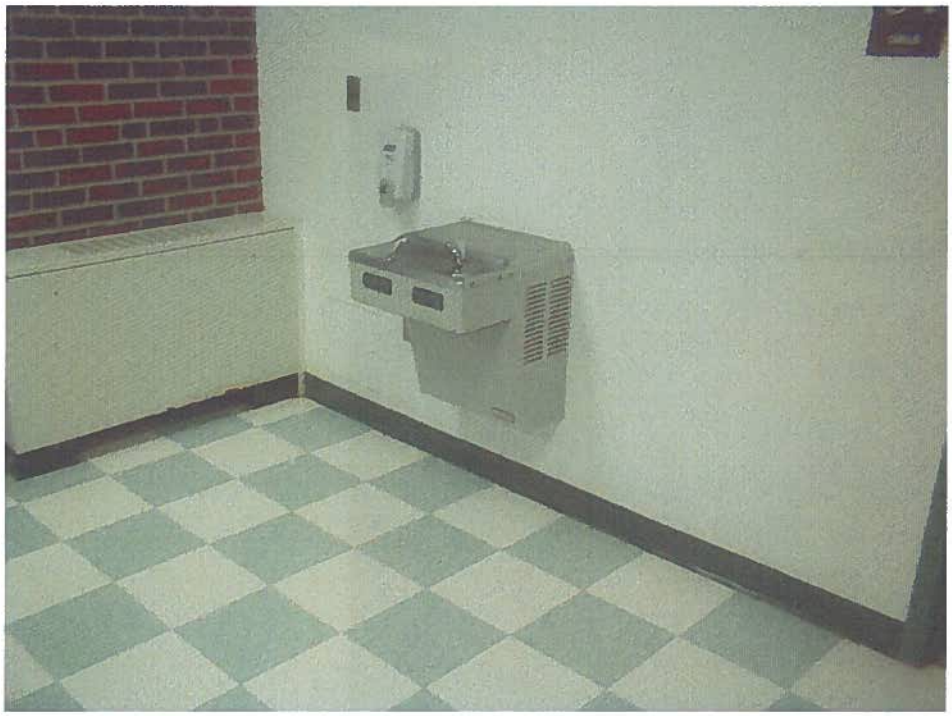
Entrance is non-accessible. Dangerous, uneven pavement; should re-grade across entire front step.

Detail of step at main entrance.

Accessible parking near rear entrance, needs signage on posts.

INTERIOR PHOTOS

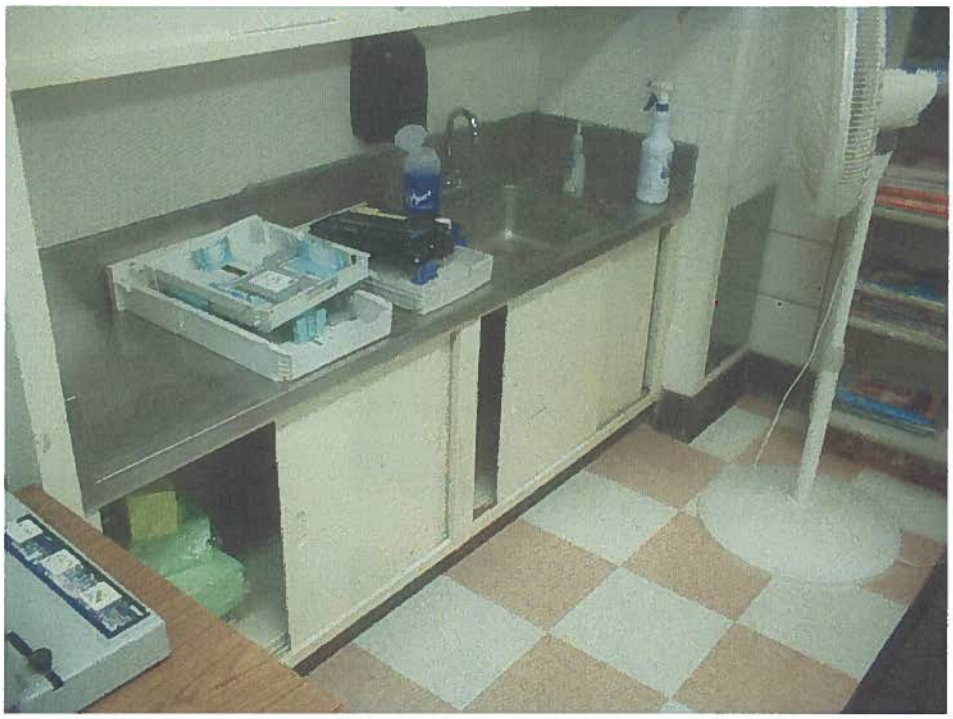
General view of main entry area.



Drinking fountain near gym at new wing; single but OK.

Divider curtain in gym
Teacher wants it taken out; swinging bottom rod is a hazard (according to the teacher).

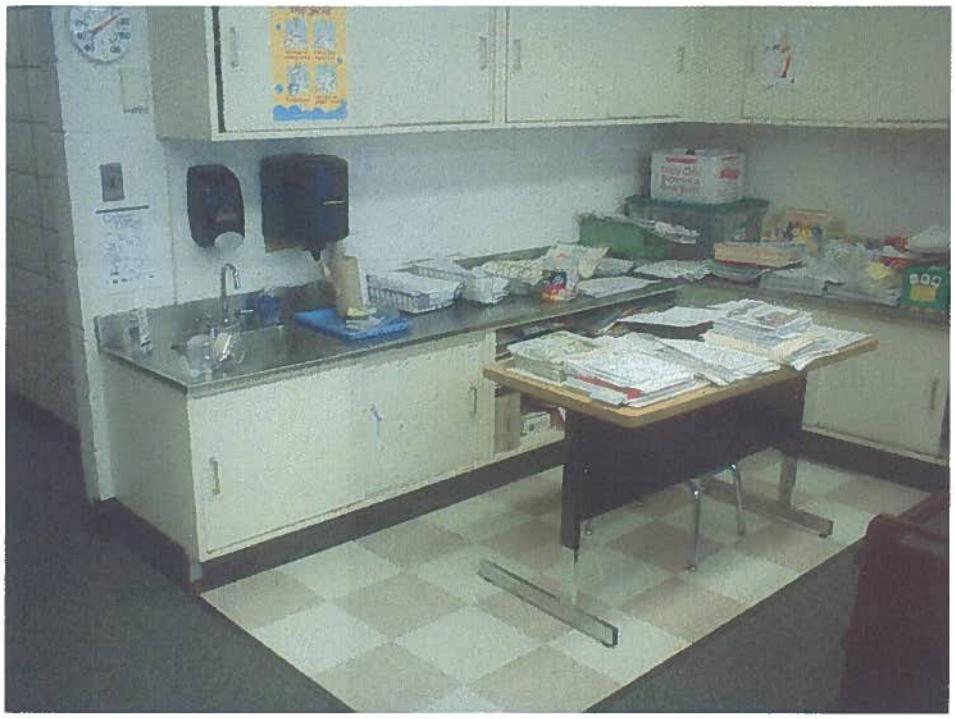
General view of classroom in new wing.



Sink in teachers' workroom; non-accessible.

Non-accessible sink in classroom, old wing.

Service counter at office, main contact point, 36" high.



Non-accessible sink in classroom.

Handicapped lift at back of stage. Obstructed from use.

Ceiling tile shows deterioration-water damage.

Broken tile. Hole in wall.

Section 07 - Hanover Middle School

Locus Map - Town of Hanover

Building Summary

Address: 45 Whiting St.
Gross Area: 133,700 SF
Description of Site: Generally level topography, open treeless site surrounded by forested land. Wooded areas to the northwest and southwest are wetlands. Bituminus asphalt paving at all parking, drives, and at play area at rear of building.
Description of Building: Constructed in 1971, two-story brick masonry, flat roof, large building with 3 wings radiating off of a central core area. Entry cover and gymnasium wing mansard have brown vertical metal siding; remainder of the building has either pre-cast concrete or buff-toned CMU banding at the roof level.
Function of Facility: : Education, grades 5 – 8
Agency or Department: Hanover Public Schools
Technical Construction Description: Primarily brick masonry exterior walls, with pre-cast concrete horizontal banding at roof level. Flat roof. Steel frame structure.
Valuation: $12,856,750.00 (estimated replacement cost)

Immediate Needs:

- Further investigate reported water infiltration problem below ground level floor slab, to determine cause and proper remediation.
- Further investigate reported air-temperature control and ventilation issues in gymnasium, to determine cause and proper repairs.
- Repair pavement and curbing at parking and drives, improve signage to control parking. Complete Schematic Design for expansion of parking area (requires overall site plan re-design, possible loss of play field space.)
- Remove barriers to universal accessibility: provide accessible entry / exit sequence at approximately 5 exterior doors with step, threshold, or other issues.
- Investigate and repair leaky conditions at one set of exterior windows.
- Repair or replace one set of doors with broken operating hardware, in corridor on ground level, leading towards exit doors.
- Annual roof inspection and minor maintenance.
- Remove sealant from condensate drains at exterior walls, at unit ventilators. Also, replace missing condensate lines; includes related masonry work.

Near Term Needs:

- Remove barriers to universal accessibility: provide new handrails at stage, provide dual-height drinking fountains, provide accessible sink units in classrooms that have sinks, provide accessible student lockers, insulate drain and hot water piping under accessible sinks, provide automatic operators at doors with inadequate clearances.

Building Summary

Near Term Needs (continued):

- Schematic Design study for expansion of Cafeteria.
- Asbestos floor tile removal.
- Regrade ground around building, to provide positive slope for drainage away from building (an extensive project which will include pavement work and accessibility work).
- Implement site parking improvement plan.
- Upgrade aging electrical sub-panels.
- Replace smoke partition doors, previously removed, with magnetic hold-opens, in non-sprinklered areas of the building.
- Re-roof building.
- Replace master clock system.

Conditions Summary:

The Middle School is in overall Good to Fair condition, considering all aspects of the interior, exterior, and site. There has been adequate periodic maintenance, and general accessibility upgrades have been made.
There is ground water infiltration problem below the floor slab in the southern wing of the building. It was reported that there are underslab (or perhaps in-slab) electrical conduits which have filled with water on occaision, shorting out the electrical power cuircuits for a large portion of the building. It was noted that the exterior grade is very level, and in some areas appears to actually slope towards the building, which could be contributing to this occaisional problem. The first floor slab, in many areas, appears to be only a couple of inches above the exterior grade level; normally the difference should be about 8" minimum for the type of construction of this building.

Parking capacity and traffic flow at this building is a big issue. Even on normal days, the capacity of the parking lot is inadequate, forcing latecomers to park on grass areas, partially off of the paved surface. The pavement is cracked and pot-holed and generally deteriorated in these locations as a result. Pavement curbing, striping and signage needs to be improved.

Most areas of the roof are now 18 years old, EPDM rubber membrane. This type of roofing material often only lasts about 20 years. The roof has some bubbled areas along seams, and some minor ponding. The roof should be inspected on an annual basis with a program of repairs to extend it's useful life, and planning should begin now to re-roof the building within 5 – 10 years.

It was reported that the Cafeteria is undersized for the student population. With only 200 seats, the 900 students eat in 5 serving groups with only 20 minutes for each group. With transition times, the lunch period extends for 2-1/2 hours.

The building has a recently installed energy management and control system, which appears to be functioning well for both energy conservation, and occupant comfort. The noted exception is the gymnasium, which requires remedial HVAC work.

The fire alarm system was recently installed, and appears adequate. The new classroom wing of the building is fully protected with a sprinkler system.

Conditions Assessment

Site/Architectural

Recommendation:
The moisture below the first floor slab requires additional investigation. Repairs were recently made in the main office area, which appear to be working acceptably well with no recurrence of the problem after about 14 months. We understand that a topical waterproofing process was used prior to installing the new resilient tile. Although this product is working well so far, we are somewhat skeptical of the long-term viability of any above-slab resolution, and suggest that a below slab waterproofing procedure may be required, and/or extensive regrading and insertion of drainage piping. A professional design firm should be employed to conduct further studies and to prepare specifications and drawings as needed, for this problematic condition.
General maintenance should continue, with particular attention to periodic inspection of the roof.

SITE

On April 21, 2010, John M. Schmid, PE, LEED® AP, conducted a site visit to The Hanover Middle School to evaluate issues previously raised to the Consultant Team regarding utility/infrastructure concerns.

Mr. Schmid met with James Hoey to observe the groundwater infiltration conditions experienced at the school over the past few years. Mr. Schmid made the following observations/assessments:

The groundwater infiltration issues may be caused by a rising ground water table, broken roof drains, or possibly other conduit that may be directing water under the building slab.

Mr. Hoey stated that this issue has been occurring over the past few years. However, this issue did not occur during the March 2010 record rainfall. Mr. Hoey also indicated that the school conducted a study and there is a report with its findings. These reports have subsequently been provided to the study team, and have been reviewed. The reports do not address site issues related to this problem. See additional comments elsewhere in this chapter

Driveway/ Parking Lot: Mr. Schmid also notes that the pavement is in poor condition consisting of numerous cracks, broken or missing berm, and damaged catch basins. When the parking lot is resurfaced, the Town should consider full depth reconstruction or the pavement cracks will likely return in the future.

ARCHITECTURAL

Exterior:

- Poor drainage, ground slopes towards building in areas.
- Loose wires, need to be secured, at South side of new wing.
- Rusted screen cover over fan exhaust, South wall.
- Parging indicates attempts to stop leaks, at unit ventilator grilles.
- Small mortar defect new door B-4.
- Dented vent on gymnasium exhaust fan.
- Dents in siding ; metal panels over main enterance.
- Two screens need to be replaced at windows near entrance.
- Stained brick near doorway A-3.
- Vent pipes above door A-2 and A-1 are unsightly; Door A-2 has rust stain.
- Missing rubber bottom piece on door D-3 (overhead doors)
- Low spot near entrance, poor drainage
- Ground slopes towards building, poor drainage
- Condensate drains for unit ventilators have been sealed shut, northeast side.

Conditions Assessment — Architectural

Interior:

First floor:

- The following reports on under-slab water infiltration were reviewed:
  -Sagamore Plumbing report, 7/6/2007
  -Evirotest report, 10/13/2008
  -OHI Report, 10/22/2008
  -RDA Architects, 7/14/2009.
  -Certified Floor Covering report, 7/22/2009
  These reports all indicated that moisture coming up through the floor slab, is the cause for loosening of existing resilient floor tiles, and 'oozing' of tile mastic. These reports do not address the root cause of the moisture problem, except that the 7/22/2009 report by Certified Floor Coving does indicate that cores were taken, and that 'no moisture retarder' was found below the slab. These reports, rather than identifying the cause, seem to be more focused on (appropriately) verifying the fact that no health dangers are existing as a result of this condition. The RDA report of 7/14/2009 indicates that 'clean air' testing was completed for asbestos fibers, but discussions with school personnel explained that this testing was precautionary, and that the necessary asbestos tile abatement work has not yet proceeded. Remediation of existing asbestos tile had been completed in the main hallway on the first floor level. The music room area was specifically observed for evidence of underslab moisture. It was noted that there is 12 x 12 vinyl composition floor tile in this area. Cracking was observed which is 'telegraphing' through these floor tiles. There is evidence of moisture below, seen in the beginning loosening of the tiles in various area, bubbling of apparent vapor under the tile.
- Multiple doors do not latch
- Damaged or missing floor tile
- Ceiling tiles in poor condition near kitchen
- Several broken and damaged doors
- Blocked exit near team room
- Some sinks non A.D.A.

Second floor:

- Misc. repair to lockers
- No eyewash in science labs
- Missing smoke doors in the corridor
- Many classrooms have scuffed floor, damaged floors, and ceiling tile damage or missing
- Some classrooms need to be repainted
- Light cover is missing or damaged in several classrooms
- Several locker doors have a missing handle

Structure:

- No general structural defects noted. There is cracking in the ground level floor slab in the music room area; and this may be related to the moisture problem noted elsewhere in this report, either as a cause or a symptom of the moisture problem; but these minor cracks are not a structural issue.

Conditions Assessment — Architectural

Roof:

- The existing EPDM adhered rubber roofing, was installed in 1991, making it 19 years old. It appears to have at least about 5 years of life remaining, if proper maintenance is continued. There are some areas of minor ponding, including one larger ponding area along a seam, and where the seam has bubbled, indicating possible moisture in the roof system below. There is loose wiring on the roof in the area of a satalite dish receiver; this has the potential to abrade the roof in windy conditions.

Building Code:

The most recent addition was completed under the 6th edition of the Mass. Building Code, at which time the Construction type was identified as combined Types 2B and 2C construction. Smoke doors were part of the original building, and designed according to the code which was current at the time, for 'compartmentalization' smoke control in the event of a fire emergency. At some point, these doors were removed, probably due to maintenance issues. These doors should now be replaced, along with fire-alarm activated (release) magnetic hold-open devices. This will allow the doors to remain normally open, therefore not impeding foot traffic, and will only shut in the event of an alarm, but still allowing passage out of the building. These smoke doors would not be required if the building were fully protected by a sprinkler system. The other known code issue requiring remedial work, is barrier removal for accessibility (as noted below).

Accessibility:

Remove barriers to universal accessibility: provide accessible entry / exit sequence at approximately 5 exterior doors with step, threshold, or other issues.

Provide new handrails at stage, provide dual-height drinking fountains, provide accessible sink units in classrooms that have sinks, provide accessible student lockers, and insulate drain and hot waterpiping under accessible sinks.

The largest challenge for full accessibility in this building, concerns the entry doors to several classrooms and office. These doors currently have inadequate clearances on the latch pull side of the door. Remediation will require either providing automatic operators, or reconstruction of entryways to widen the openings. As this is a potentially large issue, a more detailed study should be conducted to consider the costs and benefits of various alternative approaches, and also to consider the possibility of seeking a permanent variance from this requirement from the Massachusetts Architectural Access Board. It appears that as many as 35 doorways in the building, perhaps more, could be effected.

Energy & Environmental Sustainability:

The existing windows around the entire facility are replacement units, apparently installed at the same time as the last major building addition. These are 5/8" insulating glass units, with fixed glass above and operable 'hopper' style windows below, in excellent condition. A 'Kalwall' glazing system is in place at the upper level in the gymnasium, which provides daylight with good insulating characteristics.

Conditions Assessment — Architectural

Hazardous Materials:
As required by Massachusetts regulations, a full program of asbestos survey, remediation, monitoring and reporting has been conducted by the Town of Hanover for all school buildings, and a current updated report is on file with the Public School department. Know work that remains to be completed, includes the removal of existing asbestos-containing floor tile, in various areas of the building. For all schools that need this work, the Public Schools Departmenthas estimated a cost of $1,720,000, and has requested funding of this amount from the Capital improvement Committee. This includes work at the Middle, Cedar, Salmond and CenterSchools (the HS and the Sylvester do not require tile removal). From documents provided by the school Department, it appears that preliminary pricing for the remaining work at the Middle school, is a total of $487,000.

Historical/Aesthetic:
- This facility has no particular historical architectural significance, and is not located in an historic district.

Other Issues:
- Proximity to bordering wetlands is an impediment to needed expansion of the parking area.
- For public safety reasons, additional lighting should be provided, particularly on the north side of the building which is directly adjacent to heavily wooded areas. A request was noted for paving the existing pathway, and providing lighting, between this building and the adjacent HS building, as the pathway goes through a wooded area.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:
- Existing Domestic Water Service:
  The existing building is currently served by a 3" domestic water service which enters at the boiler room. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the Schools domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- Existing Natural Gas Service:
  There is currently a natural gas service to the building that enters the building in the boiler room. This service serves the boilers, generator and the hot water heater.
- Existing Sanitary Service:
  The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- Fuel Oil: There is currently no on site fuel storage.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

Plumbing Fixtures and Specialties:

Existing plumbing fixtures are as follows:

- Water closets are wall mounted; vitreous china with flush valves.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung vitreous china. Faucets are of the single lever handle.
- Drinking fountains are surface wall mounted stainless steel units. Most are not ADA compliant. The units are in good condition.
- Janitor's mop sinks are floor mounted basins units all with 2-faucets and vacuum breakers. These basins are in good condition.
- Classroom sinks are counter top, 2-lever faucets and are in good condition units do not appear to be ADA compliant.

Domestic Hot Water Systems:

Existing Domestic Hot Water System:

- The Schools domestic hot water is generated by gas fired 600 Gallon water heater which feeds all the schools hot water needs. The water heater is in good condition.

Fire Protection Service:

- There is no fire protection system coverage (sprinklers) currently in most of the facility. The newest addition does include sprinklers.
- The kitchen hood is supplied with a fire suppression system within the hood.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems:
APPLICABLE CODES AND STANDARDS
The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing building is heated by two hot water boilers. The two hot water boilers are both Cleaver Brooks with burners currently operating on Natural gas. The boilers were installed in 1999 with a capacity of 6123 MBH each. This equipment is approximately 13 years old and in very good condition.
- The present Heating and Ventilating systems consist of finned tube radiation, unit ventilators in the classrooms with associated exhaust systems and roof top units serving the inner core upper level classrooms. The gymnasium is served by two ceiling mounted H & V units it was noted by school personnel that there were ongoing problems with these units over or under heating the gymnasium these units include a fresh air component.
- Unit Ventilators in classrooms appear newer and are in very good condition with no noted problems.
- Exhaust systems servicing the classrooms utilize a single exhaust grille. Exhaust grills are located in the ceilings opposite the exterior walls containing the unit ventilators. It was noted that
- all roof exhaust fans had been replaced within the last year.
- Air conditioning is provided in select areas via packaged roof top units and split systems, these units all appear to be in good working order.
- The existing temperature controls in the school are new, by Johnson Controls including CO2 sensors in classrooms with set back function for energy savings. The temperature control system air compressor is located in the Boiler Room and includes an air dryer this unit is older but in good condition.

Electrical Systems:
APPLICABLE CODES AND STANDARDS
The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems (continued):

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 480/277volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 1200 amps. The service equipment is located in the buildings main electric room off the boiler room. The service equipment switchboard is in very good condition including the main having been recently replaced.
- There are a number of electrical panels located throughout the facility. These panel boards are a mix of newer and older having been added and/or replaced at the time of various building additions/renovations and/or on an as-needed basis. The condition of these panel boards range from good to fair. The majority of the panel boards have no spare circuit breakers available for new circuits to be added, or space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 2' x 4' 2-lamp fluorescent acrylic lens troffers fixtures in the corridors and older 1' x 4' acrylic wraparounds in the classrooms. The light levels appear to be within recommended levels.
- The fire alarm system is a Pyrotronics addressable main FACP with manual fire alarm pull stations, horn strobes and smoke detectors located throughout the building. All devices appear to be ADA compliant.
- Site lighting is accomplished via building mounted wall packs at all exit doors and pole mounted lighting in the parking area.
- There is an indoor Kohler standby emergency generator at the facility the generator is in very good condition and is located in the main electric room.
- Life safety emergency and exit lighting is provided via power from the emergency generator including battery powered exit signs.
- The existing clock and paging systems are both older however it was noted that only the clock system had been experiencing problems.
- There is currently a controlled access system by Gemini which includes motion sensors and a CCTV camera at the main front entry. All systems were noted as functioning with any issues.

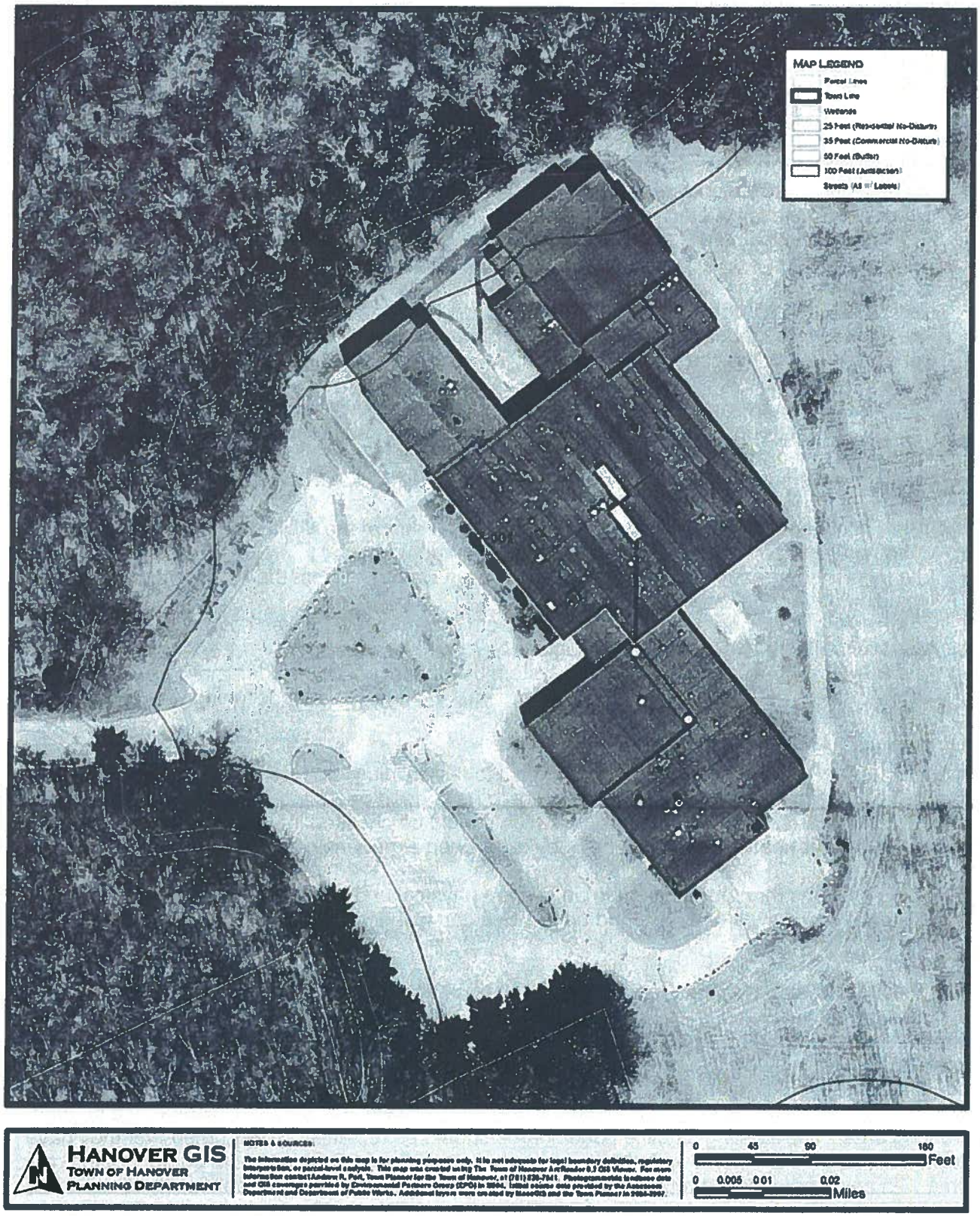
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. All mechanical heating and cooling systems seem to be in good operating condition with the exception of the H & V units serving the gymnasium which should be checked in order to determine the cause of the over/under heating problems that they have been experiencing.

Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure.

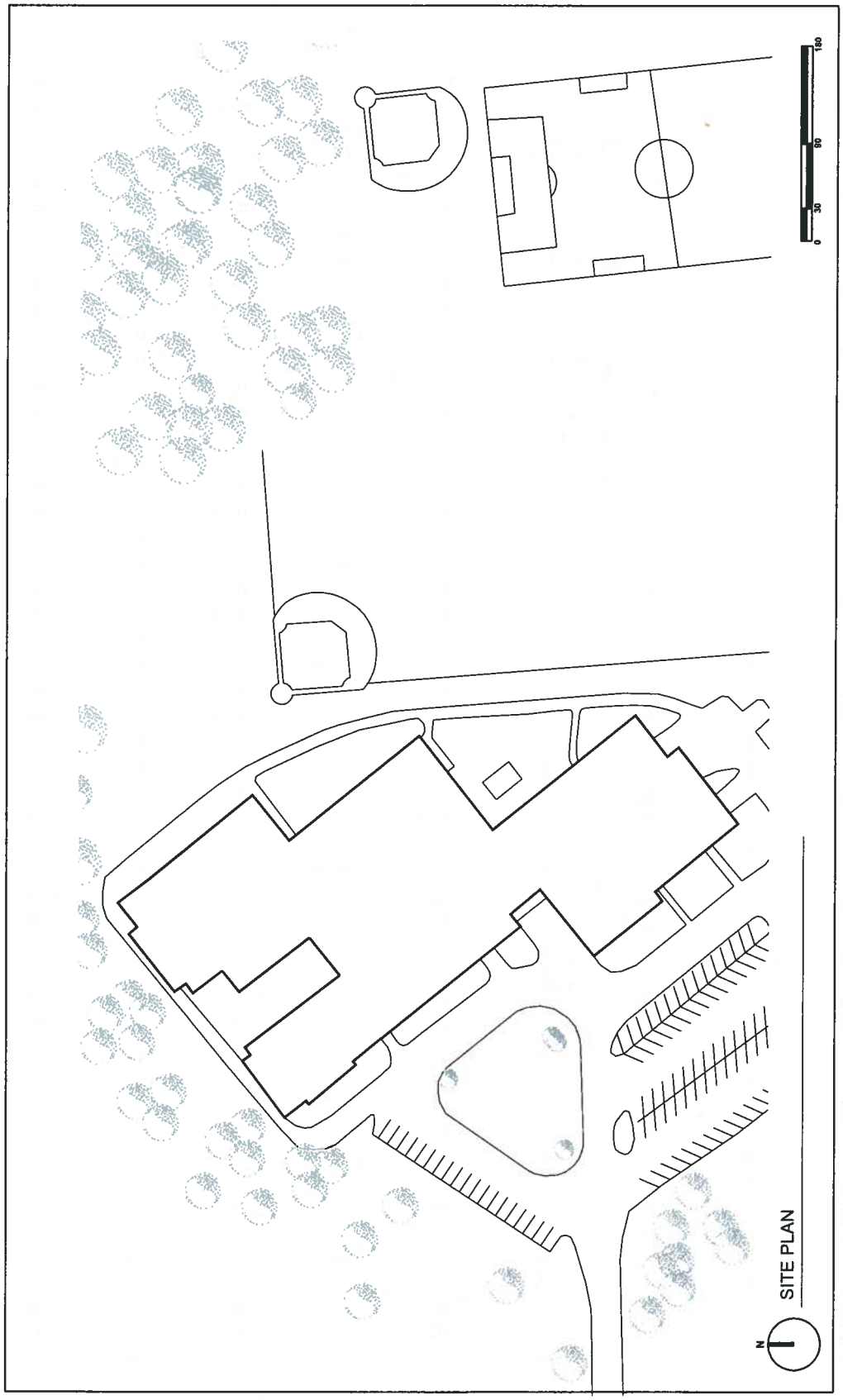
The Electrical systems appear to be in good condition and operating without issues. The lighting systems are newer and in good condition with the exception of the classroom wraparounds which should be upgraded. The existing Fire alarm system is in good condition. Emergency lighting and exit lighting systems are newer and in good condition. Existing paging system is in good condition. The clock system has had problems mainly due to the cost associated with replacing broken or damaged units which should be addressed. The existing security systems are in good working order. The existing satellite panelboards should be replaced. It was noted that they have experienced some problems with the underground conduit system this should be addressed over time with new and/or wiring replacements being run overhead rather than continuing to utilize the underground system.

AERIAL PHOTO



Hanover Middle School is the building in the center of the photo.
(Source: Hanover GIS)

SITE PLAN



D·R·A

Drummey Rosane Anderson Inc.
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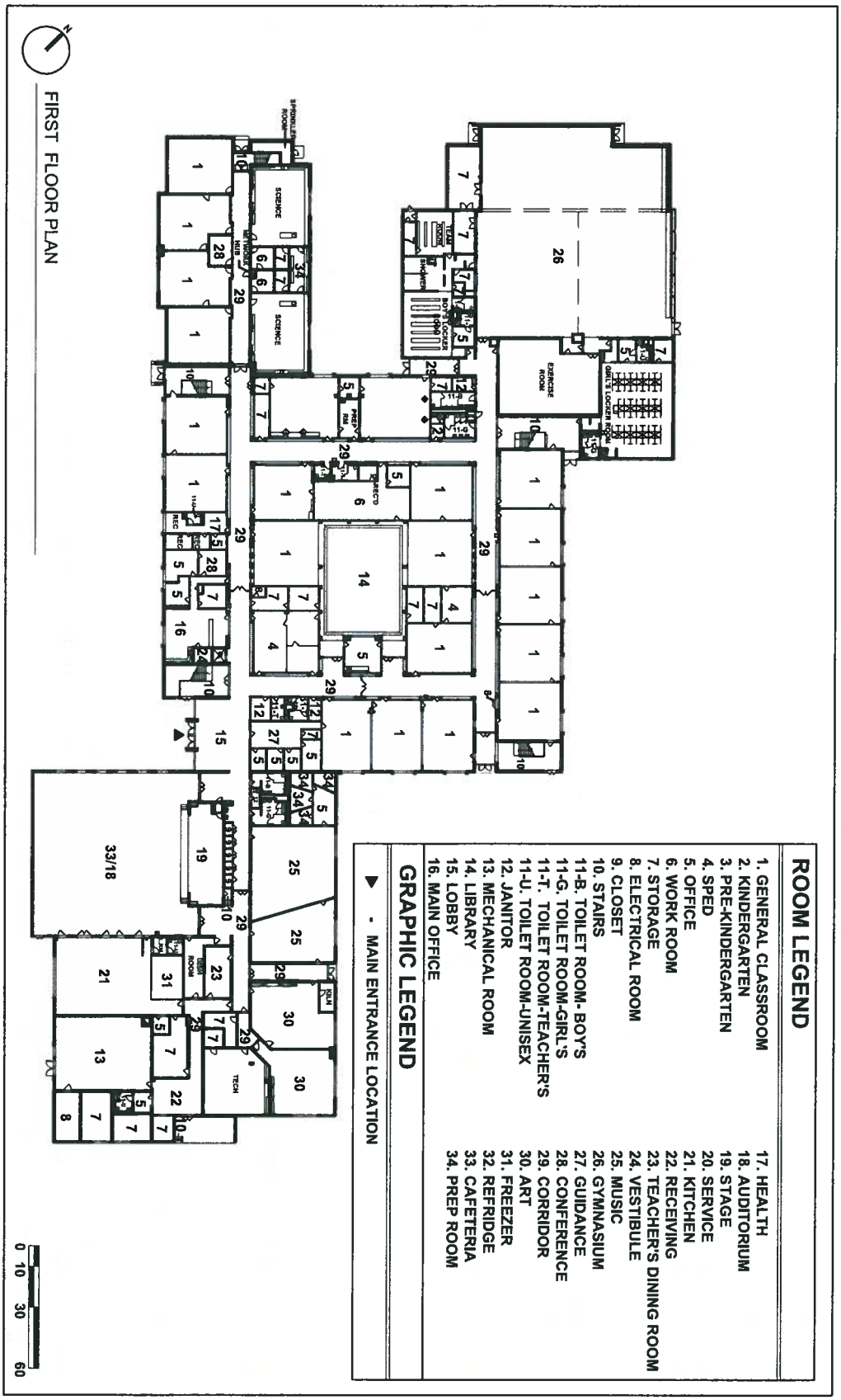
HANOVER MIDDLE SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

FLOOR PLANS



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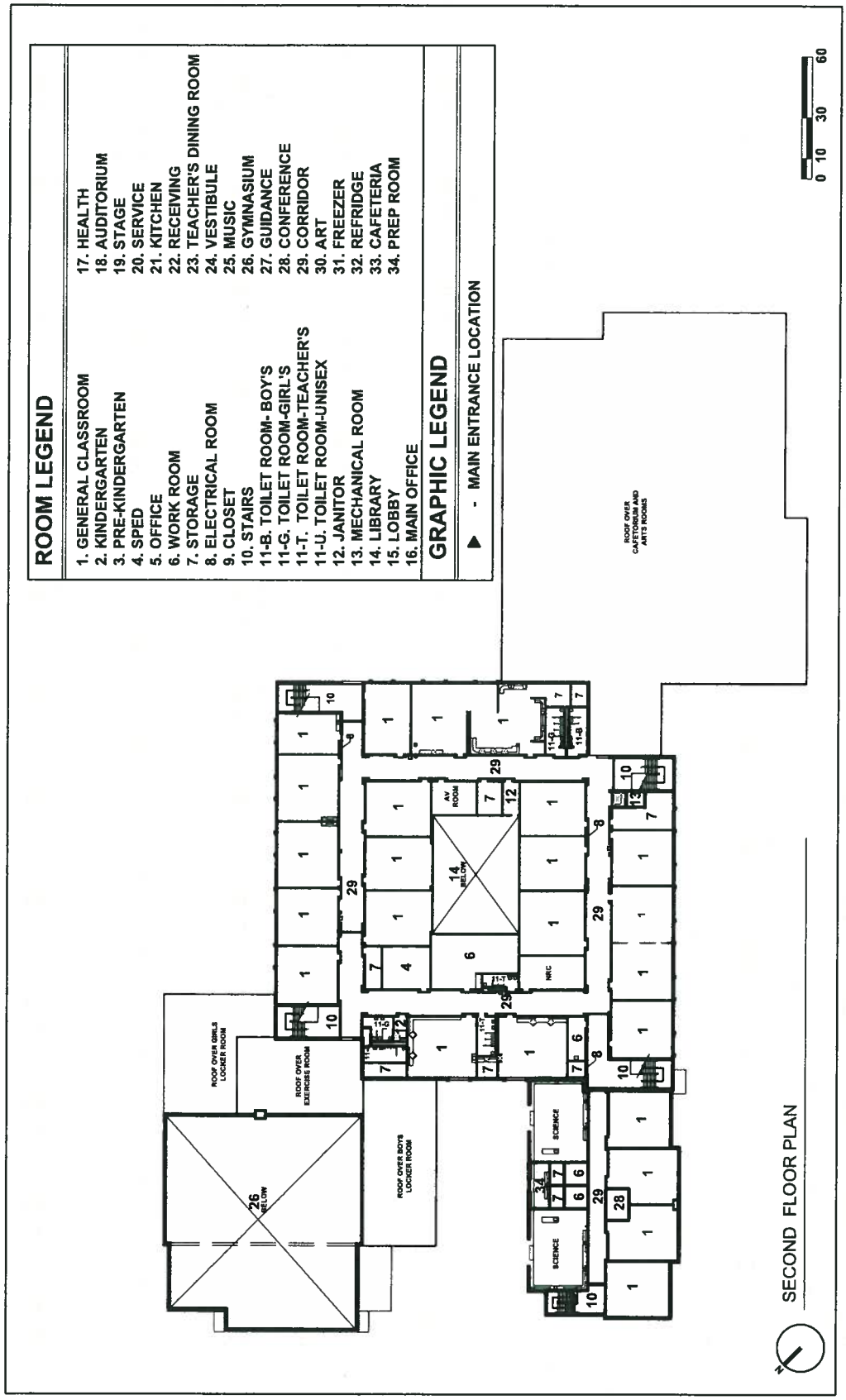
ROOM LEGEND
1. GENERAL CLASSROOM
2. KINDERGARTEN
3. PRE-KINDERGARTEN
4. SPED
5. OFFICE
6. WORK ROOM
7. STORAGE
8. ELECTRICAL ROOM
9. CLOSET
10. STAIRS
11-B. TOILET ROOM- BOY'S
11-G. TOILET ROOM-GIRL'S
11-T. TOILET ROOM-TEACHER'S
11-U. TOILET ROOM-UNISEX
12. JANITOR
13. MECHANICAL ROOM
14. LIBRARY
15. LOBBY
16. MAIN OFFICE
17. HEALTH
18. AUDITORIUM
19. STAGE
20. SERVICE
21. KITCHEN
22. RECEIVING
23. TEACHER'S DINING ROOM
24. VESTIBULE
25. MUSIC
26. GYMNASIUM
27. GUIDANCE
28. CONFERENCE
29. CORRIDOR
30. ART
31. FREEZER
32. REFRIDGE
33. CAFETERIA
34. PREP ROOM
GRAPHIC LEGEND
- MAIN ENTRANCE LOCATION
ROOF OVER CAFETERIA AND ART ROOMS
ROOF OVER GIRLS LOCKER ROOM
ROOF OVER EXERCISE ROOM
ROOF OVER BOY'S LOCKER ROOM
AV ROOM
MRC
SCIENCE
SECOND FLOOR PLAN
0 10 30 60
Scale:SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00
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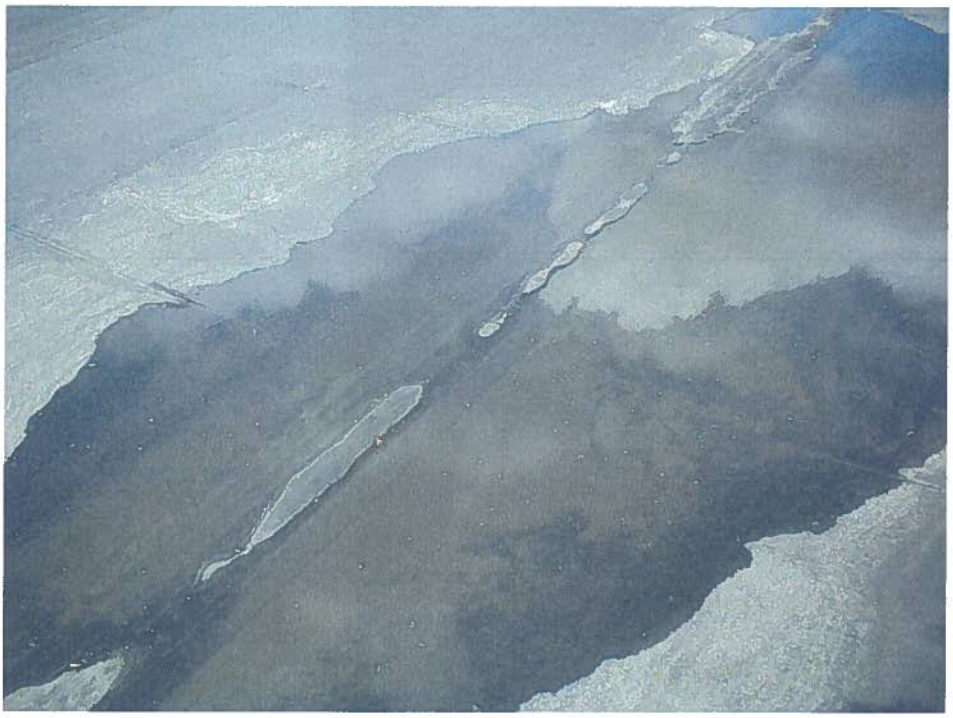
EXTERIOR PHOTOS

Exterior, main front entrance.

Change of materials.

Sealed condensate line may be causing water to back up inside-should be un-sealed.

Gap in drain cover.



Roof drainage-ponding & blistered seam.

General roofscape-loose wires should be secured to prevent chafing.

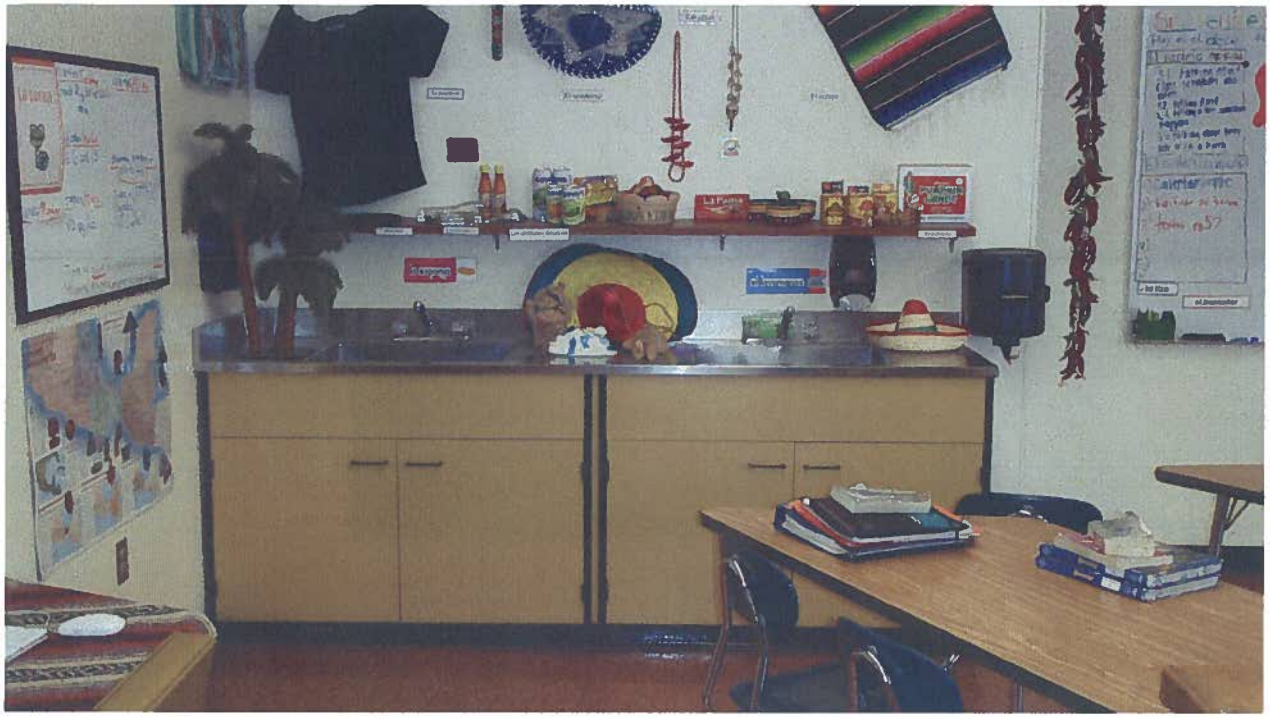
Loose wiring at satellite dish.

General roofscape, equipment on roof.

Exterior, leaky windows; plugged condensate line is in this area.

INTERIOR PHOTOS

Smoke doors have been removed. Should be reinstalled.



Non-accessible sink in classroom on level 2.

Non-accessible clearance at boys' toilet room door.

Typical lockers at this school. No designated accessible lockers.

Accessible elevator controls.

Main entrance lobby.

General view of kitchen.

Lift at cafeteria stage; does not meet code at steps.

Handicapped accessible toilet near cafeteria. Accessible sink not correct depth.

Faculty women's toilet--uninsulated trap does not meet accessibility code.

Non-accessible drinking fountain.

Threshold problem at gym entrance; exterior entrance. This entrance is used for public events.

Accessible shower in boys' locker room.

Bleachers in gym have no accessible seating, per description from gym teacher.

Damage from leaking in ceiling.

View of lockers blocking doorways (unused doors).

Section 08 - SYLVESTER ELEMENTARY SCHOOL

Locus Map - Town of Hanover

Building Summary

Address: 495 Hanover Street
Gross Area: 31,070 sq. ft.
Description of Site: Generally level topography, open treeless site, adjacent to other schools and open park and recreation land. Adjacent to main cross-town roadway. Bituminus asphalt paving at parking and drives.
Description of Building: Constructed 1927. Addition 1956 or 62. Reroofing of addition in 2000; of remainder in 1990. Three stories: partially sub-grade 'basement' level has cafeteria and other student spaces, plus upper two floors of classrooms etc.. No elevator. Serves grades 3 and 4. An attractive older brick building with white painted wood double-hung windows. Is in a state of generally poor condition on the exterior; interior has been maintained and is in fair condition. Not an historic building, but is listed on the National Register as being within the historic town district. Located adjacent to the Center Elementary School; some classrooms are shared and the kids walk back and forth.

Function of Facility: Elementary education, grades 3 and 4 only.
Agency or Department: Hanover Public Schools
Technical Construction Description: Brick masonry exterior walls, with individual wood double-hung windows. Structural system is load-bearing masonry with primarily wood-framed floors and roof. Flat roofs.
Valuation: $3,812,000.00 (estimated replacement cost)

Immediate Needs:
- If replacement of the building is not feasible due to budgetary constraints, then elevator(s) are required for accessibility for disabled persons.
- Also if replacement is not feasible, then an accessible building entrance, accessible drinking fountain on each floor level, and accessible student and staff toilets for each sex on each level, should be provided.
- Repairs should be made to the gymnasium floor, (buckled from moisture) to allow use of that portion of the building.

Near Term Needs:
- Further removal of barriers to universal accessibility, including accessible doorways to classrooms and offices, handrails, widening individual doors and pairs of doors, etc.
- Repair damaged plaster at walls and ceilings.
- Repair damaged and worn wood floors.
- Replace damaged, stained and worn acoustical ceilings.
- Design improved kitchen facilities and reconfigure cafeteria to provide one at-grade emergency egress.
- Investigate and repair leak at foundation wall in cafeteria.

Building Summary

Conditions Summary:

The Sylvester School is in overall poor condition, considering all aspects of the interior, exterior, and site, when generally compared to other state-wide public elementary school facilities. This is not a criticism of the Hanover School Department; there has been adequate periodic maintenance, as would be expected. However, because of the age of this particular building, general periodic maintenance is not a methodology that will elevate the condition of the building above 'poor'. The basic infrastructure and design of this facility is outdated and cannot be adequately remediated except with a major and complete building renovation, or by replacement of the building with a new facility. The combustible nature of the wood framed floor construction, and the (likely) inadequate seismic capacity of the load-bearing masonry construction, are fundamental building systems which are no longer considered adequate by today's standards. The cafeteria space is located in the partially below-grade 'basement' level of the building. Egress from this space is less than ideal, as it requires climbing stairs to all egress points.

Recommendation:

This team recommends that this building should no longer be used for grade school student education; at least not in its current configuration. A substantial renovation is required, which could possibly exceed the cost of a replacement building.

There are obvious advantages to be realized by combining the Sylvester School students into one single expanded building at the Center School location. Operating and maintenance costs for one larger renovated building would be lower than current expenditures at two buildings. Educational programming would be improved, with the most obvious benefit being the elimination of the need for Sylvester students to walk outdoors to attend classes at the Center School during inclement weather. It is our recommendation that the Center school be expanded as needed to accommodate the students of the Sylvester school. Following the construction of this addition on the Center School, the Sylvester School could then be totally renovated as a vacant building. This would seem to be a good location for a low-income senior-housing project, near the services and historic amenities of the town Center. Until the major program of construction begins, general maintenance should continue, and short-term measures should be utilized to improve access for persons with disabilities.

Conditions Assessment

Site/Architectural

SITE

Site is generally in good condition. Generally level, combination of paved areas and lawn, with plantings and large trees. Adjacent to town-center recreation fields and courts; and located across the street from the historic Stetson House. There is no perimeter fence between the school property and the adjacent busy roadway.

ARCHITECTURAL

Exterior:

- Brick masonry, is in generally fair condition. There are isolated areas of brick deterioration and step-cracking, and repointing is needed. In particular, brick is cracked and displaced at steel, lintels over window openings, perhaps as a result of rusting of the lintels.
- Wood work is in general fair condition, with some carpentry repairs & painting needed.
- Hole in cement stair on south side
- Steel headers could be power washed and new mortar over top
- Ivy on north west side of building

Exterior:

- Mold and wood deterioration on shed
- Steel headers on window rusty and missing mortar
- Stairs by C-2 door in bad shape, crumbling
- Damaged paint on cornice localized
- Mortar missing from header location at front right
- Open drain pipe – needs end piece, pipe discolors the wall (not sure what this pipe is for)
- Mold on brick wall all over north side
- Brick damaged at base on north side
- Damaged mortar at visible lintel ends, typical. Rust, is re-paintable
- Worn paint and carpentry repairs on door B-2
- Concrete deteriorated in areas at stairs by B-2
- Failed exterior mullions right of door B-2
- Crack in brick to the right of door B-2
- Conduit may not be needed anymore- looks like it was for an old light that was replaced with this light.
- Two new exterior doors were installed during the summer of 2010.

Interior:

Basement:

- Sag in ceiling in cafeteria near serving line.
- Doors need paint
- Paint on columns could use touch up in cafeteria
- Accessible sink needed in art room
- No accessible sink in boy's and girl's bathroom.
- Scuffed up doors need paint leading to north stairway
- Damaged wall needs patch and repair near north stairway

Conditions Assessment — Architectural

Interior (continued):

First:

- Floor in gymnasium is warped and heaved in several areas due to expansion, possibly also due to roof leaks. This condition prevents the gymnasium from being used to it's full potential for teaching and physical education activities.
- Patch and paint damaged wall near stage
- Cracked plaster right and left of entrance to auditorium
- Warped floor in southeast classroom
- Patch and paint damaged wall in teachers room and waiting room
- Hardwood floor need to be sanded and refinished in the classroom to the right of the Health room
- Accessible sink needed in special education resource room

Second:

- No sprinklers
- Poor ceiling tile work
- Sticky door
- Evidence of roof leak in bathroom next to auditorium
- Loose wall panel and damaged plaster

Roof:

- The newer adhered roof is in good condition. The older areas of the roof should be scheduled for replacement within about five years.
- EPDM ballasted membrane on the older (1990) areas. The newer roof on the addition is directly adhered EPDM.
- Aging copper copings & counter flashings, with numerous holes, tears, gaps, and applied caulkings and sealants.
- Hatch hard to operate; needs paint
- Vent near hatch may be source of leak
- Major ponding over auditorium minor ponding over additon.
- Drain line over gymnasium was investigated for leaks during the summer of 2010, with a video camera down the drain line. What appears to be leaking may actually be condensation on the uninsulated drain line.

Structure:

The structure of this building appears to be load bearing masonry in combination with wood floor and roof framing. This structural system would not meet today's standards for lateral load (seismic) resistance without steel reinforcing. There is some localized step cracking of the exterior brick masonry in a few areas, but this does not indicate any general structural inadequacy.

Building Code:

This building was constructed at a time when there was no statewide Mass. Building Code and the addition was built under a very early edition of the Code. The Construction Type for this building, under the current Mass. Building Code, would be considered Types 3B construction, which is not allowable for a 3-story building in the Educational Use Group, of this size.

The building is non-accessible to persons with disabilities, a condition which would not be accept able under current construction regulations. The degree of non-accessibility means that this public-use facility is exposed to potential complaints being filed with the U.S. Dept. of Justice, under the Americans with Disabilities Act.

Conditions Assessment — Architectural

Accessibility:

Numerous deficiencies. The building entrances are non-accessible. There is no accessible path of travel through the building, either on individual floors, or between floor levels. Toilet facilities are non-accessible. Basic educational program elements are non-accessible to persons with disabilities.

Energy & Environmental Sustainability:

- The windows have been recently replaced, with the past 3 years, which contributes to reduced energy usage. Windows are thermally insulated double-hung vinyl, high quality historic reproductions with both internal muntins and surface applied exterior muntins. Custodial staff reports that the sealants at windows were abated as hazardous materials at the time the windows were replaced.
- It is assumed that the exterior masonry walls are uninsulated.

Hazardous Materials:

- As required by Massachusetts regulations, a full program of asbestos survey, remediation, monitoring and reporting has been conducted by the Town of Hanover for all school buildings, and a current updated report is on file with the Public School department. Further detailed investigations of hazardous materials, was beyond the scope of this study. It was reported that asbestos-containing floor tile has already been removed from this building. Due to the age of the building, it is likely to have lead-based paint; this was not specifically investigated. For any future work that might disturb painted surfaces, lead testing should be carried out, and protocols should be used to prevent lead dust from being released.

Historical Value:

- This facility is not individually listed as an historic building, but it is located within the central Hanover Historic District. It is an attractive period building with classical wood detailed cornice, windows, and other elements, particularly at the main entrance. The brickwork is articulated with classical detailing.

Other Issues:

- Program space is limited for art, music and physical education, which requires students to walk to the Center Elementary school, for these programs, during the school day.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing Systems:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:
Domestic Water:
- **Existing Domestic Water Service:**
  The existing building is currently served by a 4" domestic water service which enters the boiler room. The domestic water service equipment includes a water meter and isolation valves and is located in the basement women's toilet area. This water service currently serves all of the School's domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- **Natural Gas:**
  Existing Natural Gas Service: There is currently a natural gas service to the building serving the boilers and hot water heater. This service enters the rear of the building at the boiler room and serves the boilers and hot water heater.
- **Sanitary:**
  Existing Sanitary Service: The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the building's sanitary waste system.
- **Fuel Oil:**
  There is currently no on-site fuel storage.

Plumbing Fixtures and Specialties:
Existing plumbing fixtures are as follows:
- Water closets are a combination of wall mounted on the upper levels and floor mounted in the basement; with flush valves, vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are counter top vitreous china. Faucets are a combination of single lever handle and two lever handles.
- Drinking fountains are surface mounted stainless steel units. Most are non-ADA compliant. The units are in good condition.
- Janitor's mop sinks are wall mounted basins with 2-faucets and vacuum breakers. These basins are in good condition.
- Typical classroom sinks are counter top, single lever faucets and are in good condition.

Domestic Hot Water Systems:
- Existing Domestic Hot Water System: The School's domestic hot water is generated by a 74-gallon gas-fired water heater which feeds the schools hot water needs. The water heater is new and in very good condition.

Fire Protection Service:
- There is no fire protection coverage (sprinklers) currently at the facility.
- The kitchen hood is supplied with a fire suppression system within the hood and is in very good condition.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

- The existing building is heated by two steam boilers. These two boilers have their burners currently operating on Natural gas and a capacity of 2713 MBH each. This equipment is approximately 7 years old and in very good condition. The boilers were taken apart and internally re-conditioned during the summer of 2010.
- Steam traps were replaced during the summer of 2011.
- The present Heating and Ventilating systems consist of steam radiators throughout the facility, there are approximately 6 newer unit ventilators installed in select classrooms/areas and exhaust systems. The gymnasium is served by a closet mounted H & V unit as well as steam radiation. The H & V unit includes a supply air component.
- Unit Ventilators are newer manufactured by Herman Nelson and appear in very good condition with no noted problems.
- Exhaust systems servicing the classrooms utilize a single exhaust grille. Exhaust grills are located on the wall high above floor level opposite the exterior walls.
- The existing temperature controls in the school are pneumatic. The temperature control system air compressor is located in the Boiler Room and includes an air dryer and is in very good condition. The temperature control problems that were noted however may be due to the known steam trap issue which at the time of this report writing was in the process of being budgeted under the green communities grant received by the town. Temperature control issues should be re-evaluated after the steam traps have been repaired.
- At a site visit on 12/16/2010 custodial staff pointed out that the compressor for the ATC thermostats runs 24/7.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 120/240 volts, single-phase, 3-wire electrical service; capacity was noted as being rated 400 amps. The service equipment is located in the basement of the building. The service equipment is newer and in very good condition.
- There are a number of electrical panels located throughout the facility. These panelboards are older having been added at the time of various building additions and/or on an as-needed basis. The condition of these panelboards range from fair to poor. The majority of the panel boards do not have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 1' x 4' 2-lamp wraparound fluorescent fixtures, these fixtures with the exception of some (approximately 30% in the classrooms) are in very good condition. The light levels appear to be within recommended levels.
- The fire alarm system is a Gamewell main FACP, there are manual fire alarm pull stations, horn strobes and smoke detectors located throughout the building. The system is in very good condition and was noted as having been problem free.
- Site lighting is accomplished via building mounted flood lights.
- There is no standby generator located at this facility.
- Life safety emergency lighting is provided via Emergency battery units with unit mounted emergency light heads and battery powered exit signs, units are newer and in good condition.
- The existing clock and paging system have had ongoing problems. The paging system appears to be older and in need of replacement whereas the clock system appears newer and may just need to be repaired.
- There is currently a controlled access system at the main front entry as well as CCTV cameras at three exterior locations. Motion sensors are also located throughout the facility. All systems were noted as functioning without any issues.
- Existing fluorescent light lamps and ballasts were replaced throughout the building during the summer of 2010, under a utility company rebate program. The fixtures in the gymnasium were entirely replaced, and occupancy sensors were installed.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

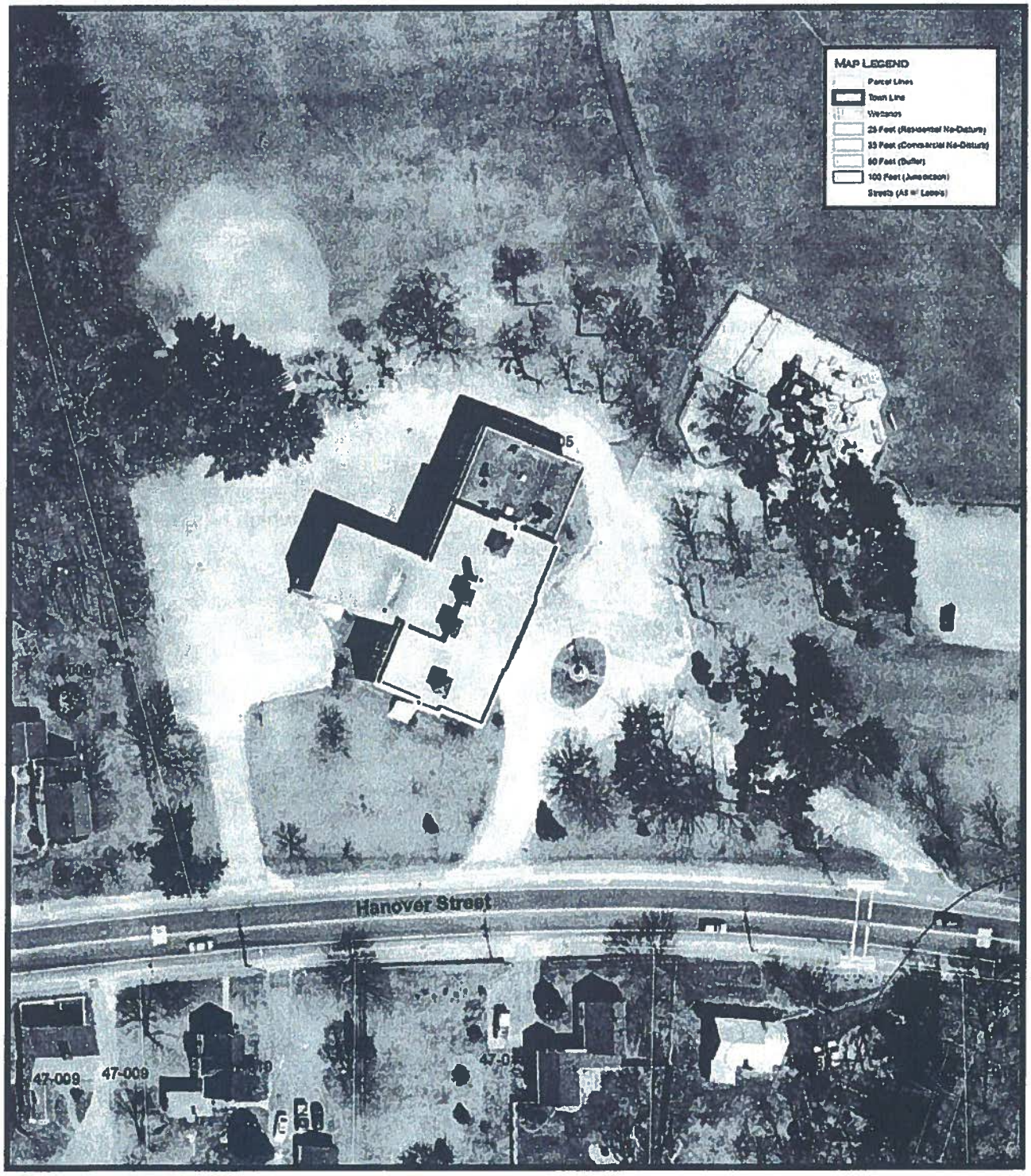
MEP SYSTEMS CONCLUSION

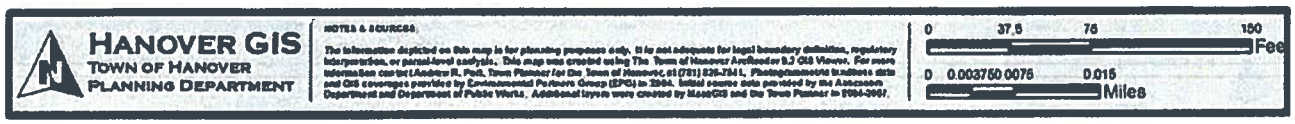
In general, the systems vary in age from original to the building, to as recent as 3-5 years old. Boilers have been recently replaced however heating problems still exist. It is believed that these will be corrected once the steam traps have been repaired/replaced.

Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure.

The Electrical systems appear to be in good condition and operating without issues. The older distribution equipment (panelboards) should be replaced with newer equipment with additional breaker spaces to meet any future needs and to alleviate the possibility of overloading individual circuits when new equipment and or devices are added to existing circuitry. The lighting systems are newer and in good condition, a small portion of the classroom lighting should be upgraded. The addition of automated lighting controls should be should be implemented in order to meet current energy codes and to save on energy costs. Fire alarm system, exit and emergency lighting systems are newer and appear to be in good condition. Existing paging system which has been problematic should be replaced and clock system should be repaired and/or replaced.

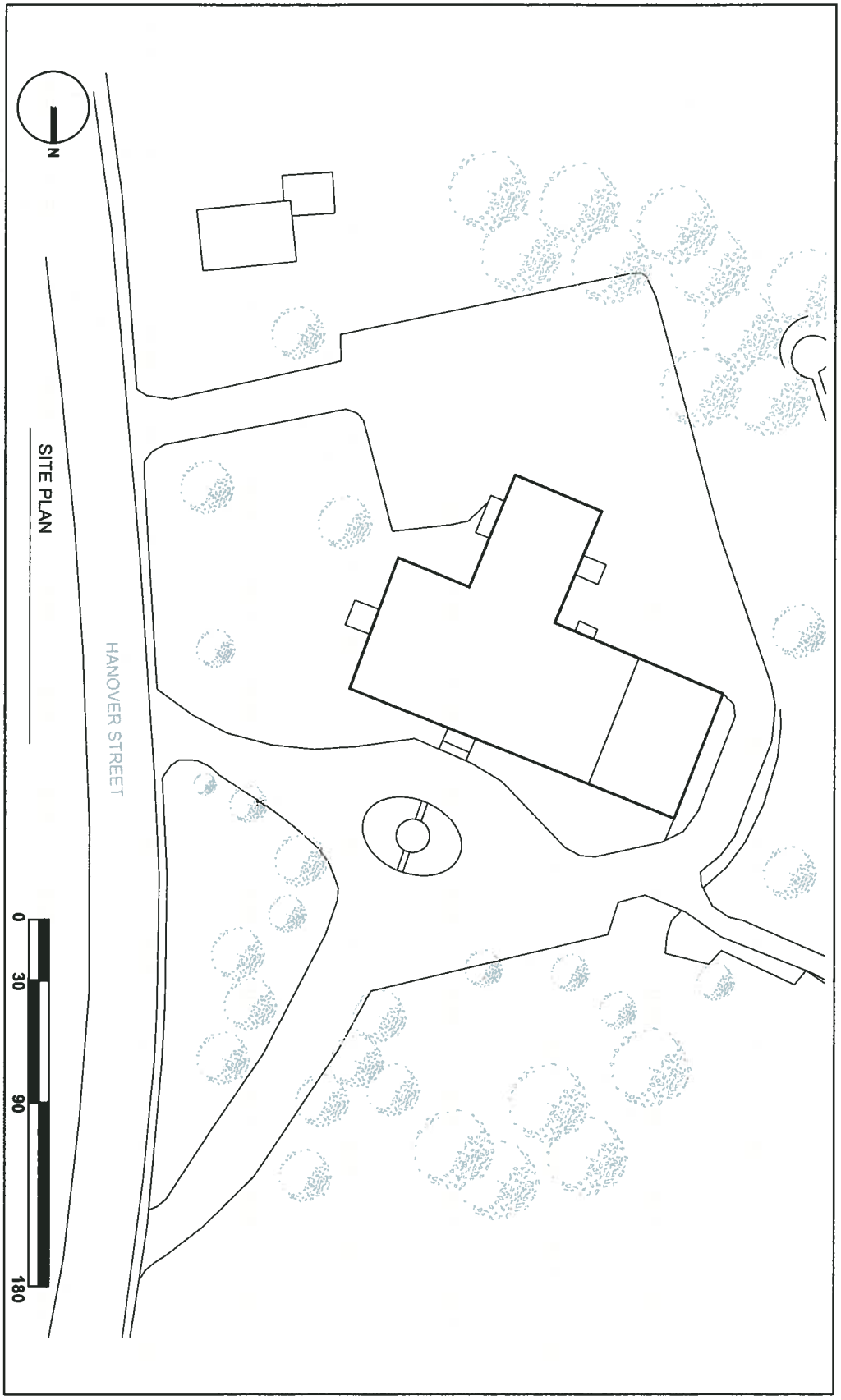
AERIAL PHOTO





Sylvester Elementary School is the building in the center of the photo.
(Source: Hanover GIS)

SITE PLAN



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Architecture
Interior Design

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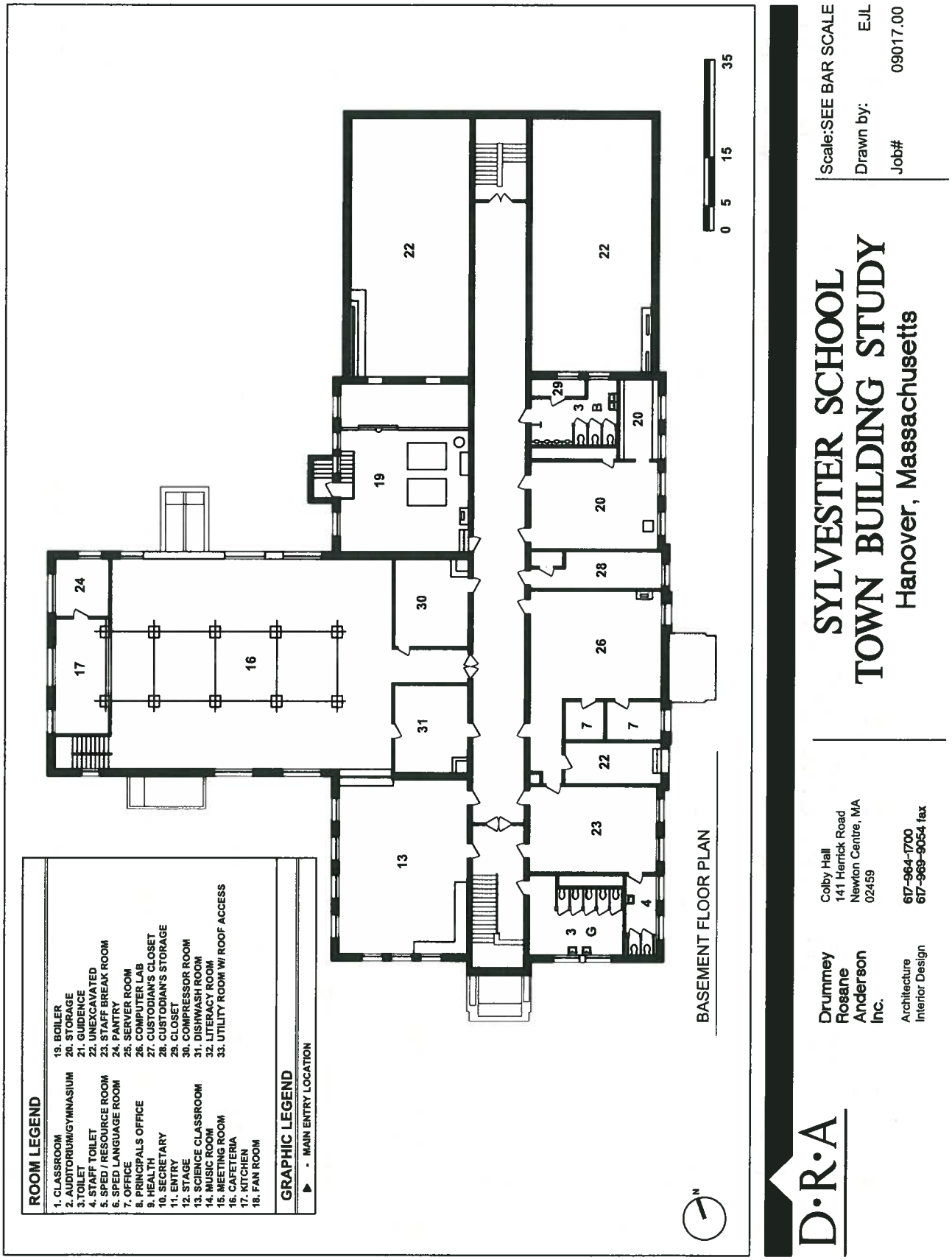
Newton Centre, MA
02459

617-964-1700
617-969-9054 fax

SYLVESTER SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLAN


ROOM LEGEND
1. CLASSROOM
2. AUDITORIUM/GYMNASIUM
3.TOILET
4. STAFF TOILET
5. SPED / RESOURCE ROOM
6. SPED LANGUAGE ROOM
7. OFFICE
8. PRINCIPALS OFFICE
9. HEALTH
10. SECRETARY
11. ENTRY
12. STAGE
13. SCIENCE CLASSROOM
14. MUSIC ROOM
15. MEETING ROOM
16. CAFETERIA
17. KITCHEN
18. FAN ROOM
19. BOILER
20. STORAGE
21. GUIDENCE
22. UNEXCAVATED
23. STAFF BREAK ROOM
24. PANTRY
25. SERVER ROOM
26. COMPUTER LAB
27. CUSTODIAN'S CLOSET
28. CUSTODIAN'S STORAGE
29. CLOSET
30. COMPRESSOR ROOM
31. DISHWASH ROOM
32. LITERACY ROOM
33. UTILITY ROOM W/ ROOF ACCESS
GRAPHIC LEGEND
▶ - MAIN ENTRY LOCATION
BASEMENT FLOOR PLAN
0 5 15 35
N
SYLVESTER SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts
Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00
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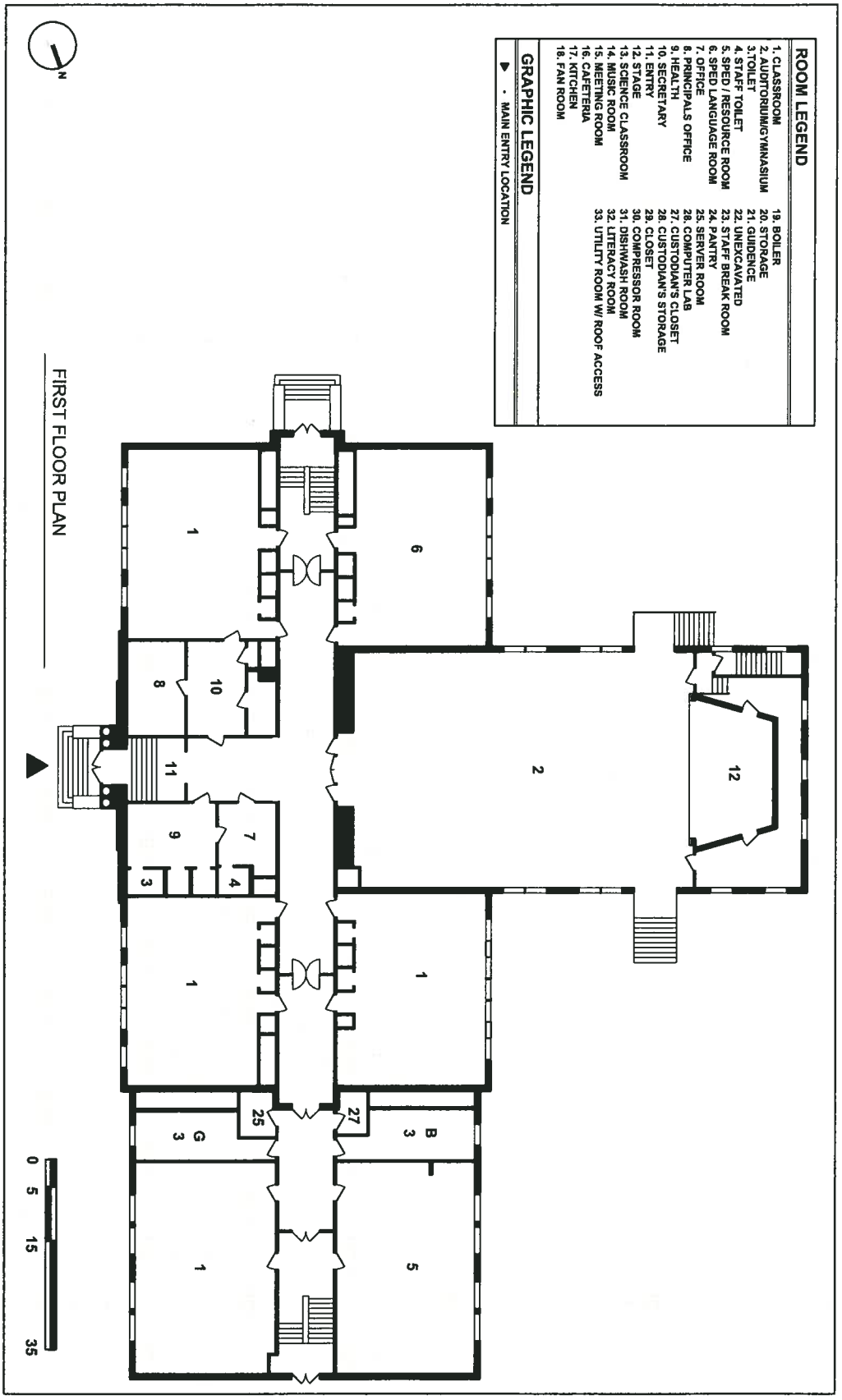
FLOOR PLAN



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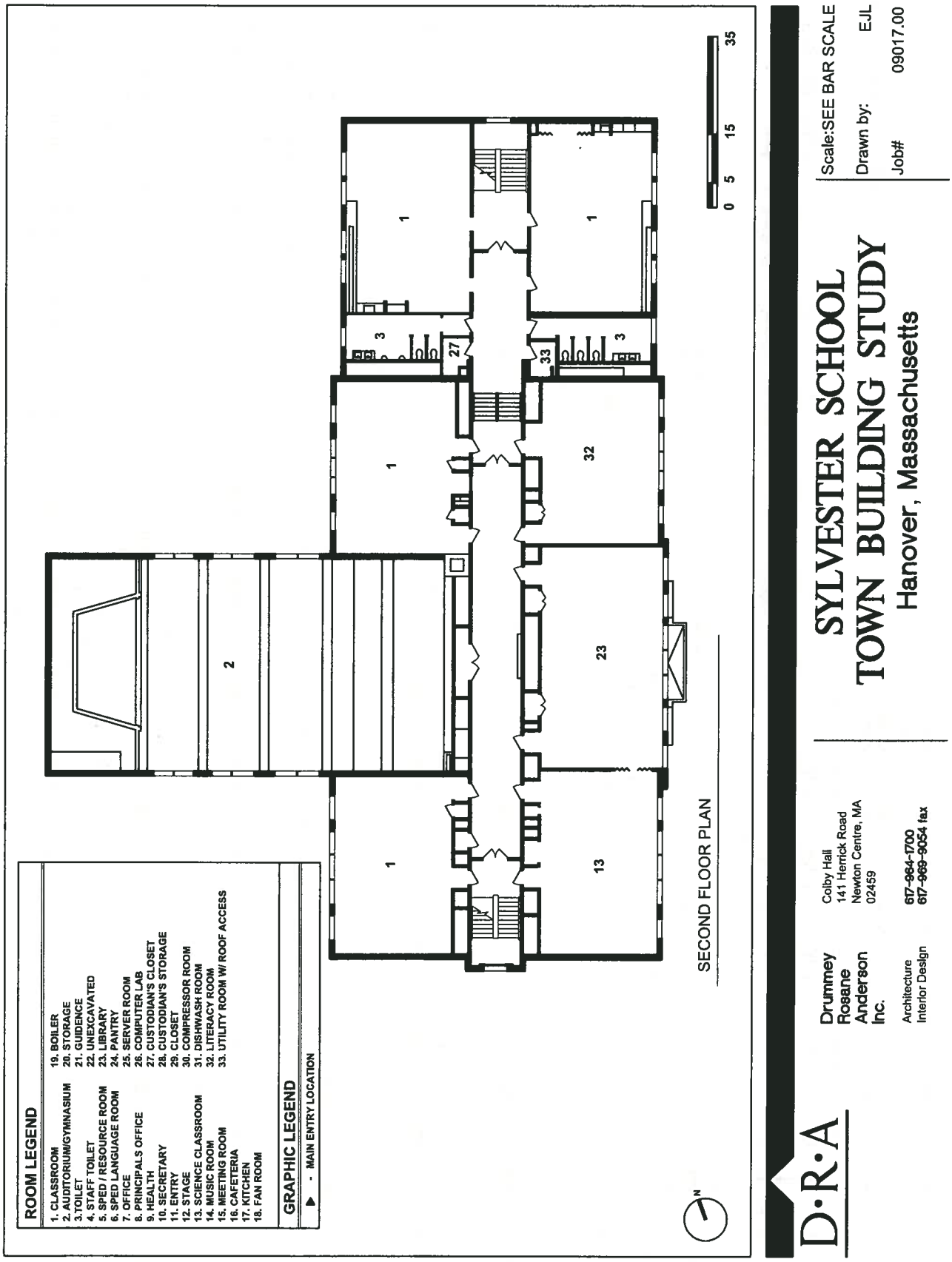
SYLVESTER SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

FLOOR PLAN


ROOM LEGEND
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2. AUDITORIUM/GYMNASIUM
3.TOILET
4. STAFF TOILET
5. SPED / RESOURCE ROOM
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29. CLOSET
30. COMPRESSOR ROOM
31. DISHWASH ROOM
32. LITERACY ROOM
33. UTILITY ROOM W/ ROOF ACCESS
GRAPHIC LEGEND
▶ - MAIN ENTRY LOCATION
SECOND FLOOR PLAN
0 5 15 35
SYLVESTER SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts
Scale:SEE BAR SCALE
Drawn by: EJL
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EXTERIOR PHOTOS

Exterior view of front entrance.

Exterior view of north corner.

Exterior view of west corner.

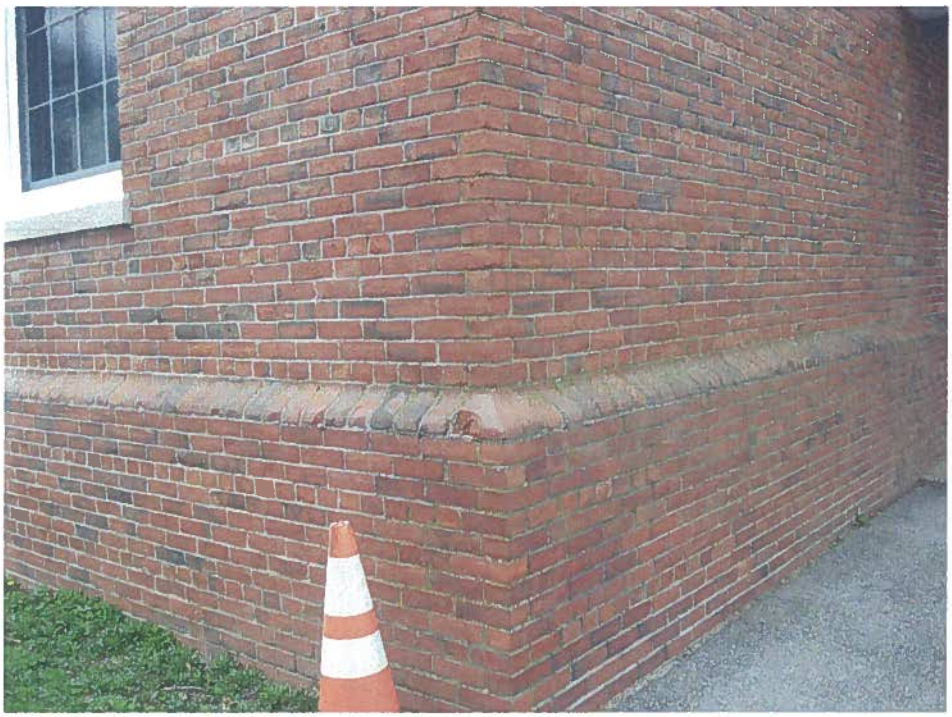
Non-accessible step into entrance.

Detail view of window and brick facade.

View of entrance stairway.

Electrical conduit; large feeder cables inside cut off.

Old exterior light ?, broken fitting



View of brick corner detail. Damage at corner.

View of stair leading to basement & multiple vent pipes from boiler room.

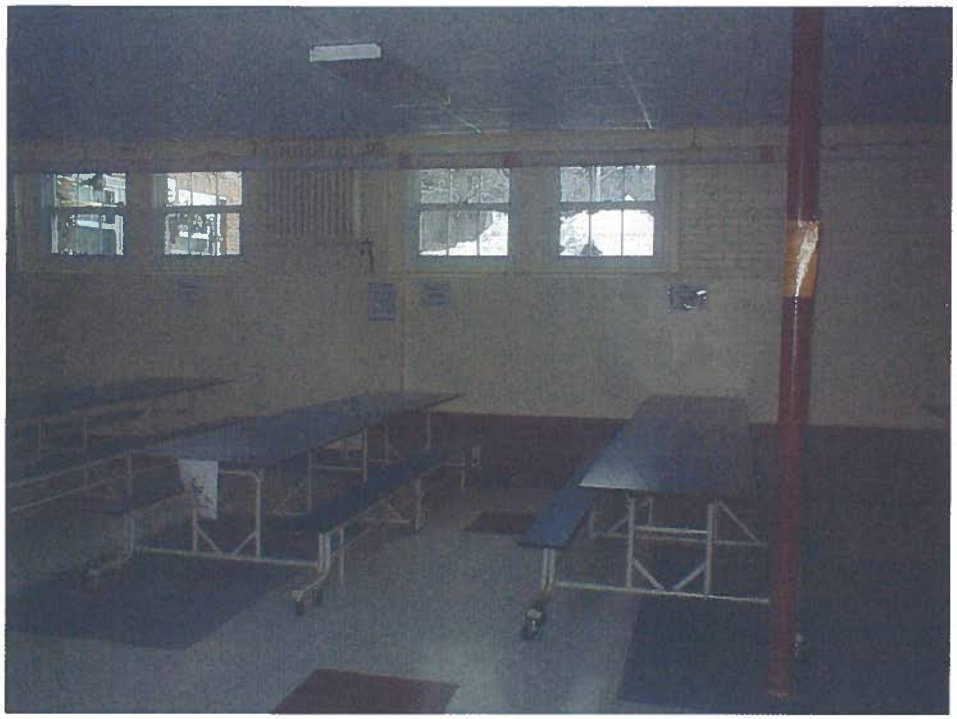
Piping details.

Cracks between block and concrete at steps. This condition was repaired during the summer of 2010 with parging.

Deteriorating concrete stairs (repaired summer 2010).

Cracks in brick near windows (lintels).

INTERIOR PHOTOS



Basement level cafeteria space.

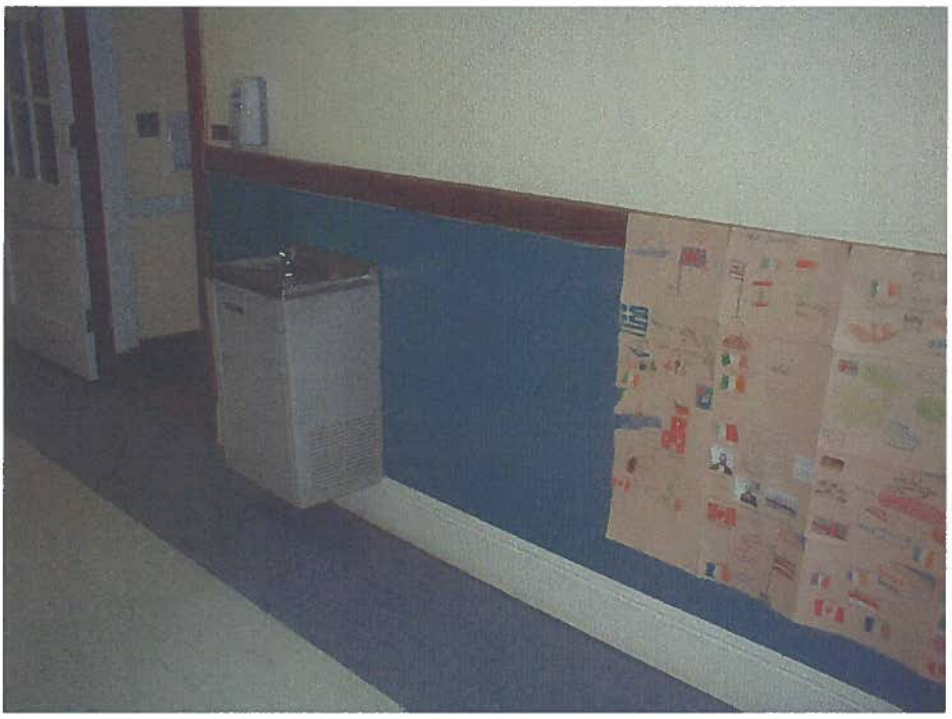
Entrance doors to cafeteria; wood. Narrow doors do not meet access codes.

Non-accessible sinks in basement boys' toilets.

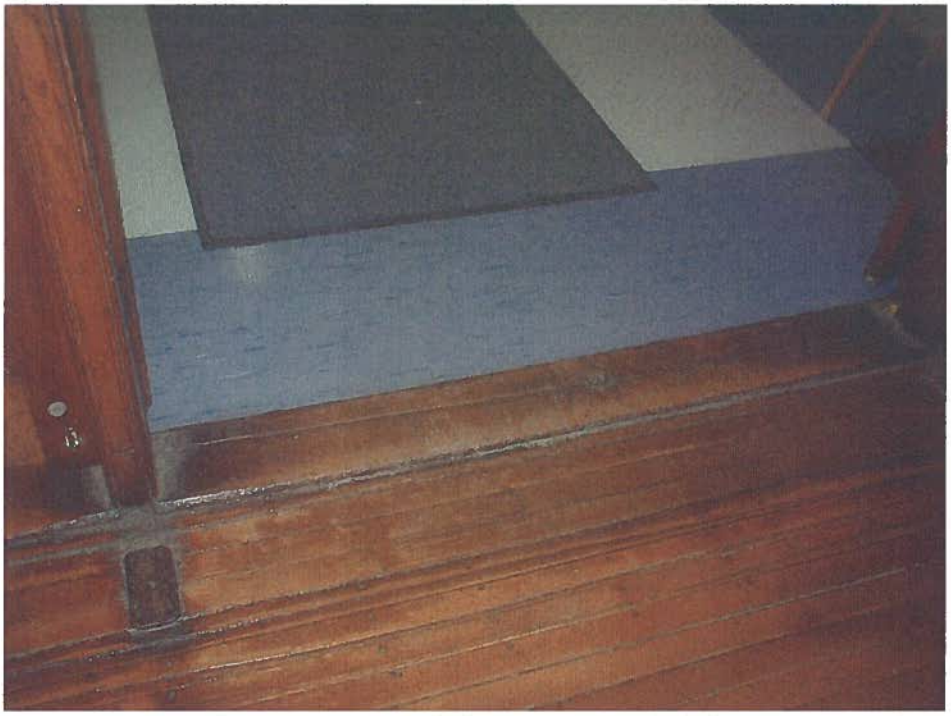
Basement boys' toilets, privacy issues from hallway.

Girls' room lower level, non-accessible.

Double 2'-6" doors at stairs; double-acting hinges modified.



Non-accessible drinking fountain at main lobby.



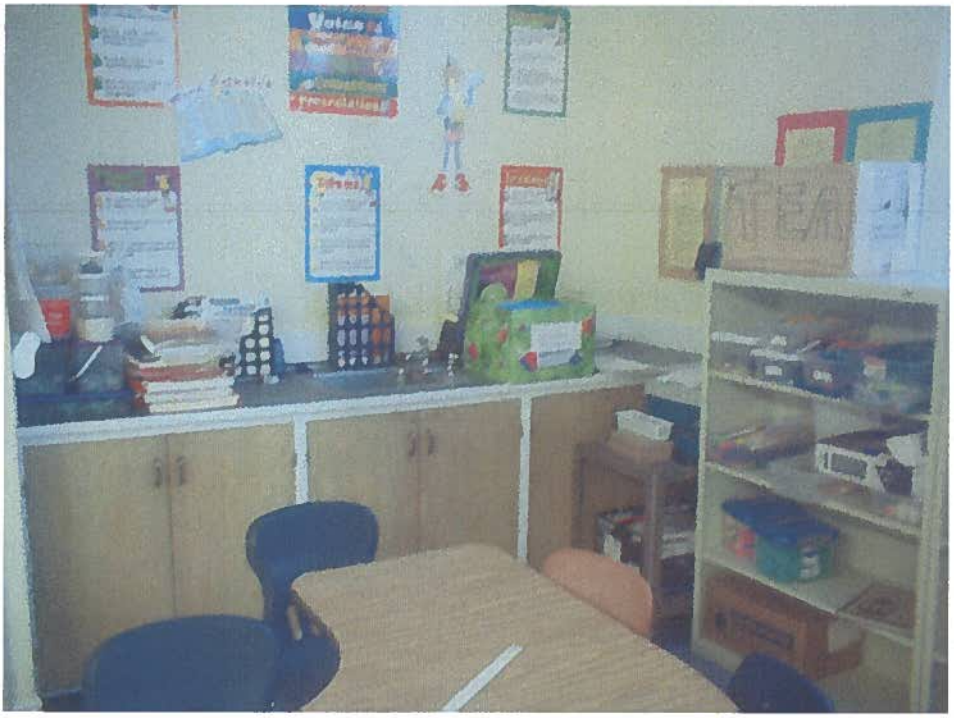
Threshold too high at gym entrance doors.

Steps to stage not code compliant. No lift. Missing guard rail balusters.

12x12 ceiling tiles reported to have black mastic possibly containing asbestos.

Non-accessible toilet in nurse's room. Non-accessible sink.

Steps in hallway with no lift. Center hand rail not per code; needs extensions.



Non-accessible sink in classroom on 3rd floor.

Section 09 - SALMOND SCHOOL ADMINISTRATION BUILDING

Locus Map - Town of Hanover

Building Summary

Address: 188 Broadway
Gross Area: 13,195 sq. ft.
Description of Site: On hill, near Fire Station #2, parking in front, play field in rear, 3 drives from Broadway causes confusing traffic flow, stone wall along exit drive.
Description of Building: Constructed in 1931. Brick, single-story with full basement, former elementary school now being used as school admin. Offices. Sloped roof on front section of building, combined sloped and flat roof on rear. Wood single-glazed multi-pane double-hung windows are original and aging. An attractive building set far back from the road on a slight rise.
Not an historic structure.
Function of Facility: School district administration offices
Agency or Department: Hanover Public Schools
Technical Construction Description: Brick masonry exterior walls, with wood double-hung windows. Structural system is load-bearing masonry with wood-framed floors and roof. Pitched roof with shingles and original bell cupola.
Valuation: $1,389,250.00 (estimated replacement cost)

Immediate Needs:
- Reconfiguration of building entrance to provide accessibility to disabled person. Schematic design study needed; some loss of useable space should be expected.
- Replace aging wood windows for energy savings. (If replacement is not affordable, then painting and glazing compound work is required on the existing windows.)

Near Term Needs:
- Further removal of barriers to universal accessibility, including accessible doorways to classrooms and offices, handrails, widening individual doors and pairs of doors, etc.
- Repair damaged and worn wood floors and other finishes, including ceilings, at certain locations.

Building Summary

Conditions Summary:
The Salmond School administration building is an old elementary school, modified only slightly and being re-used as the Town of Hanover, Public School Department Administration Building. As with many communities, the Hanover School Department has put the needs of the students before the needs of the Administrators, 'making do' with this aging building and inefficient office layout.
The lower level of the building is used for educational training for teachers and other school department staff.The building is in overall fair to poor condition, considering all aspects of the interior, exterior, and site. It appears that there has been minimally adequate periodic maintenance.
The basic infrastructure and design of this facility is outdated and cannot be adequately remediated except with a major and complete building renovation, or by replacement of the building with a new facility. However, unlike the Sylvester School, this building does not serve young children. For that reason, our recommendation for this property is different from our recommendation for the Sylvester school.

Recommendation:
This team recommends that the older windows in the building be replaced with newer thermally insulated windows, for energy conservation and for user comfort. Following completion of the 'immediate needs' work noted above, we recommend continuing maintenance and minimal modification of this building, as needed to improve accessibility, energy savings, and life safety.
Investment in some interior design layout work, along with new modular furniture systems, could improve functionality for daily business purposes. This design work should be done in coordination with work to improve accessibility to the main entrance of the building.

Conditions Assessment

Site/Architectural

SITE

Site is generally in fair to good condition. Gently sloping up towards the building from the adjacent road, with adequate parking. There is some reported deterioration of asphalt paving. The area of paving directly in front of the main entrance door does not drain well, and can cause icy conditions in cold weather. The driveway arrangement for this building, with three separate entrances/exits, is confusing to motorists. Parking of vehicles directly against the building, could lead to damage to basement level windows and masonry. Two fenced-in play areas on the south side of the building, have few items of play equipment, and that equipment is old and outdated, although still serviceable.

ARCHITECTURAL

Exterior:

- Single low step at front entrance is hard to see and could be a tripping hazard.
- Minor carpentry repairs all bases of columns at front
- Windows on side all in good condition (at basement level)
- Masonry needs pointing above side stairway
- Windows on back in "poor" cosmetic condition, missing putty and poor paint
- Minor brick damage at back
- Minor foundation crack at corner
- Deteriorated wood panel and window frames at back
- Minor deterioration along soffit and eaves
- Repaint the rack (full length) on side above door C-1
- Mortar needs to be fixed on right corner of window to the right of door C-1
- Overhang on stairway at B-2 needs the rake board repainted
- Roof okay but 10 year minimum left
- Loose wire above window on side of building
- Poor guardrails at stairway leading to door B-2
- Damaged louver and bad windows at side above door B-2

Interior:

Basement:

- The original basement windows have been replaced with newer thermally efficient units, and are in generally good condition.
- Handrails not to code
- No sprinklers
- Pipe hole needs to be sealed

Conditions Assessment

Architectural

Interior:

First Floor (Ground Floor):

- Corridor in the north needs paint on ceiling and perhaps due to water damage
- Classroom in northwest corner need ceiling painted due to water damage
- Radiator needs a more secure cover in office
- Sink in office not H.C.
- Crack in wall on right side
- Floor tile could be replaced in all the classrooms
- The ceiling tile need to be fixed in the two classroom to the right
- The main floor windows are single-pane multiple-divided-lite double-hung wood windows, and appear to be original to the building. These windows are in poor condition and should be removed and replaced with newer thermally efficient replacement windows. The new windows should be carefully designed to mimic the appearance of these historic windows, which are mostly a combination of 8 over 12 and 12 over 12 design.

Building Code:

This building was constructed at a time when there was no statewide Mass. Building Code. The Construction Type for this building, under the current Mass. Building Code, would be considered Type 3B construction. The building is not adequately accessible to persons with disabilities, a condition which would not be acceptable under current construction regulations. The degree of non-accessibility means that this public-use facility, where School Committee Meetings are held, is exposed to potential complaints being filed with the U.S. Dept. of Justice, under the Americans with Disabilities Act.

Accessibility:

Numerous deficiencies. The main building entrances and exits are non-accessible. The main entrance door has a knob instead of a lever. There is no lift on the steps inside the main entrance; the lift at the front of the building is outdoors and awkward to use, and causes a disabled person to pass through a meeting room in order to gain access to the public areas of the building. There is no accessible toilet, a condition which may be in the process of being remedied. The building does not have an elevator. This means that educational program elements located on the lower level, are non-accessible to persons with disabilities. Accessibility is a significant issue at this public-service building, and must be improved significantly, as soon as possible.

Energy & Environmental Sustainability:

- The upper level double-hung wood windows in this building are aged, loose, and leak both air and water. The users report that outside breezes can move interior curtains during the winter, when the windows are closed. Replacement of the windows will significantly reduce energy usage. It is assumed that the exterior masonry walls are uninsulated. Lower level walls also appear to be uninsulated solid concrete construction.
- Although the boiler was recently replaced, future consideration should be given to the idea of converting the building heating system from steam to hot water.

Conditions Assessment — Architectural

Hazardous Materials:

As required by Massachusetts regulations, a full program of asbestos survey, remediation, monitoring and reporting has been conducted by the Town of Hanover for all school buildings, and a current updated report is on file with the Public School department.

Known work that remains to be completed, includes the removal of existing asbestos-containing floor tile, in various areas of the building. For all school properties that need this work, the Public Schools Department has estimated a cost of $1,720,000, and has requested funding of this amount from the Capital Improvement Committee. This would include work at the Middle, Cedar, Salmond and Center Schools (the HS and the Sylvester do not require tile removal). On 12/9/2010, we were provided with copies of quotations for floor tile abatement work for the Salmond building, totaling $16,500 for very limited scope of work.

Due to the age of the building, it is likely to have lead-based paint; this was not specifically investigated. For any future work that might disturb painted surfaces, lead testing should be carried out, and protocols should be used to prevent lead dust from being released. The proposed window replacement project may uncover the need to abate the perimeter sealants which might contain hazardous materials.

Historical Value:

This facility is not individually listed as an historic building, and is not located within any Historic District. It is an attractive period building in the Federal Style, with classical wood detailing at the entrance columns, doorway, windows, and other elements. The brickwork is articulated with quoins at the front corners.

The existing wood windows, which appear to be original to the building, are important features of the building. If this building were a more significant historical structure, we would advise preserving the fabric of the building by specifying historic-restoration of these existing windows. However, given the fact that this building is not actually a registered structure, or in a registered district, we feel that the benefits of a sensitively designed thermally efficient window system, out-weigh the loss of the old windows. Accordingly, we have recommended replacement as soon as possible.

Other Issues:

Space utilization should be reviewed, as some spaces appear to be undersized, and others oversized or under utilized (particularly in the basement level).

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

PLUMBING UTILITIES:
- Domestic Water:
  Existing Domestic Water Service: The existing building is currently served by a 2" domestic water service which enters the basement mechanical space. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the Schools domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- Natural Gas:
  Existing Natural Gas Service: There is currently a natural gas service to the building serving the boiler and hot water heater. This service enters the left side of the building and runs overhead to the boiler room and serves the boiler and hot water heater.
- Sanitary:
  Existing Sanitary Service: The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- Fuel Oil:
  There is currently no on site fuel storage.

PLUMBING FIXTURES AND SPECIALTIES
Existing plumbing fixtures are as follows:
- Water closets are floor mounted; with flush valves, vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall mounted vitreous china. Faucets are two lever handles.
- Janitor's mop sinks are floor mounted basins with 2-faucets and vacuum breakers. These basins are in good condition.

DOMESTIC HOT WATER SYSTEMS
Existing Domestic Hot Water System:
- The buildings domestic hot water is generated by a 50-gallon gas-fired water heater which feeds the buildings hot water needs. The water heater is in good condition.

FIRE PROTECTION SERVICE
- There is no fire protection coverage (sprinklers) currently at the facility.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The boiler was replaced in 2011. The burner unit is in good condition.
- At the time of the study the Heating and Ventilating system consist of steam radiators throughout the facility, with approximately 4 newer unit ventilators installed in select areas and exhaust systems.
- Unit Ventilators are newer manufactured by Herman Nelson and appear in good condition with no noted problems.
- Exhaust systems servicing the building utilize a single exhaust grille, mounted low on the wall in each room, are believed to be via gravity. Rooms containing unit ventilators do include an outside air supply component offering some ventilation to the spaces served.
- The existing temperature controls in the building are pneumatic. The temperature control system air compressor is located in the Boiler Room and is older but in good condition. Temperature control problems were noted by operations personnel, however may be due to the known steam trap issue which at the time of this report writing was in the process of being budgeted under the green communities grant received by the town. Temperature control issues should be re-evaluated now that the steam traps have been repaired.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems:
APPLICABLE CODES AND STANDARDS
The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 120/240 volts, single-phase, 3-wire electrical service; capacity was noted as being rated 400 amps. The service equipment is located in the basement of the building. The service equipment consists of fused disconnect switches and is in good condition.
- There are a number of electrical panels located throughout the facility. These panel boards all are older having been added at the time of various building additions and/or on an as-needed basis. The condition of these panel boards range from fair to poor. The majority of the panel boards do not have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 1' x 4' 2-lamp wraparound fluorescent fixtures, these fixtures (with the exception of some approximately 50% located in the basement) are in very good condition. The light levels appear to be within recommended levels.
- The fire alarm system is a Gamewell main FACP. There are manual fire alarm pull stations,horn strobes and smoke detectors located throughout the building. The system is in good condition and was noted as having been problem free.
- Site lighting is accomplished via building mounted wall packs and pole mounted flood lights in the parking area.
- There is no standby generator located at this facility.
- Life safety emergency lighting is provided via Emergency battery units with unit mounted emergency light heads and battery powered exit signs, units are newer and in good condition. Approximately 20% of the exit signs are older and should be replaced for energy reasons.
- There is currently a controlled access system at the main front entry by Gemini. Motion sensors are also located throughout the facility. This system was noted as functioning without any issues.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

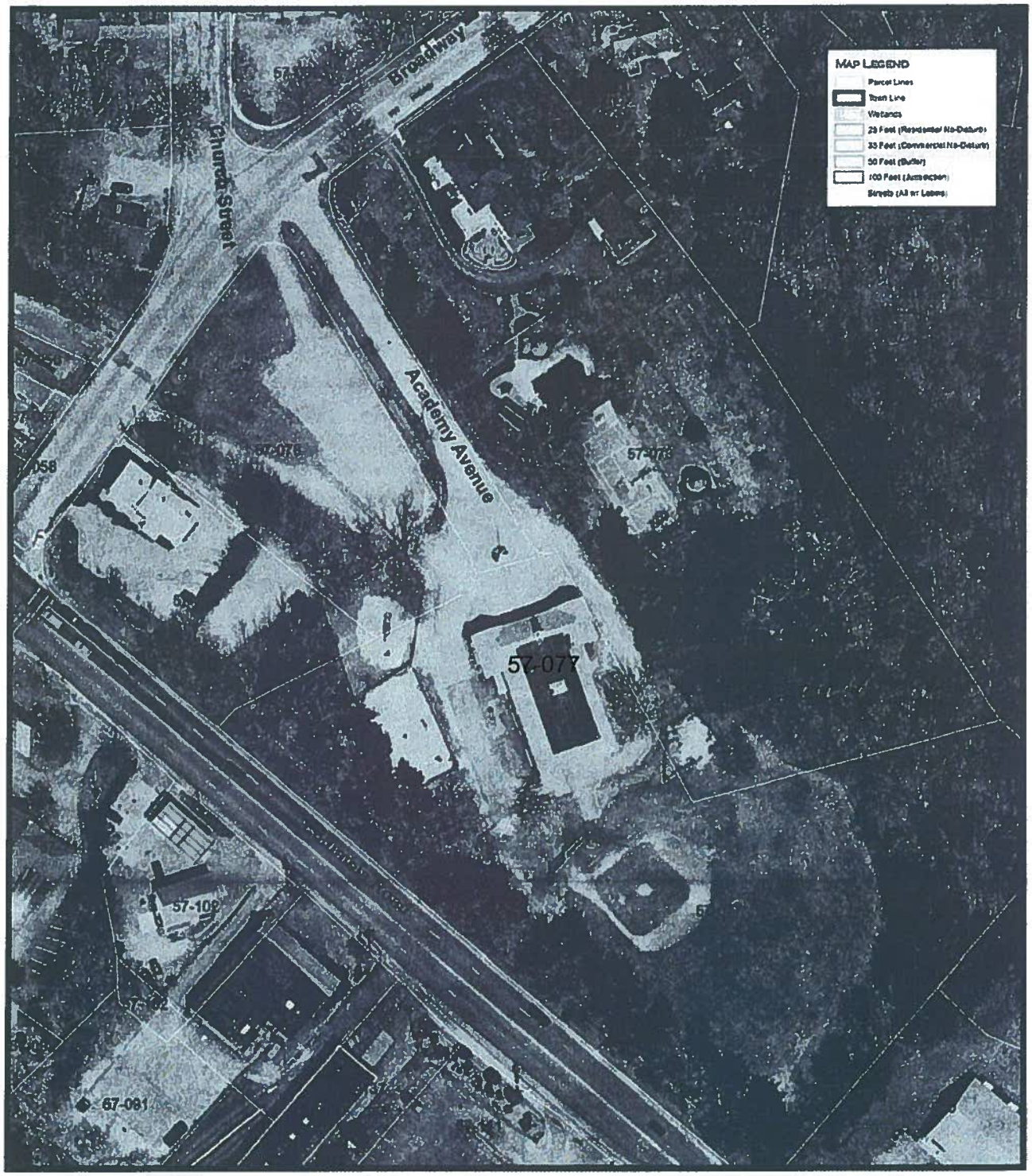
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. The Boiler was recently replaced with a new unit. The burner is in good condition.

Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure. Select sinks and drinking fountains should be replaced with ADA compliant units. It was noted by operations personnel that there was a problem with sewage smells when flushing toilets. This could be caused by a vent stack issue and should be investigated. A new single-user accessible toilet room was constructed in 2011.

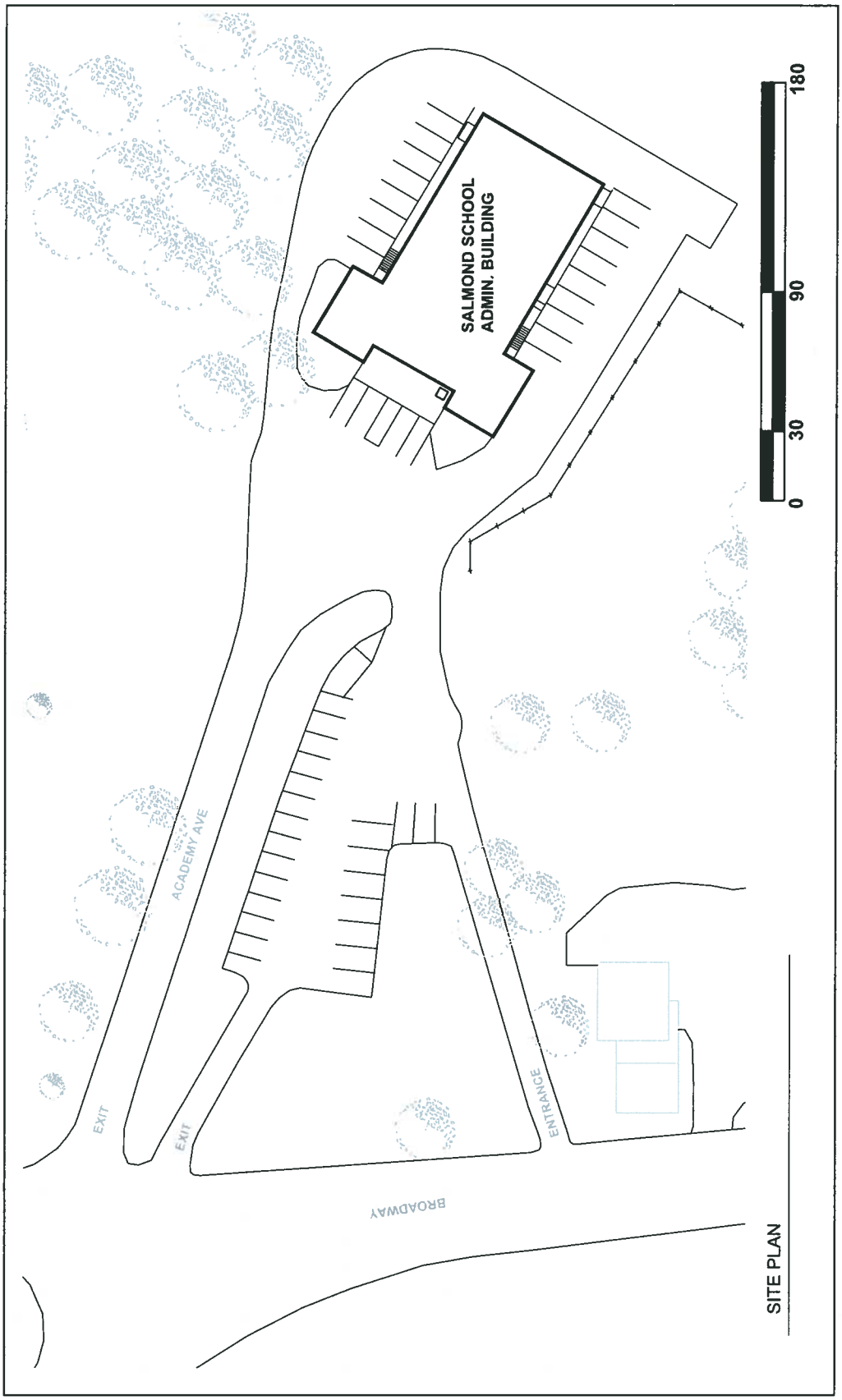
The Electrical systems appear to be in good condition and operating without issues. The older distribution equipment (panelboards) should be replaced with newer equipment with additional breaker spaces to meet any future needs and to alleviate the possibility of overloading individual circuits when new equipment and or devices are added to existing circuitry. The lighting systems are newer and in good condition, a small portion of the lighting in the basement (approximately 50%) should be upgraded. The addition of automated lighting controls should be implemented in order to meet current energy codes and to save on energy costs. Fire alarm system, exit and emergency lighting systems are newer and appear to be in good condition. A small percentage, approximately 20%, of the exit lights are older and should be replaced.

AERIAL PHOTO



Salmond School is the building in the center of the photo, at the end of Academy Avenue, labeled 57-077. (Source: Hanover GIS)

SITE PLAN



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Architecture Interior Design

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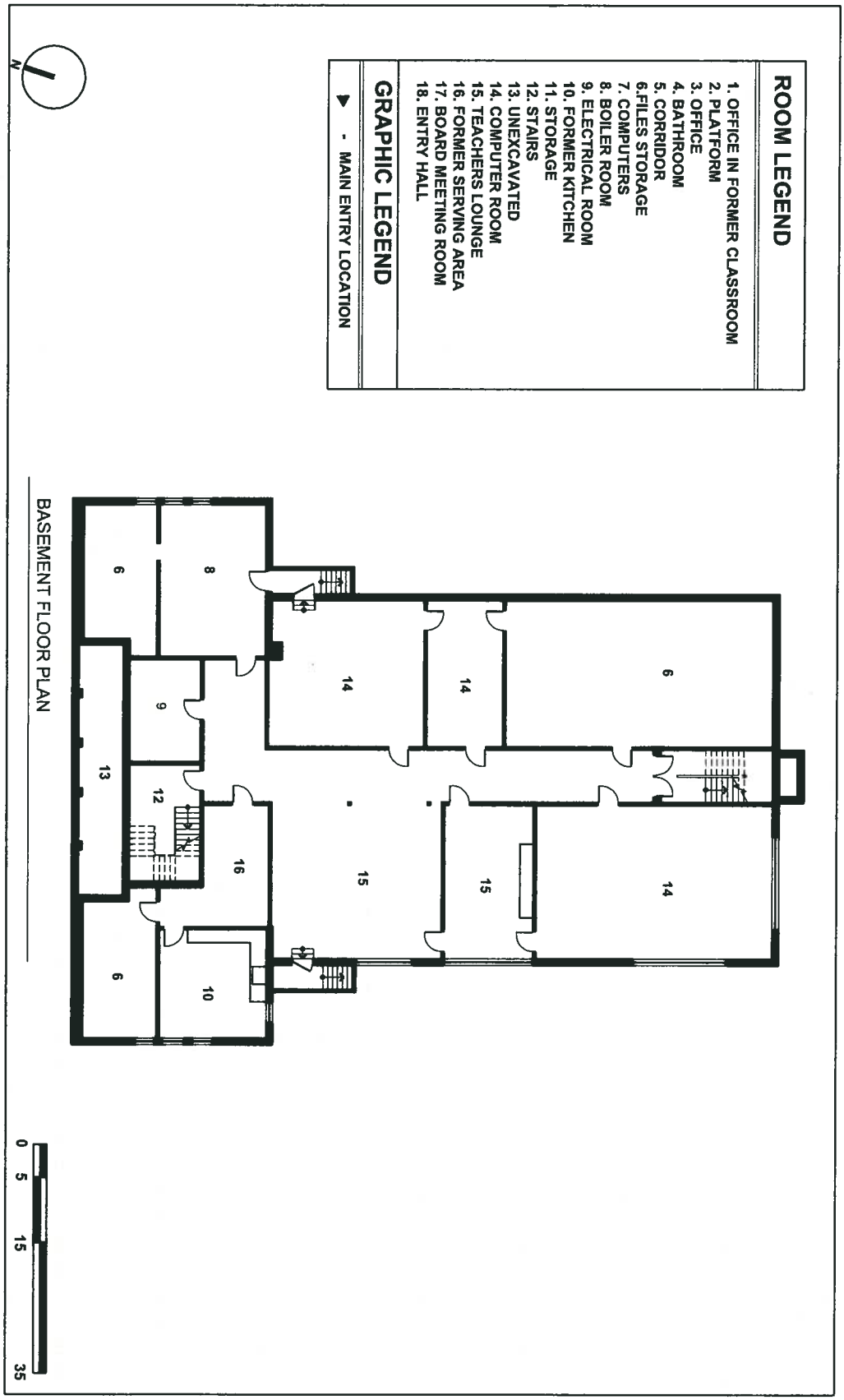
617-969-9054 fax

SALMOND SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLAN



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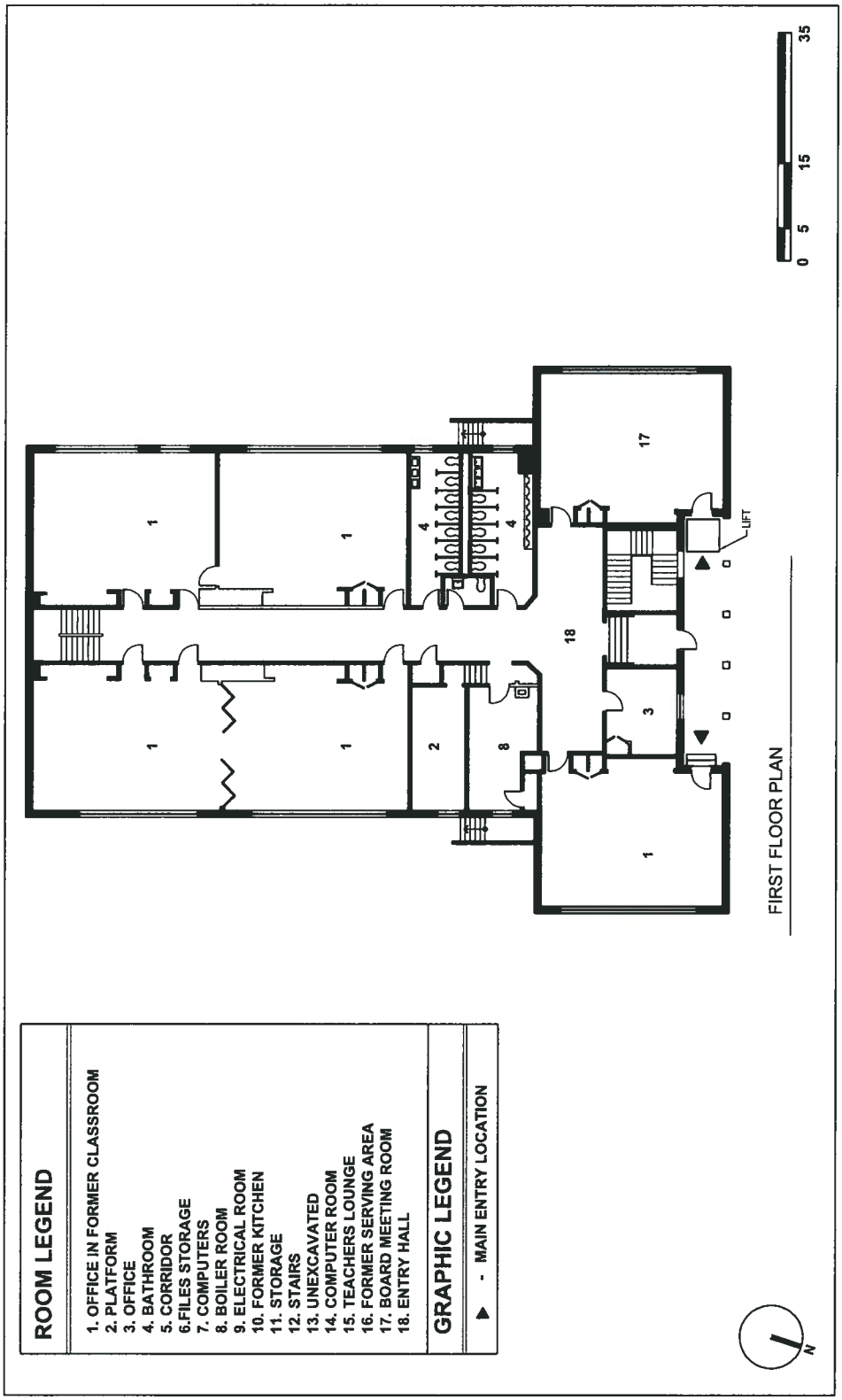
ROOM LEGEND
1. OFFICE IN FORMER CLASSROOM
2. PLATFORM
3. OFFICE
4. BATHROOM
5. CORRIDOR
6.FILES STORAGE
7. COMPUTERS
8. BOILER ROOM
9. ELECTRICAL ROOM
10. FORMER KITCHEN
11. STORAGE
12. STAIRS
13. UNEXCAVATED
14. COMPUTER ROOM
15. TEACHERS LOUNGE
16. FORMER SERVING AREA
17. BOARD MEETING ROOM
18. ENTRY HALL
GRAPHIC LEGEND
▲ - MAIN ENTRY LOCATION
LIFT
FIRST FLOOR PLAN
0 5 15 35
N
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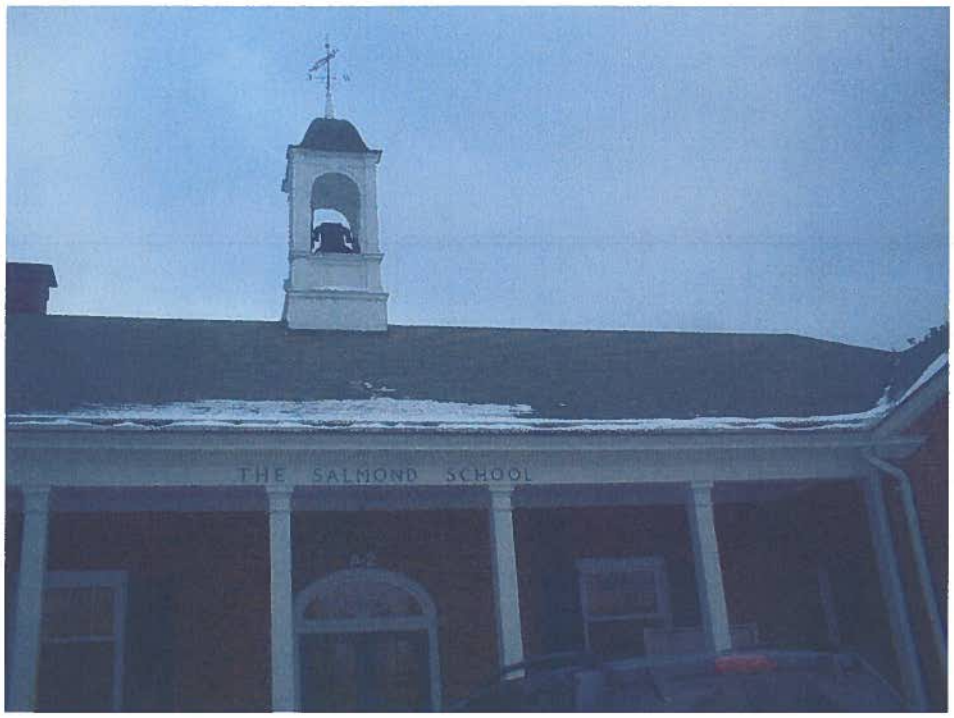
EXTERIOR PHOTOS

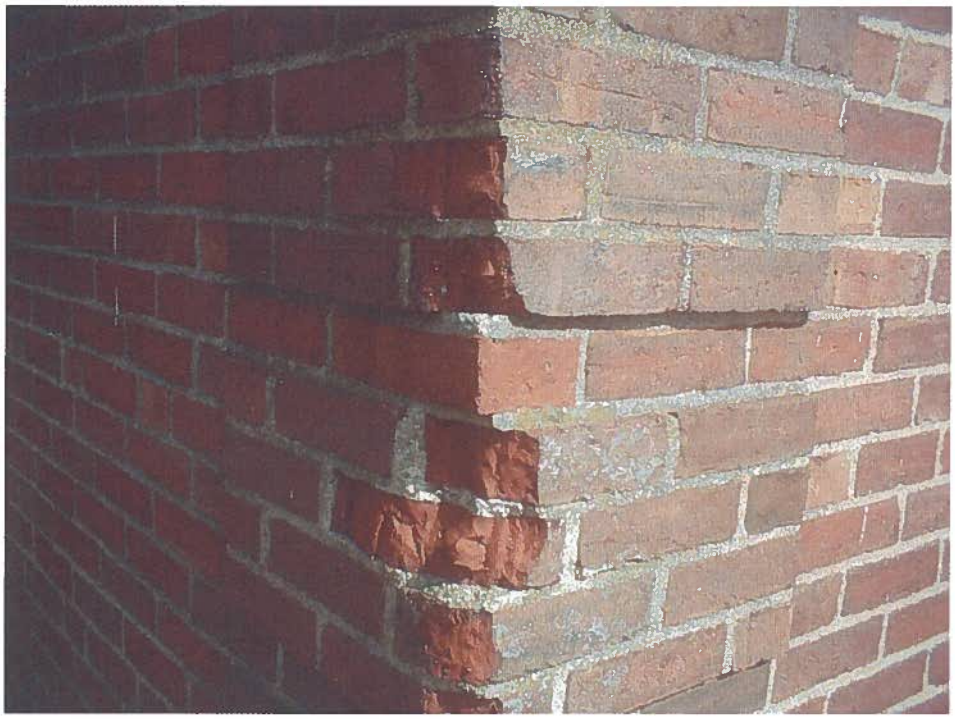
Exterior view of main entrance; non-accessible.

View of steps to side entrance; handrails do not comply with current codes.



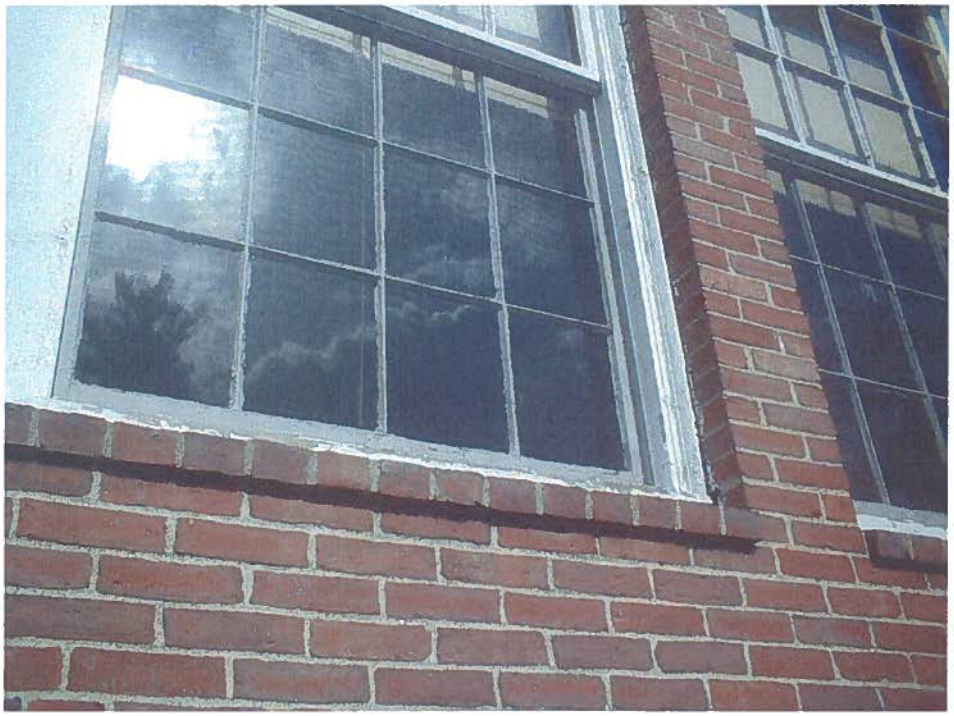
Exterior front roof:
Ashphalt shingles (probably was slate originally)

Exterior west side.



Brick deterioration/damage

View of the gas entrance piping; minimal protection with widely-spaced bollards.



Window closeup view, see detail below

Detail of window condition-deteriorated frames and sash. Loose glazing putty.

Detail view of wiring penetration into wall-unsealed openings.

Handicapped access lift-outdoors.

INTERIOR PHOTOS

Ceiling detail at windows-poor condition.

Damaged floor tile.

Sink with non-accessible controls.

Damaged wood floor, needs repair.

Toilet room floor damaged areas.

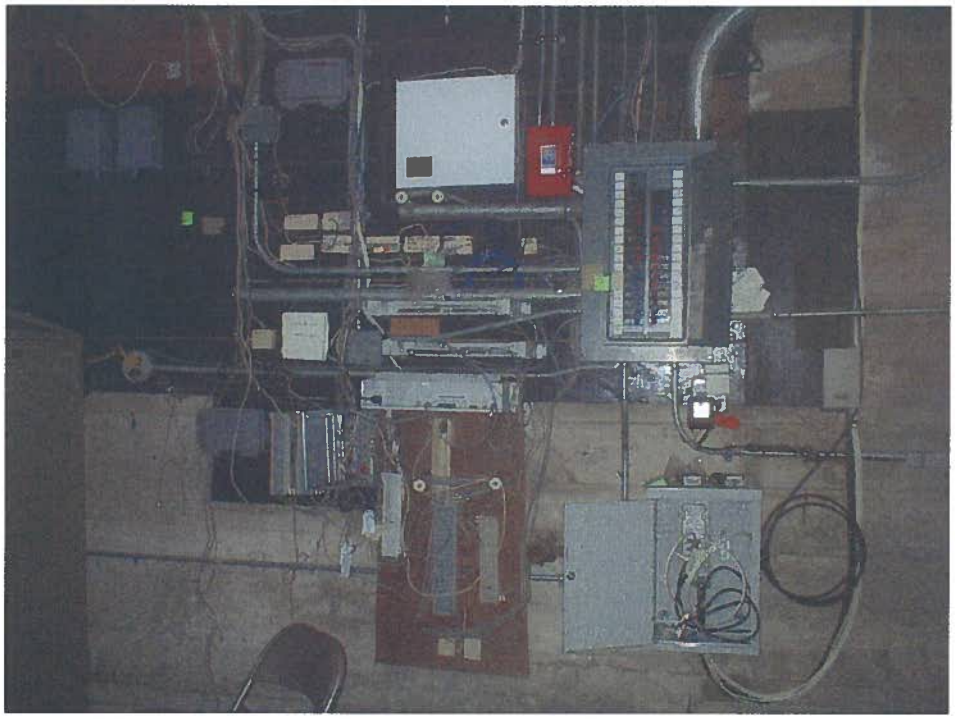
Suspended ceiling in basement.

Windows in main meeting room.
Screens at bottom sash only. No storm windows.

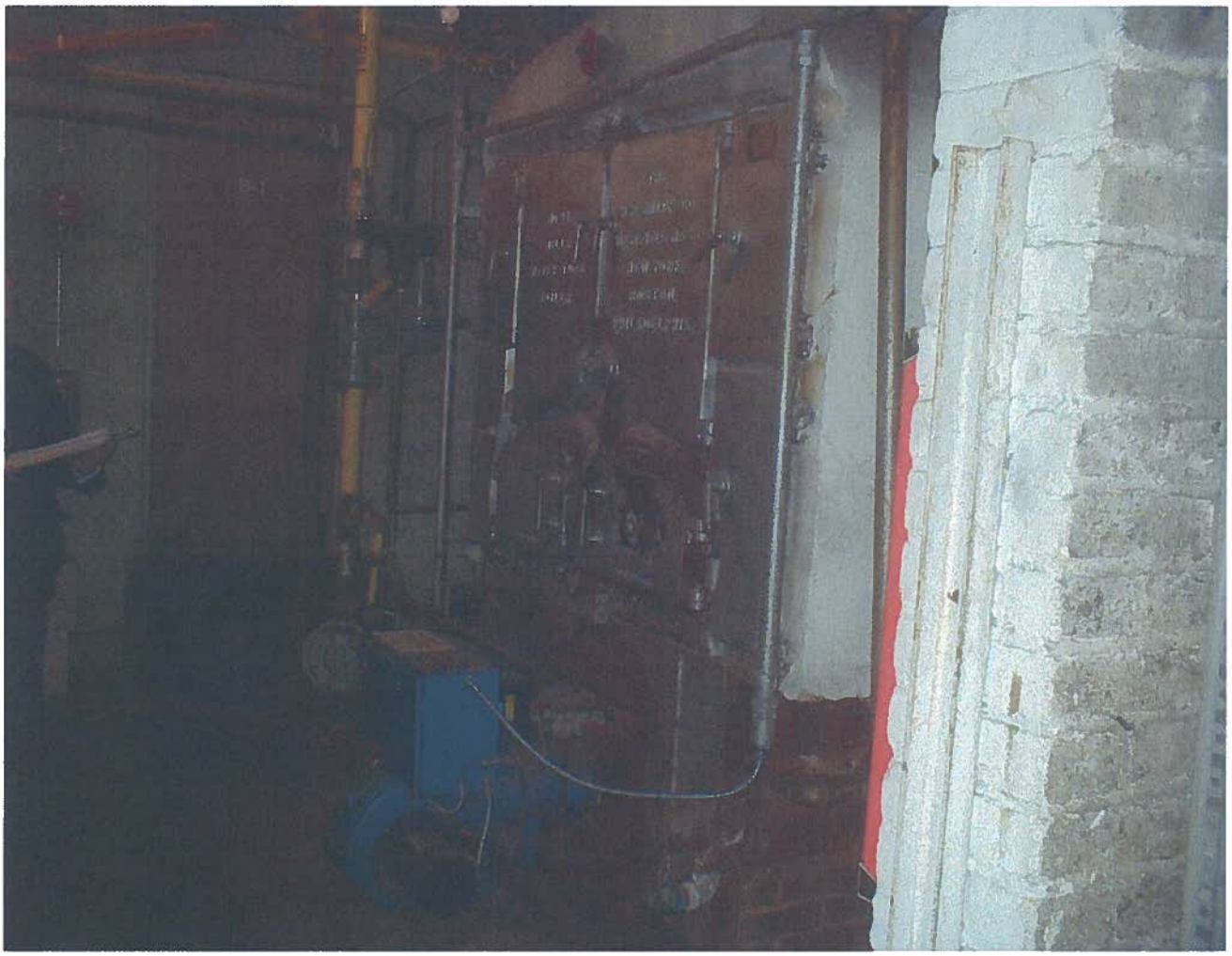
Main entry steps handrail non-accessible.

Window closeup shows deterioration.

Non-accessible sink in main level toilet room



Electrical and tel/data wiring below front entrance



Boiler recently replaced in 2011. This photo shows the older boiler in place at the time the fieldwork for this study was done.

Section 10 - POLICE STATION

Locus Map - Town of Hanover

Building Summary

Address: 129 Rockland St.
Gross Area: 11,704 sq. ft.
Description of Site: Recently developed site on major town thoroughfare, centrally located. Open site with adequate paved parking, bounded by forested land on 3 sides.
Description of Building: Constructed in 1999, white clapboard siding (vinyl), gable roof with large 'lantern' feature. Centrally located, stand-alone facility with communications radio tower to rear of lot. Classical design style.
Function of Facility: Police Department Headquarters. Includes offices, dispatch, holding cells, and some public meeting spaces.
Agency or Department: Hanover Police Department
Technical Construction Description: Recently constructed; drawings not available. Concrete foundations light guage open-web bar joists observed at attic level.
Valuation: $2,046,250.00 (estimated replacement cost)

Immediate Needs:
- Block heater for emergency generator.
- In-depth investigations, including the services of a testing technician working with a Professional Engineer, to trouble-shoot the existing HVAC system equipment and design.
- In-depth investigation by a Professional Electrical Engineer, including the services of an electrician technician, to investigate reported frequent loss of power during electrical storms. This study needs to be conducted by a qualified professional with experience dealing with earth/ grounding issues related to storm activity.
- Architectural schematic design study to resolve light and temperature issues related to design of 'lantern' above main dispatch room.

Near Term Needs:
- Regular periodic ongoing maintenance; no other particular known issues at this time.
- Note however, that the results of the work conducted on various investigations noted above under 'immediate needs', could result in additional work being required.

Conditions Summary:
This is a recently constructed building in generally good condition, but still suffering problematic operating conditions apparently as the result of unresolved issues from the original construction.

Recommendation:
Detailed investigative work is needed to resolve building operational issues that seem to stem from perhaps incomplete punchlist work at the time of the original construction. This effort should include a detailed review of any remaining project records, coupled with qualified mechanics to do on-site equipment testing, under the guidance of registered professional engineers.

Building Summary

Recommendation (continued):
Depending on the outcome of those investigations, additional work may be required.
For the building envelope and interior construction, normal ongoing regular observations and maintenance is all that is needed.

Conditions Assessment — Site/Architectural

SITE

Site is generally in good condition. Gently sloping from the front of the building towards the rear; downward away from the street. Wooded on side and rear. Plantings, lawn and paving are in good condition. Site appears to have been filled at the time of construction to allow the topography to come up to a gentle slope away from the road, instead of the steep slope that was present at the time.

On April 21, 2010, John M. Schmid, PE, LEED® AP, conducted a site visit to The Hanover Police Station to evaluate issues previously raised to the Consultant Team regarding utility/infrastructure concerns.

Nitsch Engineering was requested to inquire about a reported septic system failure/issue that the Police Station. Mr. Schmid inquired with the Board of Health (BOH) regarding this concern. The BOH reports that the septic system required a filter in the septic tank to prevent solids from flowing to the distribution box. The filter was installed on June 29, 2009 and the BOH is not aware of any lingering issues regarding the system appears to be functioning properly.

ARCHITECTURAL

Exterior:

- The exterior envelope of the building is in good condition, including roof, walls, doors, windows, and foundation systems. There are no known urgent maintenance issues.
- The exterior of the building is horizontal white vinyl siding. It has a pitched gable roof with asphalt/fiberglass composition shingles that appear to be in good condition. There is a very large attic space under the gable roof, with some mechanical equipment. A central 'light well' passes through the building, above the central dispatch room, to a roof top lantern.
- There is some puckering of the siding, and some mildew staining, at the southeast corner near the emergency generator. No action is needed, but this area of the building should be monitored in case leaks develop.

Interior:

- First Floor (lower level): CMU walls and vinyl composition floor tile in holding cell areas. Gypsum wall board in other areas, with oak wood trim. Vinyl composition floor tile in corridors. Metal door frames, combination of some oak veneer wood doors, and some painted metal doors. Locker room wet areas have glazed ceramic wall tile and ceramic floor tile.
- Second Floor: Gypsum wall board in most areas, with oak wood trim. Vinyl composition floor tile in corridors. Metal door frames, combination of some oak veneer wood doors, and some painted metal doors. Some office spaces have carpeted floors. Ceilings in the lobby and office areas are suspended acoustical tile, 'tegular' edge detail, 2' x 2' size, for an attractive look. Lighting is generally recessed fluorescent fixtures, both 2x2 and 2x4 sizes, with 'parabolic' lenses for low glare.

Conditions Assessment — Architectural

Structure:

- Poured-in-place concrete foundation in good condition; no apparent significant cracking or structural issues.
- Original construction drawings were not available for examination for this study. From observations on site, the basic building structure appears to be a steel frame, with light-gauge steel wall and roof framing. There are no observable structural defects. The steel bar joists in the attic space, which form the 'floor' of the attic and support the ceiling of the upper level of the building, are approx 16" deep. A question was raised as to whether these joists were purposely over-sized, in order to accommodate future expansion of useable office space (or dorm space for officers) into the attic area. Without having the benefit of the construction documents to review, we are not able to definitively answer this question at this time. However, it seems unlikely. The more probable explanation is that these joists, which have a long span, were designed to support the small air-handling equipment loads and the work platform, and to support the ceiling below, and were made uniform throughout, but were not designed to support an additional floor.

Roof:

- There are some locations where water appears to have backed up from the aluminum gutters, and drained over the back of the gutter, down the face of the building, through the overhanging soffit. This is likely due to leaf debris clogging the gutters. Gutters should be cleaned on an annual basis, perhaps twice per year in this location which is surrounded by tall trees.

Building Code:

- The Construction Type for this building, under the current Mass. Building Code, appears to be Type 2B, construction.
- There are no known code compliance issues with this property.

Accessibility:

- There were no significant accessibility issues noted with this building or site, and none reported by Town personnel.

Energy & Environmental Sustainability:

- The existing HVAC system was reported to be an 'annual budget buster', meaning expensive to operate and maintain. Problems with air temperature control and occupant comfort, were also noted, with complaints of widely varying conditions in various parts of the building. As noted under 'immediate needs', further investigations may reveal operational controls deficiencies, that will lead to improved energy economy when corrected.
- The building envelope appears to be well insulated. The attic space is insulated at the roof line above. This is a large volume space. Insulating at the level of the attic floor (the ceiling of the upper level) and leaving the attic 'cold', but with adequate ventilation to remove moisture, could result in significant energy savings. The air-handling equipment is located in this space. The equipment design includes water connections that need to be kept warm, and protected from freezing. A warm mechanical room could perhaps be constructed (code issues need review), inside the future un-heated attic space.This concept would require further design study before it could be proven feasible.

Conditions Assessment — Architectural

Hazardous Materials:

- There are no known issues with Hazardous Materials, at this facility.

Historical Value:

- This facility does not have any significant historic architectural value, and is not located within any Historic District.

Other Issues:

- Parking can fill up when a public meeting is held in the training room space.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

PLUMBING UTILITIES

- Existing Domestic Water Service: The existing building is currently served by a 2" domestic water service which enters the basement next to the sprinkler service. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the Stations domestic water needs. The water distribution system is original to the building.
- Existing Natural Gas Service: There is currently a natural gas service to the building serving the boilers, hot water heater and generator. This service enters the building at the side of the building at the boiler room adjacent to the generator.
- Existing Sanitary Service: The Station's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the Station. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system. It was noted that the septic system has had to be pumped out a number of times and that there has been a problem of solids buildup in the distribution box.
- Fuel Oil: There is currently no on site fuel storage.

PLUMBING FIXTURES AND SPECIALTIES:

Existing plumbing fixtures are as follows:

- Water closets are wall mounted; with flush valves, vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung and counter mounted vitreous china. Faucets are a combination of single lever handle and two lever handles.
- Janitor's mop sinks are wall mounted basins with 2-faucets and vacuum breakers. These basins are in good/fair condition.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

DOMESTIC HOT WATER SYSTEMS:

Existing Domestic Hot Water System:

- The Stations domestic hot water is generated by a hot water boiler which feeds an 82 gallon storage tank. This equipment is in very good condition. This equipment feeds all the facilities hot water needs.

FIRE PROTECTION SERVICE:

- There is full fire protection coverage (sprinklers) currently at the facility. This service enters the building in the basement at the boiler room and includes all backflow prevention **devices and** valves as well as Fire alarm system monitoring

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing building is heated by a single hot water boiler. The boiler is a Burnham with its burner currently operating on Natural gas and a capacity of 1281 MBH each. This equipment was replaced just 2 years ago because of failure do to an improper water treatment system which has now been corrected and is in very good condition.
- The present HVAC systems consist of hot water finned tube radiation, Air Handler units in the attic with a ducted VAV air distribution system. The heating and cooling systems were noted as the single biggest problem in the facility. It is believed to be a controls issue that is causing this ongoing problem as the Mechanical equipment is either new in the case of the boiler or original to the building in the case of the air handling units which would put them at only 10 years old. It was also noted that there was a lack of baseboard radiation in some areas at the exterior walls causing some spaces to be cold.
- The dispatch area was noted as being provided with its own dedicated HVAC system.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical (continued):

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 208/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 1200 amps. The service equipment is located in the basement of the building. The service equipment is in very good condition.
- It was noted by operations personnel that they have had issues with surges during storms which in the past has taken out various electronic equipment. Upon investigation it was noted that the switchboard is provided with surge protection which appeared to be added after the fact. It should be investigated to ensure that all wiring entering or leaving the facility is provided with appropriate surge protection. This would include wiring to the remote garage and cell tower as this could transmit surges back into the building due to ground lightning strikes in the immediate area.
- There are a number of electrical panels located throughout the facility. These panel boards all are original to the facility and are all in very good condition. These panel boards all seem to have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 3 lamp 2' x 4' parabolic's with manual dual level switching. The lighting throughout the facility is in good condition. Upon review of the recently conducted energy audit conducted by National Grid it is highly recommended that these measures be implemented as the payback period is only 13 months. The light levels throughout the facility appear to be within recommended levels.
- The fire alarm system is an Edwards EST main FACP being original the building and is in very good condition with no noted problems or issues. There are manual fire alarm pull stations, horn strobes and magnetic door holders located throughout the building. Heat and smoke detectors are located in select areas throughout the building.
- Site lighting is accomplished via pole mounted shoebox type lights located around the facility and bollard lighting located at the main entry door.
- There exists a 200KW Kohler standby generator complete with two automatic transfer switches one for life safety and one for standby power. We were informer that this generator has been problem free since a repair related to a block heater and that the generator backs up the entire facility with the exception of the air conditioning.
- Life safety emergency lighting is provided via select lighting fixtures being wired to the emergency generator power source. Exit lighting is also provided throughout and is in very good condition.
- A building wide paging system is in place and was noted as functioning without any issues or problems.
- There is currently a complete controlled access and security system installed at the facility. The system includes motion sensors access control and CCTV cameras both inside and outside the facility. All systems were noted as functioning without any issues.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

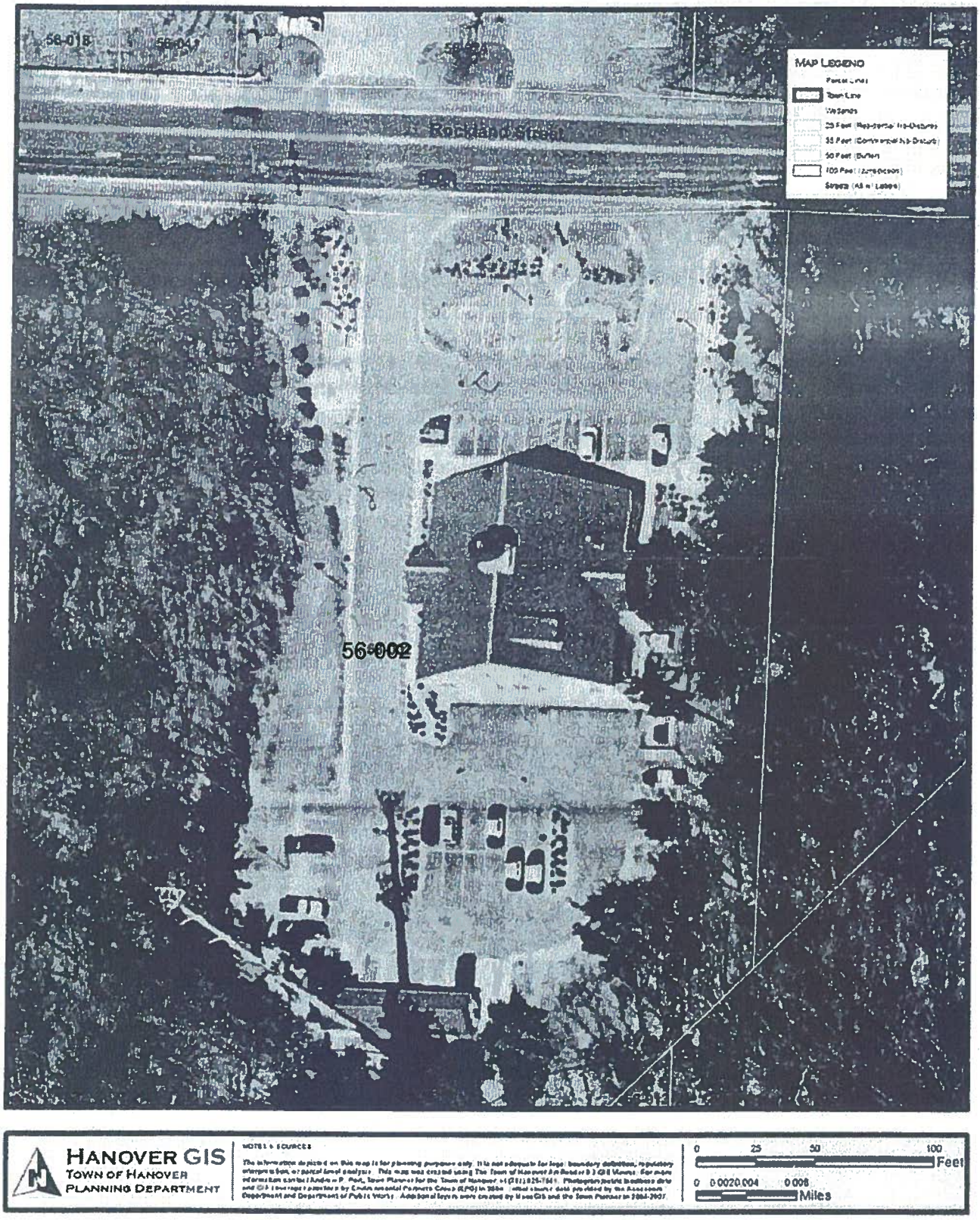
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building to as recent as 2 years old. Some equipment mainly the heating and cooling system and controls should be investigated in order to determine the source of the ongoing problems and what corrective measures should be taken to correct them.

Plumbing systems throughout seem to be in good physical and working condition with no issues or problems noted during the inspections or by operating personnel. One item that was noted was the problem with the septic system which should be investigated to determine the cause of the problem and the corrective measures which should be taken.

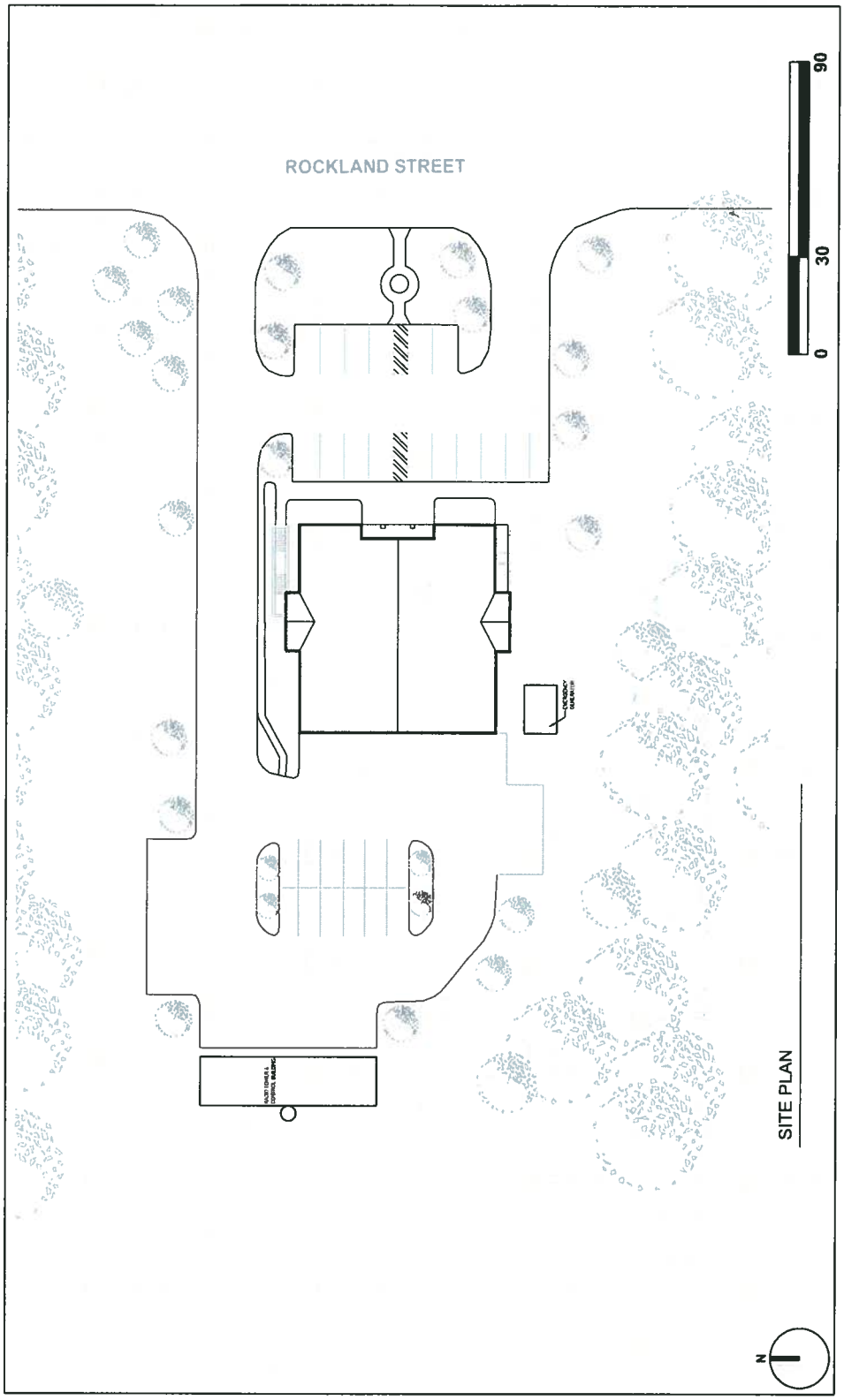
The Electrical systems appear to be in very good condition and operating without issues. However, concerns were expressed about frequent power outages during lighting storms; we have advised a focused investigation of the building electrical grounding system. The lighting systems are newer and in good condition, the addition of automated lighting controls should be implemented in order to meet current energy codes and to save on energy costs, as well as the implementation of the recently conducted energy audit. Fire alarm system, emergency power generation and exit lighting systems are newer and appear to be in good condition. Existing paging system is in good working order and operating without problem.

AERIAL PHOTO



Police Station is the building in the center of the photo, labeled 56-002.
(Source: Hanover GIS)

SITE PLAN



Scale: SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

POLICE STATION
TOWN BUILDING STUDY
Hanover, Massachusetts

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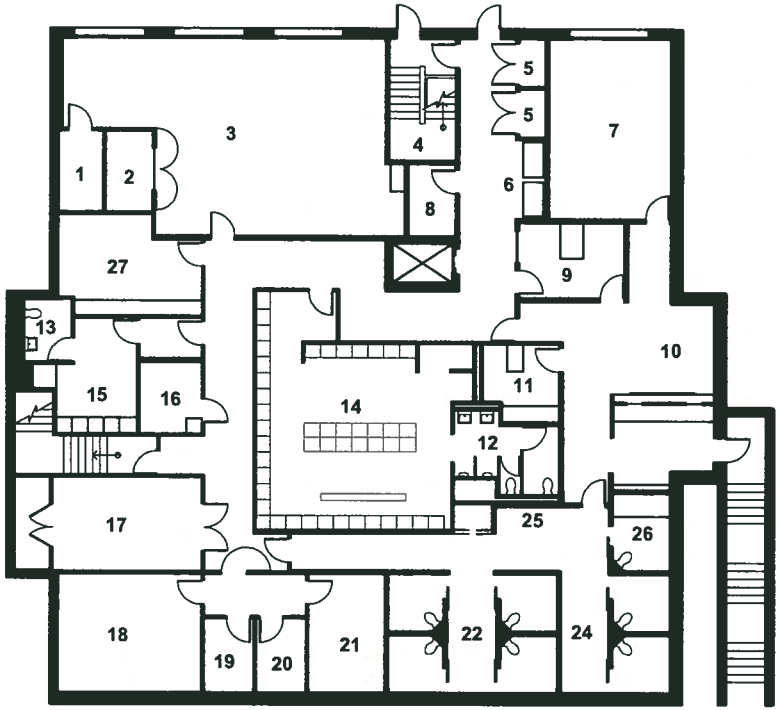
FLOOR PLAN

ROOM LEGEND

1. BULK EVIDENCE
2. BULK STORAGE
3. GARAGE
4. STAIRS
5. STORAGE
6.VENDING MACHINE
7. SALLY PORT
8. ELEVATOR MECHANICS
9. INTEROGATION
10. BOOKING
11. BREATH.
12. MEN'S TOILET
13. TOILET
14. MALE LOCKERS
15. FEMALE LOCKERS
16. CUSTODIAN
17. BOILER ROOM
18. STORAGE AND DEAD RECORDS
19. ELECTRIC
20. EMERGENCY ELECTRIC
21. ALARM 911 / TELEPHONE
22. MALE DETENTION
23. ELEVATOR
24. FEMALE DETENTION
25. MATRON
26. SPECIAL HOLDING CELL
27. STAFF KITCHEN

GRAPHIC LEGEND

▶ - MAIN ENTRY LOCATION



GROUND FLOOR PLAN (LOWER LEVEL)

0 5 15 35

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POLICE STATION
TOWN BUILDING STUDY
Hanover, Massachusetts

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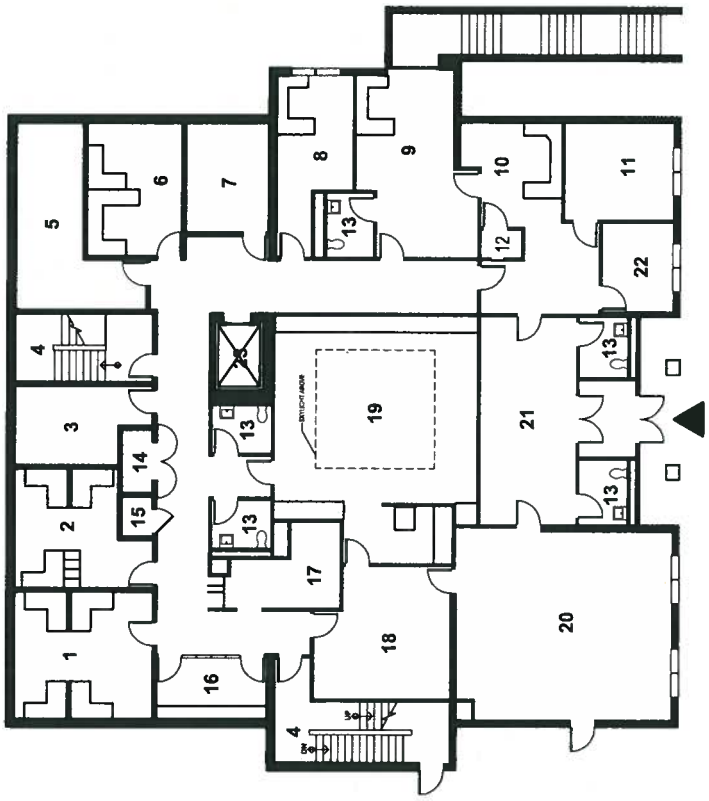
FLOOR PLAN



ROOM LEGEND

1. OIC
2. DETECTIVES
3. OFFICE
4. STAIRS
5. RECORDS
6. PROSECUTOR/SECRETARY
7. D.A.R.E. SGI/SECRETARY
8. LT OFFICE
9. CHIEF OFFICE
10. CHIEF SECRETARY
11. INT CONFERENCE
12. SUPPLIES
13. TOILET
14. SPECIAL OPS
15. ARMORY
16. WRITING REPORT
17. EVIDENCE
18. SQUAD ROOM
19. COMMUNICATIONS CENTER
20. TRAINING / COMMUNITY
21. LOBBY
22. INTERVIEW ROOM
23. ELEVATOR

GRAPHIC LEGEND

▶ - MAIN ENTRY LOCATION

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POLICE STATION
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
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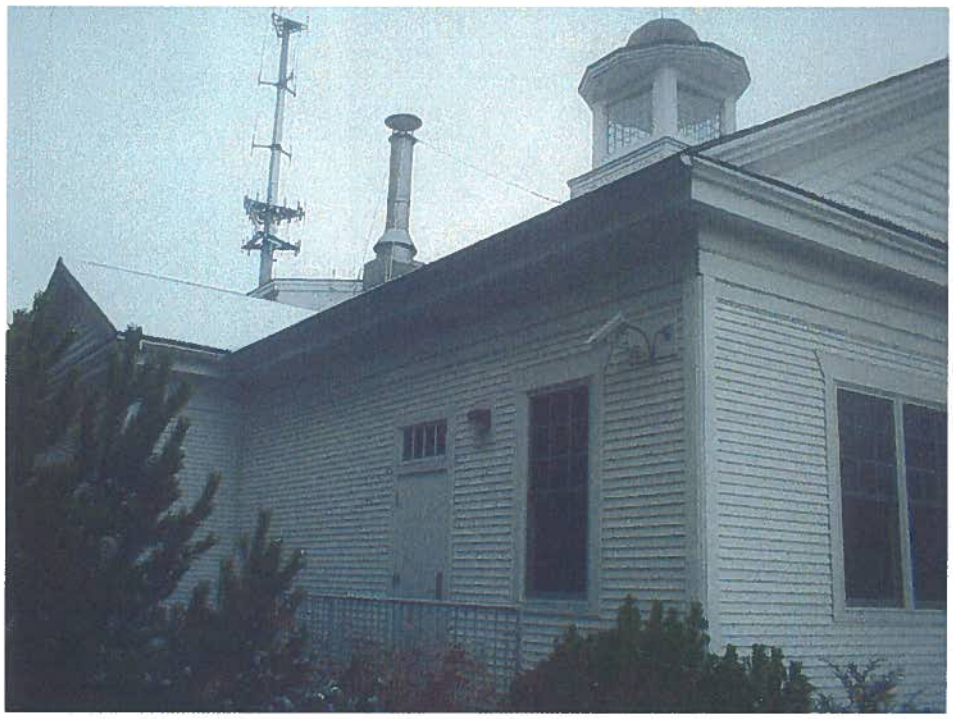
EXTERIOR PHOTOS

Exterior, main entrance.

Exterior, back facade, main entrance to apparatus bay.



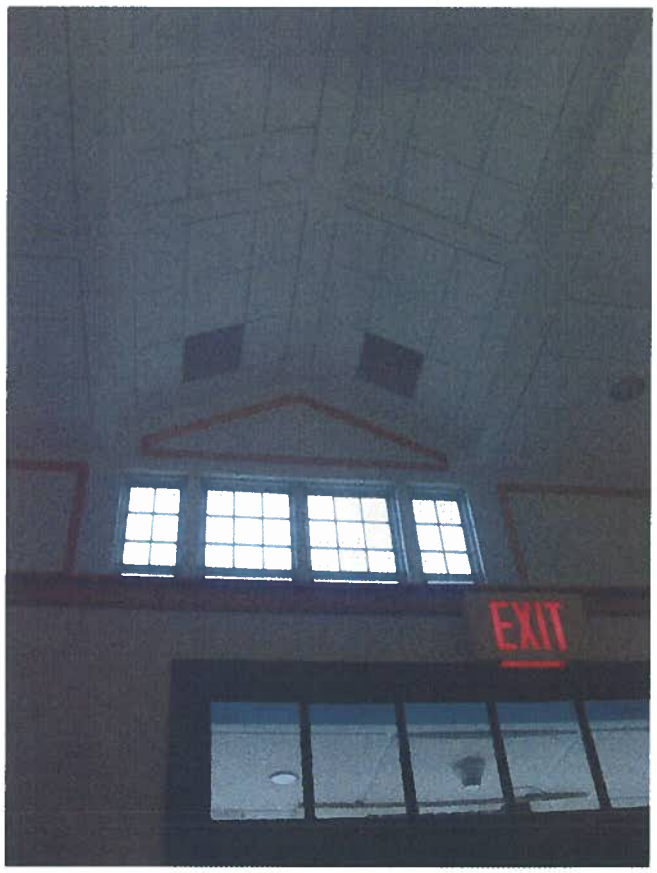
Exterior view; southwest corner.

Exterior, northeast corner.

Exterior, northeast corner with accessible ramp.

Communications tower

INTERIOR PHOTOS



Interior, front vestible looking up. Large volume space requires lots of heat to maintain comfort at floor level.

Interior view of shower room.

Interior view of accessible toilet.

Interior view of sink, accessible.

Interior view of hallway.

Section 11
RECREATION AREA FACILITIES

Locus Map - Town of Hanover

Building Summary

Address: Hanover St.; near Town Hall district, adjacent to Sylvester School.
Gross Area: Not applicable
Description of Site: Exterior recreation area with support facilities.
Description of Building: Constructed at various dates, there are a total of 6 small buildings in use at this recreation field area.
Function of Facility: Recreation area with ball fields, tennis courts, basketball courts, and summer day camp program for town youth.
Agency or Department: Hanover Parks and Recreation Department
Technical Construction Description: Various, 6 structures. See descriptions below.

Valuation:

Office Trailer:	$12,000
Toilet Building:	$30,500
Storage Building #3	$30,500
Storage Building #2	$ 3,000
Storage Building #1	no town records, estimated at $3,000
Gazebo	no town valuation record, estimated at $75,000
Total:	$153,000 (estimated replacement costs)

Immediate Needs:
- **Gazebo:** Miscelaneous Carpentry, painting repairs, and electrical re-wiring.
- **Toilet Building:** Demolish and replace with new, accessible facility. Use porta-pottis in the meantime.
- **Storage Shed 1:** Repair vandalized wiring at court lighting controls, [may already be completed]. Then demolish shed.
- **Office Trailer:** Construct accessible ramp to provide access for persons with disabilities.

Near Term Needs:
- Design study for new facility; develop program of space needs and cost estimate. Coordinate design effort with relocation of Parks and Rec. department offices to former Council on Aging location.
- **Office Trailer:** remove and replace with new permanent structure, designed to suit the programmatic needs including toilets, refreshement stand, first aid station, office, and storage, etc.
- Reroof gazebo-wood shingles.

Building Summary

Near Term Needs (continued):

- **Storage Building #3:** demolish building and fence, incorporate storage needs into program for new Recreation Building, to be designed.
- **Storage Building #2:** lift shed and construct new footings to below frost line, repair damaged floor structure, set shed on new foundation.

Conditions Summary:

- **Office Trailer:** Very poor condition. Non-accessible. Unsightly. This building should be removed.
- **Toilet Building:** Exterior is in very poor condition. Damaged and vandalized. This building should be demolished.
- **Storage Shed #1:** very poor condition. This structure should be demolished.
- **Storage Shed #2:** Small outbuilding in fair condition. Repair foundation and floor framing.
- **Storage Shed #3:** Fair condition. Unheated storage garage building. This building should be replaced with a new building located closer to the main parking area.
- **Gazebo:** In poor condition due to deferred maintenance. Extensive carpentry repairs are needed, and repainting. The wood shingle roof appears to be aging; replacement may be needed within 3-5 years. The deck of the gazebo is pressure treated wood which is unattractive, but in good serviceable condition.

Recommendation:

In general the structures at this site are in very poor condition, and are an unsightly presence in the center of the town historic district area. Programs operated for youth at this site appear to be well attended and provide a vital service to children and families in Town. Our recommendation is that existing structures be demolished and/or relocated, that the Gazebo be wholly renovated, and that a new structure be designed and constructed to properly house the necessary programmatic requirements.

Conditions Assessment

Site/Architectural

SITE

Large site with tennis courts, basketball courts, baseball diamond, and the six structures noted herein. Generally open, with large trees in areas shading picnic facilties. Asphalt paved parking is in fair condition. Grounds appear to be in generally good condition, but the areas with the most use are bare dirt and gravel, and improved landscaping treatments are needed.

ARCHITECTURAL

- Office Trailer: Very poor condition. Under-sized for needs. Non-accessible. Unsightly. Dented metal siding. Temporary building. This building should be removed. Potential target for vandalism.
- Toilet Building: Exterior is in very poor condition. Damaged and vandalized. Unsightly. Interior toilet areas are too small and in extremely poor, dirty condition, and seem to be generally un-healthy and un-suitable for use. Toilets and sinks are old. Toilet partitions are painted wood and very old. Floor is concrete. Roof structure is exposed wood. Ventilation and lighting is poor. Door on Women's side, to exterior, does not close. The building is not accessible to disabled persons. The interior is also non-accessible. This facility is piped into the same septic field that serves the Sylvester Elementary school. School personnel report that they frequently get people coming from the recreation area, asking to use the toilets in the school building. This is both generally annoying and also a potential security problem at the school. This building should be demolished immediately.
- Storage Building #3: Fair condition. Unheated storage garage building. Located far away from the main road and parking, this building is now fenced inside a tall chain-link and barbed-wire fence to discourage vandalism and loitering in the vicinity. Unattractive. The building itself is in need of maintenance, but the problematic nature of its location dictates that the building should be demolished (or perhaps moved to the DPW yard if they could make use of it?) and replaced with a new building to be designed and located to meet programmatic requirements.
- Storage Building #2: Small outbuilding in fair condition. Unheated storage shed. Not so remote from the main paved parking area, but perhaps still a potential target for vandalism. The floor structure is sagging at one corner. The building is set on concrete blocks which rest directly on the ground, there is no proper foundation.
- Storage Shed #1: very poor condition. Small shed serves equipment distribution for summer camp programs, etc. Unsightly unheated wood structure with low headroom inside. Should be demolished and replaced with a new structure, to be designed to meet the needs of the programs.
- Gazebo: In poor condition due to deferred maintenance. Carpentry repairs and repainting are needed. Railings and baulasters show loss of paint and some rot. Trim skirt boards at base have lost painted finish and are deteriorating. One skirt board has fallen off. Steps have been deteriorating, some have been replaced, others are in need of more repairs.

Exterior:

- **Toilet Building:** Missing shingles, Missing gutter, Damaged lattice, Cracked; rotted roof edge, Non-accessible drinking fountain, Open crack above door labeled 'Women'; needs to be sealed, Damaged; dented door, deteriorated paint, weathered.
- **Storage Shed #1:** Worn paint; all sides, Rotten wood,Open electrical box
- **Storage Shed #2:** Sagging footers
- **Storage Shed #3:** Deterorating paint, roof okay, open electrical box at gable end, unsightly barbed-wire-topped chain link fence, Trash behind building, Missing light.
- **Office trailer:** Damaged metal siding
- **Gazebo:** One section missing rails and 5 broken banisters, Lights falling out of ceiling have safety cages,General railing re-construction needed, Some localized deterioration of sills.

Conditions Assessment — Architectural

Building Code:
These structures should all be inspected by the Town of Hanover Building Department. The toilet building should also be inspected by the Town of Hanover Health Official, and determinations should be made as to whether these facilities should be allowed to continue in use. Each structure should be evaluated individually. The toilet building, and shed #1, and the office trailer would not be allowed to be constructed in the manner they now exist, under today's building codes.

Accessibility:
None of these buildings is accessible for persons with disabilities. Extensive work is needed to make the gazebo accessible, by constructing a new ramp and modifying the railings. The toilet building interior, as noted above, is entirely non-conforming and the value of the work required to deal with the approach issues alone, probably exceeds the value of the structure. Similarly, the office building trailer and shed 1 are also both entirely non-accessible.

Energy & Environmental Sustainability:
The office trailer is the only building in this group with mechanical heating and/or cooling. This trailer is very poorly constructed with regard to windows and exterior wall thermal insulation, and undoubtably consumes a great deal of energy for it's size.

Hazardous Materials:
There are no known issues with Hazardous Materials at any of these facilities. Lead paint is suspected, particularly at the older toilet room building, at shed #1, and at the gazebo. Additional testing should be completed if any of these buildings are to remain.

Historical Value:
This facility is located within the town Historic District. The gazebo is the only property with any distinctive period styling and should be maintained to preserve it's current attractive appearance. None of the structures have historic value.

Conditions Assessment — Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):
EXISTING PLUMBING UTILITIES

- Existing Domestic Water Service: The existing public toilet building is currently served by a domestic water service. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the facility's domestic water needs. The water distribution system is original to the building. The trailer and two storage shed have no water service. There is no backflow preventer.
- Existing Natural Gas Service: There is currently no gas service to any of the structures located at this site.
- Existing Sanitary Service: The public toilets sanitary sewer system provides sanitary waste drainage for plumbing fixtures located within the structure. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system. The trailer and two storage sheds have no sewer services.

Fuel Oil:

- There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:
Existing plumbing fixtures are as follows:

- Water closets are wall mounted; with flush valves, vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung vitreous china. Faucets are a combination of single lever handle and two lever handles and some with function.

Domestic Hot Water Systems:
Existing Domestic Hot Water System:

- The public toilet facility's domestic hot water is generated by an electric water heater which feeds all the buildings hot water needs. The water heater is in good condition.

Fire Protection Service:

- There is no fire protection coverage (sprinklers) currently in any of the structures at this facility.

Mechanical Systems:
APPLICABLE CODES AND STANDARDS
The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- All structures with the exception of the on site trailer have no heat or air conditioning. The trailer has an integrated heating and air conditioning unit with supplemental electric baseboard heat.
- Exhaust systems are present only in the public rest rooms building. The adequacy of this system was indeterminable due to winter conditions and the building being shut down.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems:
APPLICABLE CODES AND STANDARDS
The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

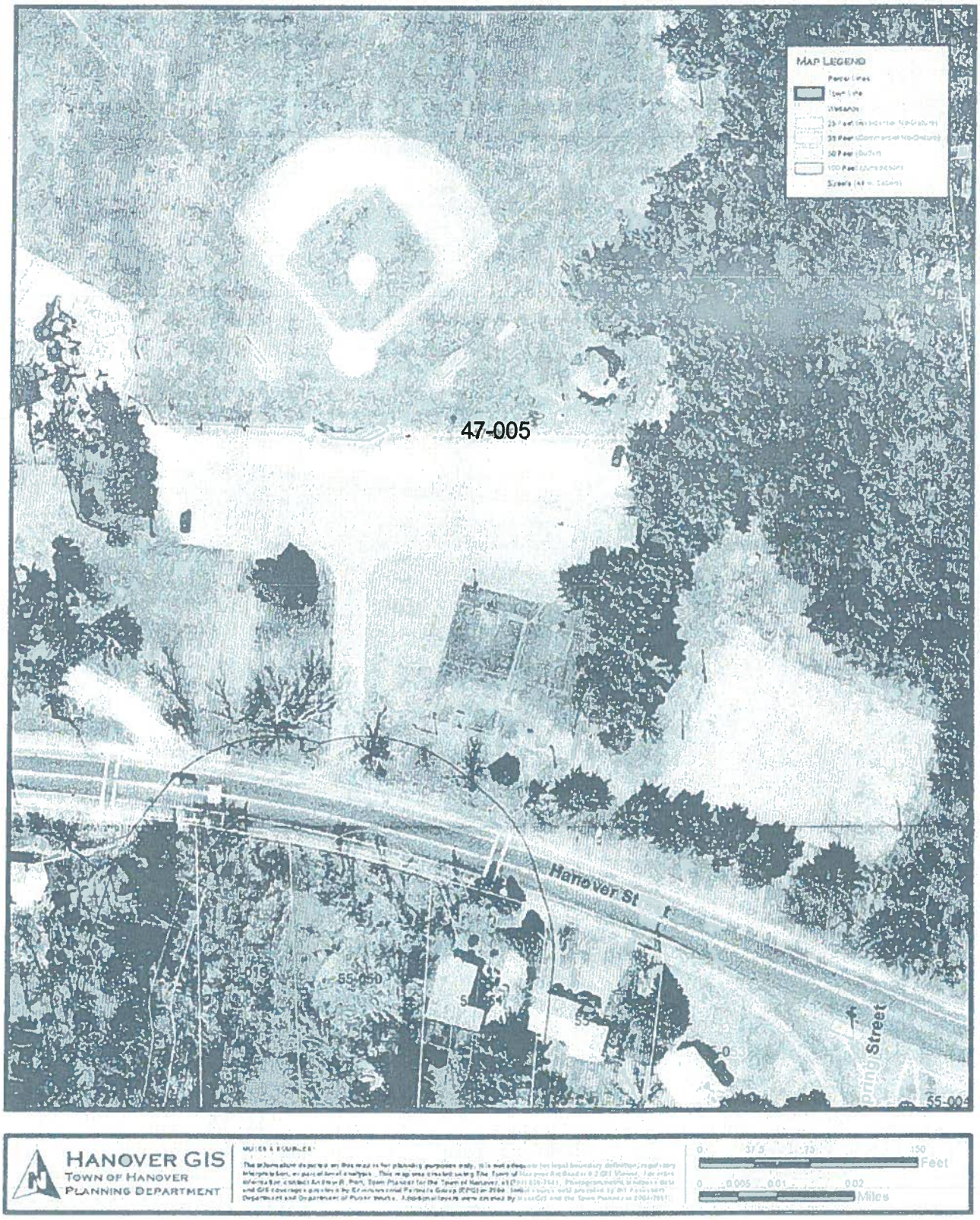
EXISTING ELECTRICAL SYSTEMS
- The building is served by a 120/240 volts, 1-phase, 3-wire electrical service. This service feeds the storage shed located adjacent to the trailer underground from a pole top transformer. The electric meter is located on the exterior of the shed and the main service panel inside. This service panel intern feeds power to all the structures on site including the trailer and public
- Restrooms via underground feeds to each building. The service equipment located in the shed appears to be in very good condition.
- The lighting throughout the facilities is in good condition. The lighting within the public restrooms should be replaced.
- There is no fire alarm system present in any of the structures on site.
- There is no site lighting with the exception of the basketball and tennis court lighting which is fed from the storage shed panel and control via individual switches mounted on the exterior of the shed. These switches were noted during the field visit as being in very poor condition and in need of replacement.
- There is no standby power serving any of the structures at the site.
- There is no life safety or emergency lighting located in any of the facilities on site.

MEP SYSTEMS CONCLUSION
In general, the systems vary in age from original to the buildings to as recent as 3-5 years old. Heating and ventilating equipment within the trailer appears to be in good condition. Ventilation equipment in the public restroom was unable to be examined due to the fact that the facility was shut down for the winter but should be examined to ensure it if functions properly.

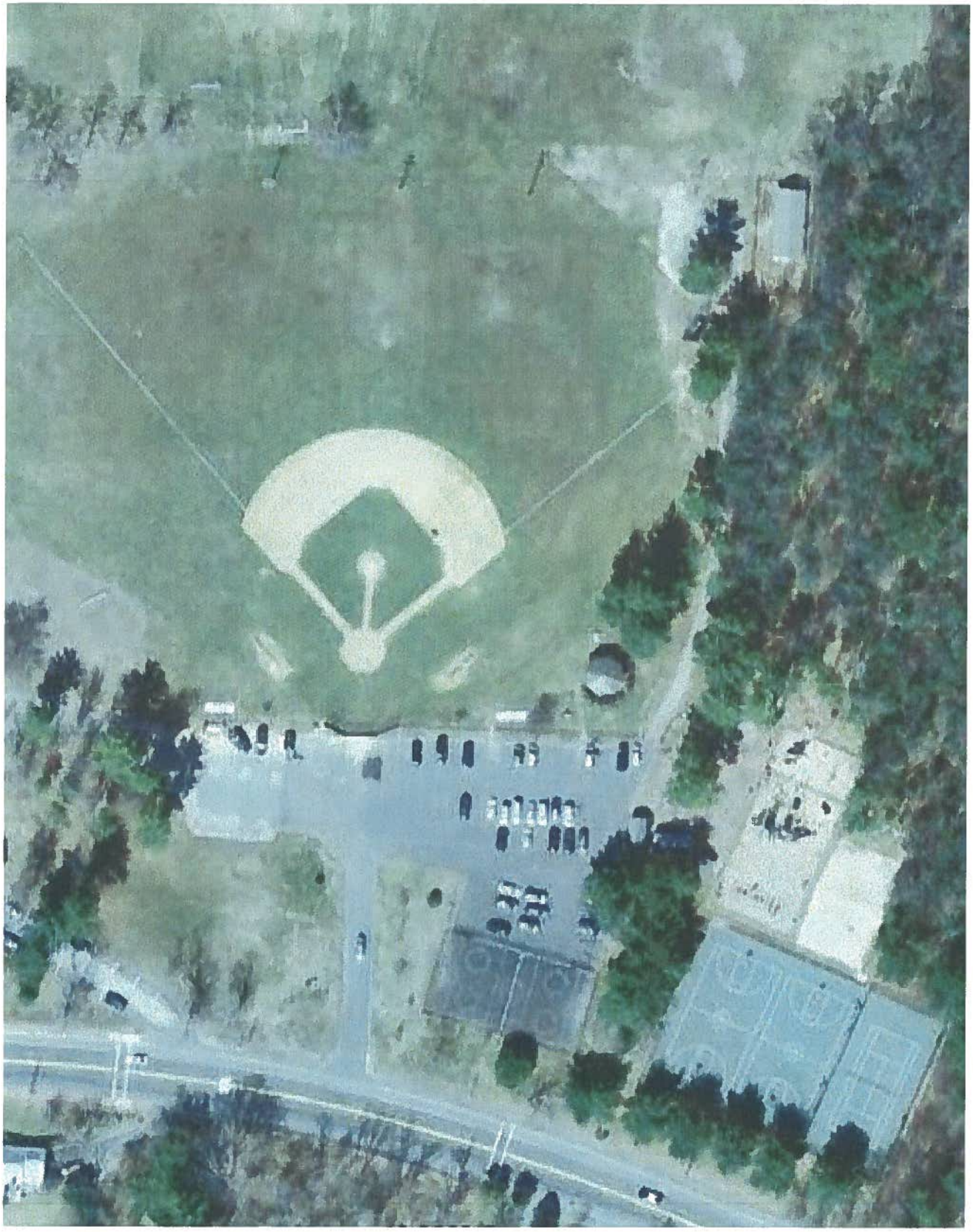
Plumbing fixtures in the public restrooms should all be replaced due to age and physical condition. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure.

The Electrical systems appear to be in good condition and operating without issues. The basketball and tennis court lighting controls mounted on the exterior of the storage shed should be replaced with weather appropriate switches. The lighting within the public toilets building should be replaced.

AERIAL PHOTO

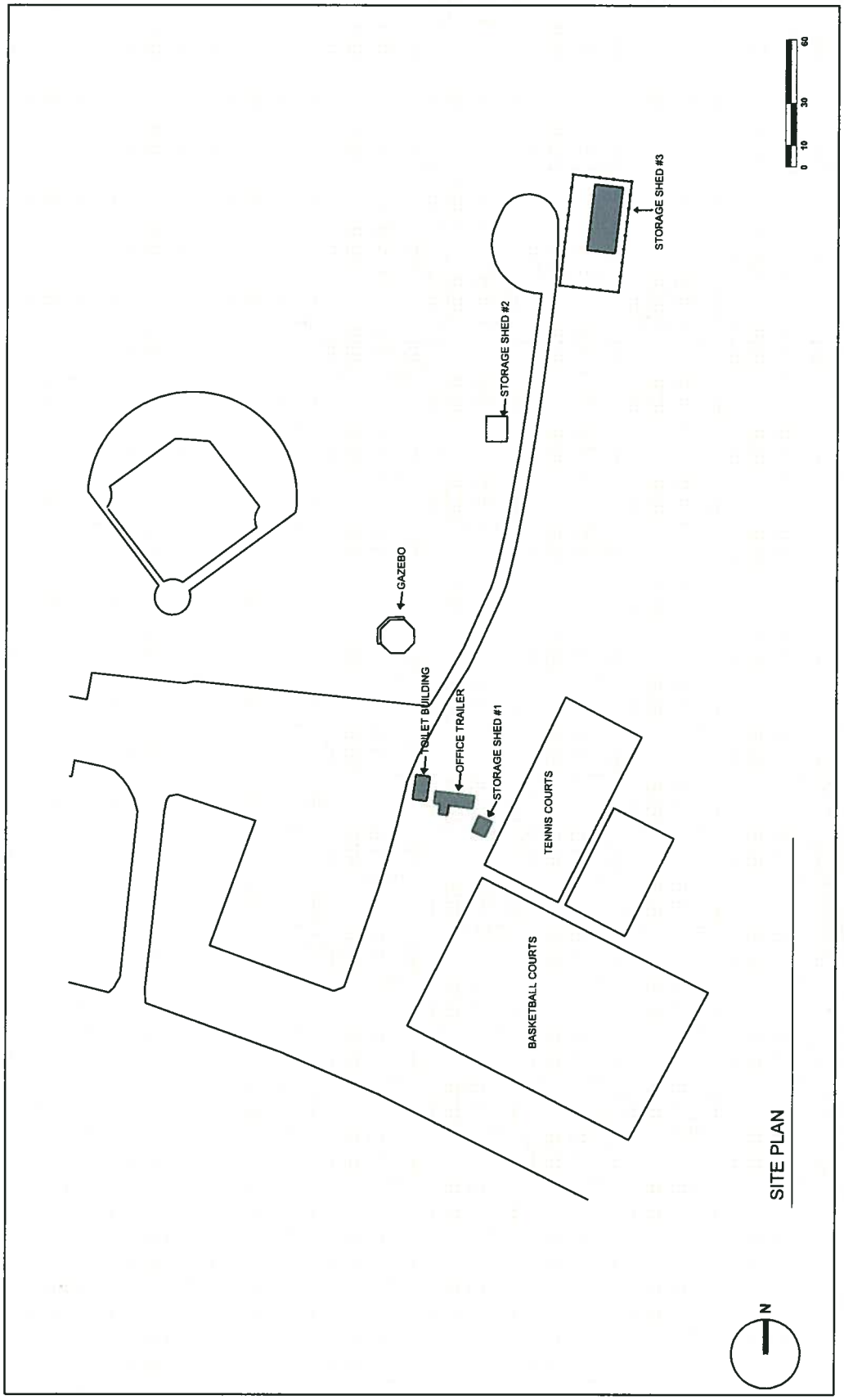


B. Everett Hall Support Facilities are several small structures used in support of the B. Everett Hall Field, labeled 47-005.



Aerial photo from Google, dated April 10, 2008.

SITE PLAN



D·R·A

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EVERETT HALL FACILITES
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

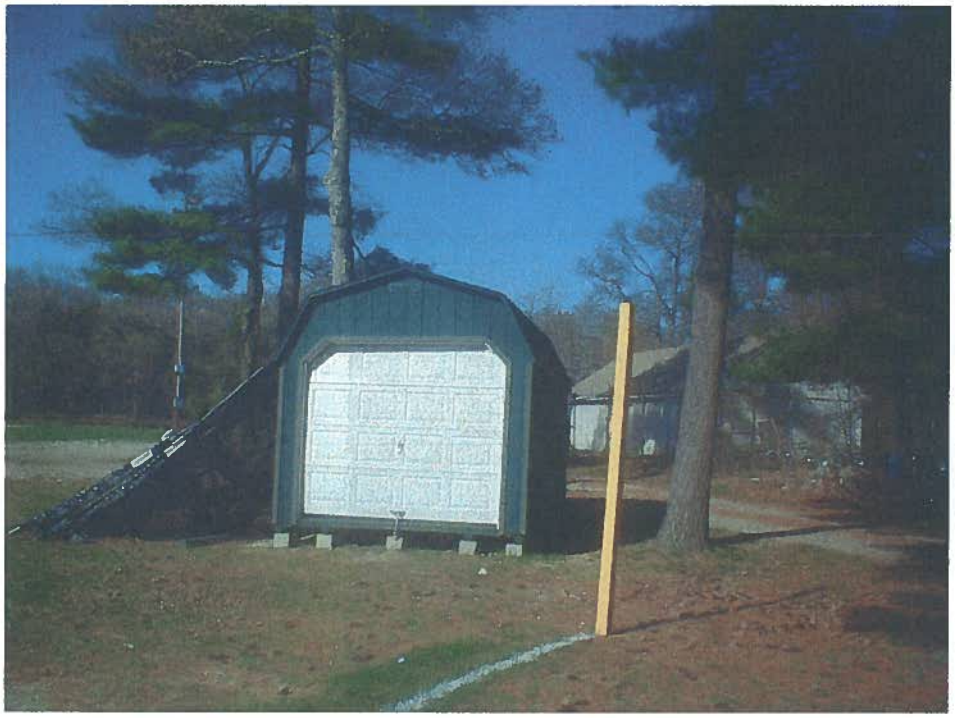
EXTERIOR PHOTOS

Exterior recreation area.

View of Toilet Building.

Exterior view of Office Trailer.

Exterior view of Shed #1.



Exterior view of shed #2.

Exterior view of storage shed #3.

Exterior view looking along side of storage shed #3 and fence.

Section 12 - PUBLIC WORKS FACILITY

Locus Map - Town of Hanover

Building Summary

Address: 219 Winter St.
Gross Area: 22,009 sq. ft.
Description of Site: Generally level, sand and gravel pits to side and rear, three separate drives, each with limited parking at each drive; center drive and parking are being used for piping material laydown area. Large pine trees in front, with some grassy area between drives.
Description of Building: Constructed before 1998, exact date unknown.
Function of Facility: Public Works (water / roads / etc.) Maintenance Headquarters. Includes offices and warehouse space.
Agency or Department: Department of Public Works
Technical Construction Description: Metal building on slab-on-grade foundation. Steel frame with metal panel exterior wall siding and roofing. Long-span storage bays to rear, with office spaces towards front.
Valuation: $733,500 (estimated replacement cost)

Immediate Needs:
- Perimeter fencing and security cameras.
- Repair minor roof leaks.
- Repair broken glass at windows and patch / repair holes in exterior metal siding.
- Clean unused portions of the building and dispose of debris.
- Investigate and test interior concrete floor to determine if oil products that soaked into floor from previous metal machine shop operation, are a hazardous material.
- Make entrances and one toilet for each sex, accessible.
- Test older electrical panels and switchboard.
- Title V sewage system evaluation.

Near Term Needs:
In addition to the above noted immediate needs:
- The entire exterior of the building, roof and sidewalls, needs repair. Rusted areas of sidewall metal panels need to be cut out, and new matching material installed to professional standards. The roof should be repainted, and, in the long term, replaced.
- Fire-Protection sprinklers should be installed.
- Repair sub-surface drainage to prevent ponding of water.
- Planning (schematic design work) to examine feasibility of various options for use of the property. Desire expressed to relocate offices to this location, from the water treatment plant.
- Install emergency generator.

Building Summary (continued)

Conditions Summary:
This is an aging metal warehouse building, with office space in the front, and is in poor condition. The property was formerly a commercial metal machine shop enterprise. The Town of Hanover purchased the property in 2004. It is primarily used as a storage facility for the DPW and for parking DPW vehicles out of weather. It is located directly adjacent to the main DPW yard.

This facility has a large amount of underutilized warehouse space. The oldest bay of the building is unheated and unused, and littered with debris and animal infestation. This bay also seems to have the worst oil-soaked concrete floor slab condition.
The exterior metal siding is in poor condition. Windows range from 'fair' to 'very poor'.
Mechanical equipment ranges from good in newer areas of the building, to very poor in older areas.
There are areas of the foundation that have some cracking, with re-bar exposed in one location.
Metal doors; some have rust. Doors and entry sequences are non-accessible. Existing toilet rooms and the employee kitchenette are non-accessible.

Recommendation:
The only thing worth saving at this facility is the steel frame of the building and the foundation system. Even the foundation is suspect, in areas where oil material is soaked into the floors. Before any decisions are made about future renovation and increasing the number of persons working here, the oil-in-concrete condition should be thoroughly tested and evaluated by a professional hazardous materials hygienist.

If the oil condition can be remedied, and if the Town intends to expand use of this facility, then the entire exterior metal siding system and insulation should be removed, and replaced, including the roof. Some of the newer overhead doors could be salvaged for re-use in the new building.
If the oil condition cannot be cost effectively remedied, then the structure should be demolished and a new facility designed and constructed to meet the needs of the Town.

Alternatively, areas of this facility could be used for long-term 'dead' storage of Town Records, as follows: A properly environmentally controlled storage 'building' could be constructed inside the shell of the existing building in the large unused warehouse bay. If properly designed, this facility could be an un-staffed repository of records that would be stored in a controlled environment, preventing deterioration of important documents, and in an orderly manner allowing retrieval of archived material.

Use of portions of this buildings for office space seems to be infeasible pending resolution of remaining questions about existing potentially hazardous materials. This proposal would require a separate specific feasibility study, to determine if such a project could be done more cost effectively than new construction. The proposed re-use would trigger full compliance with all current building codes and regulations.

Conditions Assessment

Site/Architectural

SITE

Site is generally in poor condition. Paving is cracked and potholed and degraded, and does not drain properly. Parking is minimal and striping of parking spaces is not visible.
Drives are in similarly poor condition, with deteriorated paving.
The large trees at the front of the building are attractive; an arborist should further evaluate these trees and determine if any trimming or other work is needed.
There is old, unused mechanical equipment in the rear of the building, with open panels and generally exposed to the weather and subject to vandalism. (disconnected, not in use.)

On April 21, 2010, John M. Schmid, PE, LEED® AP, conducted a site visit to 219 Winter Street Public Works Facility to evaluate issues previously raised to the Consultant Team regarding utility/ infrastructure concerns.

Mr. Schmid met with Victor Diniak to review and discuss the Public Works Facility. The Town acquired this building in 2004 and is presently used for Water District operations. The DPW will also be using a portion of the building as office and shop space.

The town should consider developing a Master Plan for both the 229 Amesway Yard and the 219 Winter St. Yard. These parcels abut each other and offer some underutilized space. With thoughtful planning both properties could be reconfigured to provide the DPW safer and more efficient operations.

Presently, there are some exterior site issues:

Material Storage: The Water District is storing materials in the front driveway. The facility should be enclosed with a fence and gated to mitigate material theft.

ADA Accessibility: The building does not appear to provide accessible access to the main entrance.

Stormwater Management: The depressed loading dock ponds water after storm events. The drainage system should be inspected and repaired to ensure it functions properly.

Fire Service: The building does not have a fire supression system. A new fire service may be required if the fire suppression system cannot be served off the domestic water service.

Title V Sewage Disposal System: Nitsch Engineering understands that the final building use is still being developed. The existing Title V Sewage Disposal System should be evaluated to confirm that it is designed for the proposed building programs.

Conditions Assessment

ARCHITECTURAL

Exterior:

- The exterior envelope of the building is in poor condition, including roof, walls, doors, windows, and foundation systems.
- Metal siding is rusting at about 10% of the area, particularly along the lower edges of panels near ground level. There are dents, tears, and holes in the metal siding. At one location there appears to have been a fire, which burned through the exterior wall. At other locations, piping has been removed, and the resulting holes in the exterior wall were not patched closed. Windows are low-quality sliding glass, and some have cracks and at least one window was observed to be entirely broken.

Interior:

- The warehouse areas store both small vehicles, and miscellaneous piping and fittings and other products. There is limited shelving, and most products are therefore stored on the floor, in an inefficient manner.

Structure:

- Steel frame. Appears to be in fair condition.

Roof:

- Painted metal ribbed roof; very low slope, minimally insulated. Some areas of leaking, probably as a result of ice dams, near the entrance in the front office areas (ceiling tiles damaged in this area.) The roof should be further evaluated to determine when full replacement will be needed. We have estimated a remaining useful service life of 5 years, with maintenance.

Building Code:

- This structure is an unprotected steel frame, use group Storage, Low-Hazard, Group S-2, and building type III-B.
- No known pre-existing code violations or safety citations by the local building inspector were reported. The Health Department should be involved in the further investigation of potential hazardous oil materials in the concrete floor slabs. The Health Department might also want to survey the property at this time with regard to animal infestation; the level of infestation of the older area of the building warrants immediate action to remove pests and animal debris.

Accessibility:

- This facility is entirely non-accessible. Although it is not a public building, the existing condition exposes the Town of Hanover to potential complaints from employees, or potential employees, who might feel that the non-accessible conditions are essentially discriminatory against them, if they have special needs and are prevented from performing essential work functions.

Energy & Environmental Sustainability:

Existing roofs and walls have minimal insulation. Three of the four warehouse areas are unheated. Windows are inexpensive sliding units. The perimeter of the existing concrete floor is likely not insulated from the cold stemwall foundation, leading to cold floors and heat loss.

Conditions Assessment — Architectural

Hazardous Materials:

- See previous discussions related to the history of the building, and its prior use as a machine shop. Oils from the machining process appear to have soaked into the concrete floor slab in some areas, and should be evaluated by a professional to determine if there are hazardous products in the oil. A '21 E' site investigation for underground tanks and any other potential hazardous materials conditions was completed at the time the property was purchased by the Town, with no significant findings.

Historical Value:

- This facility does not have any significant historic architectural value, and is not located within any Historic District.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:

- Existing Domestic Water Service: The existing building is currently served by a 1" domestic water service which enters a closet in the kitchen area of the renovated portion of the facility. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the buildings domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- Existing Natural Gas Service: There is currently a natural gas service to the building serving the gas fired unit heaters in the renovated garage bay area. These services enter the rear of the building.
- Existing Sanitary Service: The facility's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the building. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- Fuel Oil: There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:

Existing plumbing fixtures near the front occupied area are as follows:

- Water closets are floor mounted; tank and flush valve type, vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are a combination of wall hung and counter top vitreous china. Faucets are a combination of single lever handle and two lever handles.
- There are additonal, deteriorated, toilet fixtures in other areas of the building.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

Domestic Hot Water Systems:

Existing Domestic Hot Water System:

- The facility's domestic hot water is generated by a 30 gallon electric hot water heater which feeds the hot water needs of the facility. The water heater is in good condition.

Fire Protection Service:

- There is no fire protection coverage (sprinklers) currently at the facility.

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing building is heated by use of ceiling mounted gas fired unit heaters. These units are newer and in very good condition.
- There is currently no heating in the unfinished portion of the building.
- Exhaust systems are provided via thru wall exhaust fans venting out thru the exterior wall.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 208Y/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 1200 amps. The service equipment switchboard is located at the far end of the building away from the portion of the building which has been renovated. The service equipment is in good condition.
- There are a number of electrical panels located throughout the facility. These panel boards vary in age from original to the building for those in the unoccupied portion to new those in the renovated portion. The condition of these panel boards range from good to poor. The majority of the older panel boards do not have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical (continued):

- The lighting throughout the facility consists primarily of 1' x 4' Industrial fluorescent fixtures in the garage bay area. The lighting throughout the renovated portion of the building is in good condition, although utilizes older T12 lamping. The lighting located in the unoccupied portion of the building is in very poor condition. The light levels appear to be within recommended levels for the occupied portion of the building.
- The fire alarm system is a Firelite main FACP. This equipment appears to be in good condition. All devices within the occupied portion appear to be in very good condition. Those devices located within the unoccupied portion of the building appear in fair/poor condition and should be replaced. The mounting height of the panel should also be corrected in that the panel is mounted too high.
- Site lighting is accomplished via building mounted wall packs.
- There is currently no standby power generation on site. The desire was expressed by operations personnel to add a generator in order to allow for the future expansion.
- Life safety emergency lighting is provided via Emergency battery units with unit mounted emergency light heads and battery powered exit signs, units are newer and in good condition within the occupied space but should be added in the unoccupied portion of the building.
- There is currently a controlled access system at the building this includes motion sensors and magnetic contacts in the occupied area. The system was noted as functioning without any issues but requiring to be expanded and the desire to include exterior cameras.

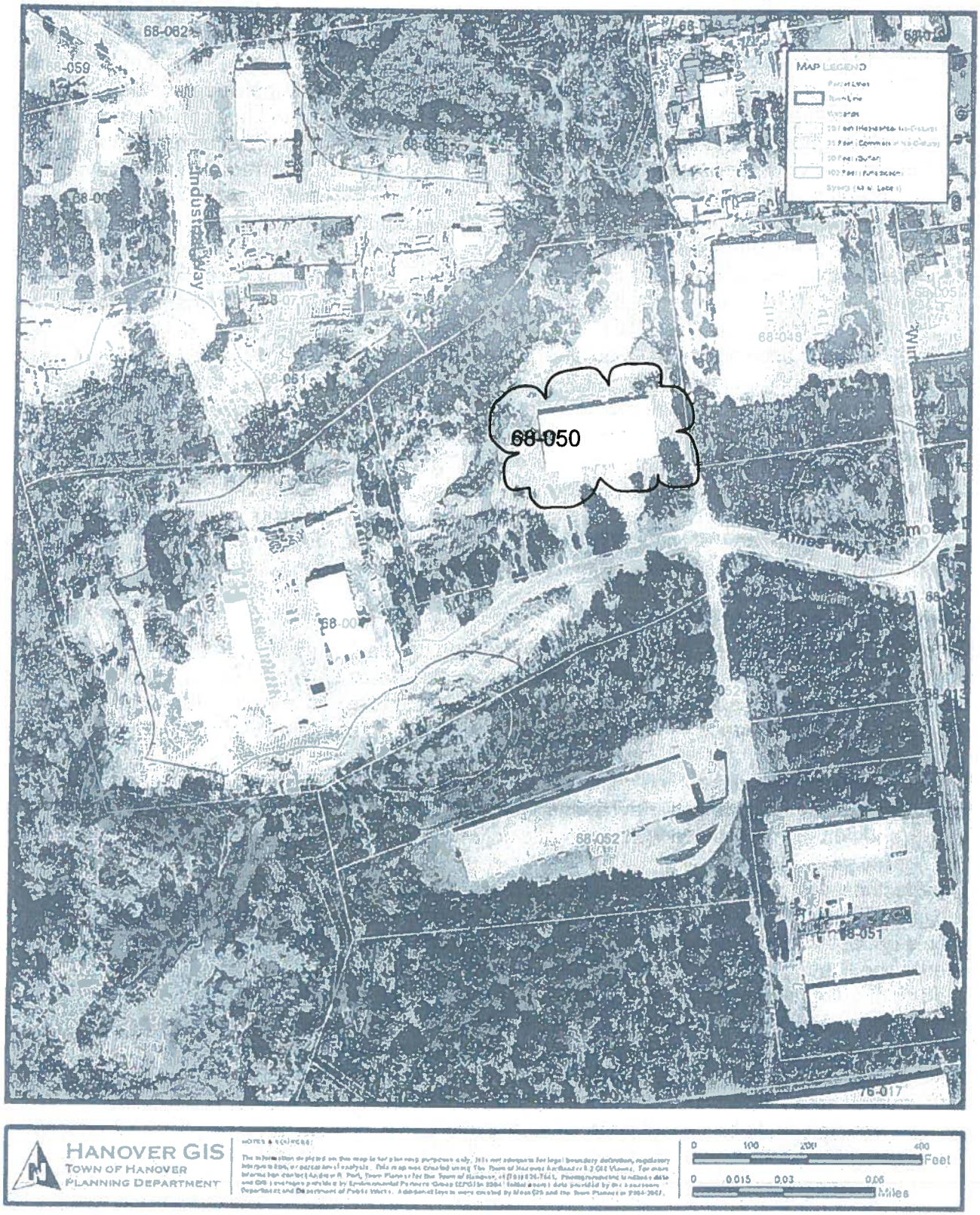
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. Some equipment such as heating units in the unoccupied areas should be replaced as they are not currently working. These upgrades however should take into consideration what the intended fit-out of the space is to be in order to provide the appropriate system.

Plumbing systems throughout the occupied spaces are newer and appear to be in good physical and working condition. Replacement of faucets and flush valves on sinks and urinals should be implemented with automatic units as a water conservation measure.

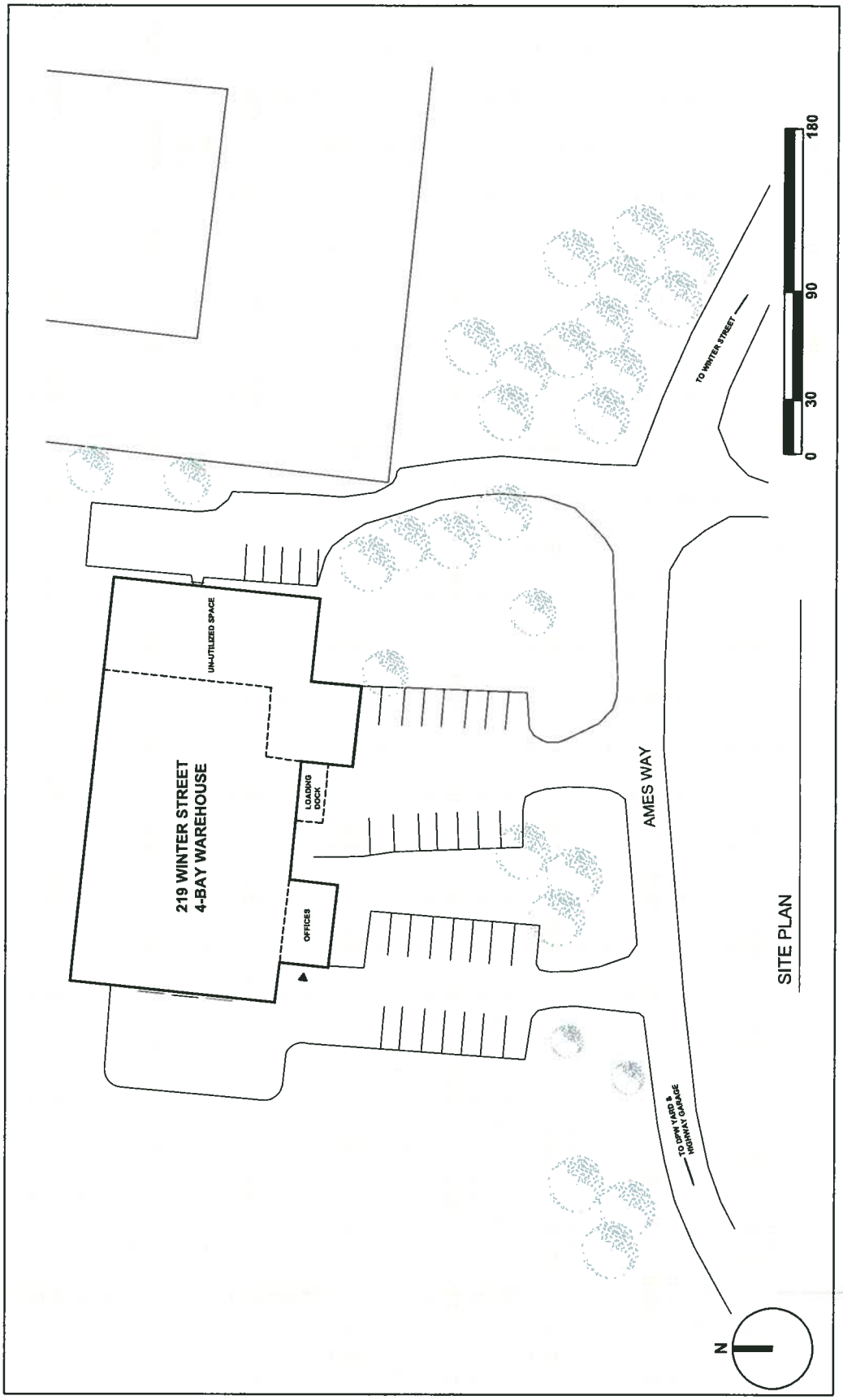
The Electrical systems appear to be in good condition and operating without issues within the occupied spaces. The older distribution equipment (panelboards) in the unoccupied space should be replaced with newer equipment with additional breaker spaces to meet any future needs. The lighting systems are newer and in good condition in the occupied areas, the addition of automated lighting controls should be incorporated in order to meet current energy codes and to save on energy costs. New lighting should be installed on a temporary basis in the unoccupied areas. Fire alarm system should be expanded to cover the entire building. Exit and emergency lighting systems are newer and appear to be in good condition in the occupied areas, however, need to be installed in the unoccupied space. The existing security system should be expanded to cover the unoccupied space.

AERIAL PHOTO



Public Works Facility is the building in the center of the photo, labeled 68-050.
(Source: Hanover GIS)

SITE PLAN



D·R·A

Drummey Rosane Anderson Inc.
Architecture
Interior Design

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141 Herrick Road
Newton Centre, MA
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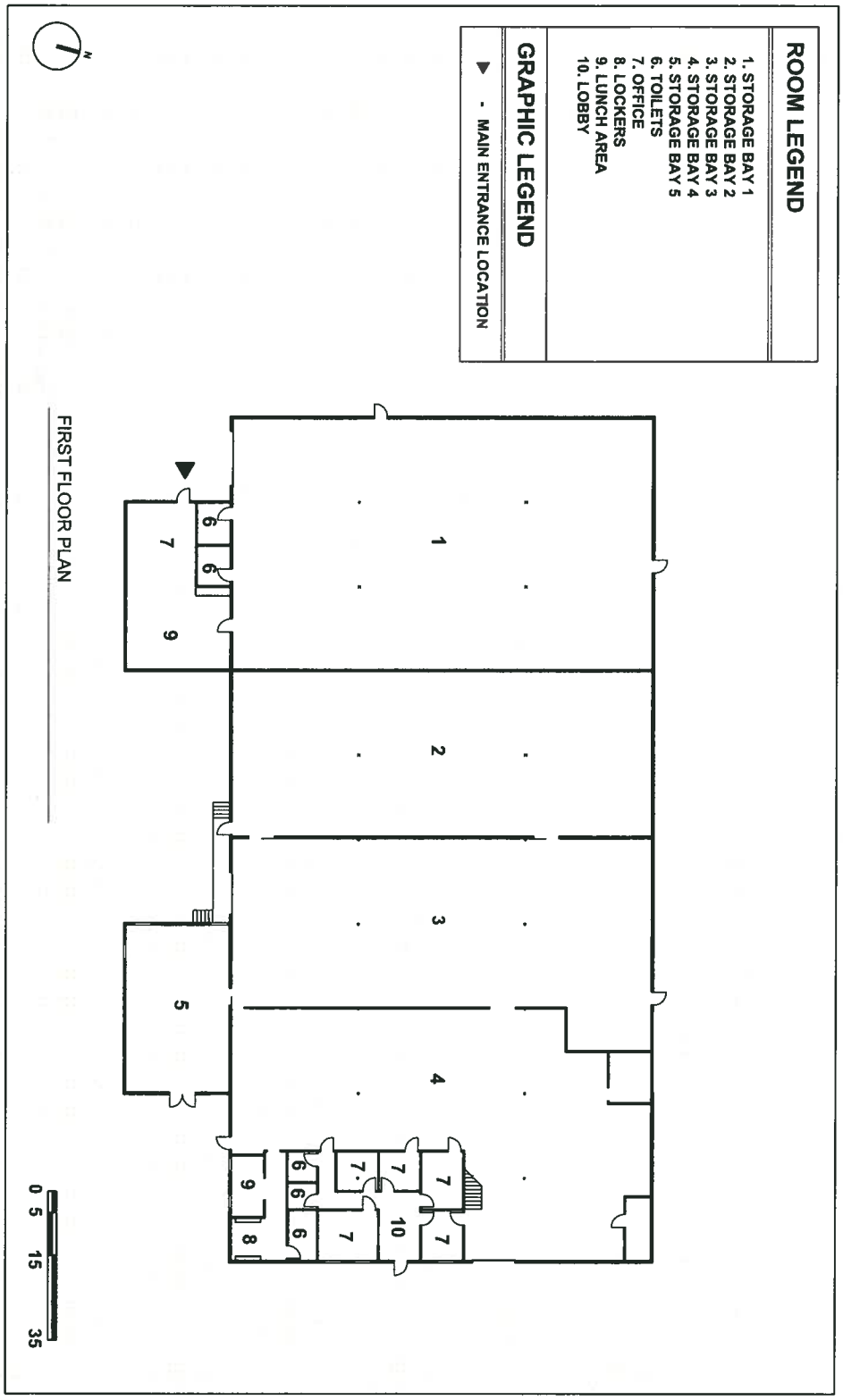
617-964-1700
617-969-9054 fax

DPW 219 WINTER STREET TOWN BUILDING STUDY

Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

FLOOR PLAN



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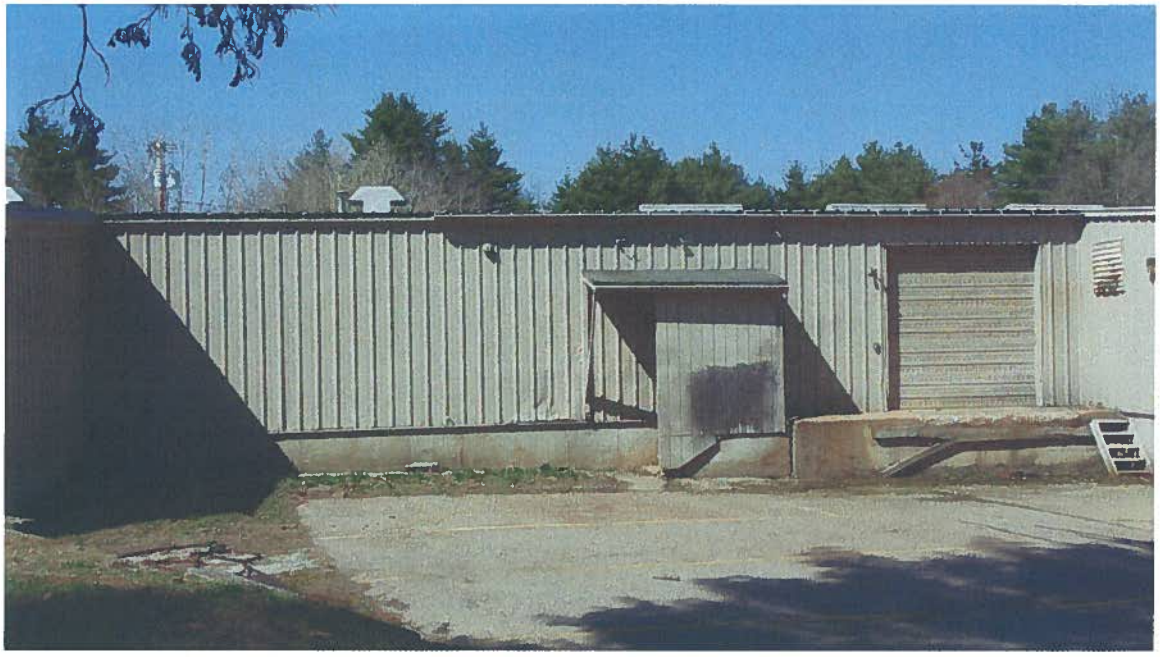
EXTERIOR PHOTOS



Exterior view of south facade; ponding in this area after rains.

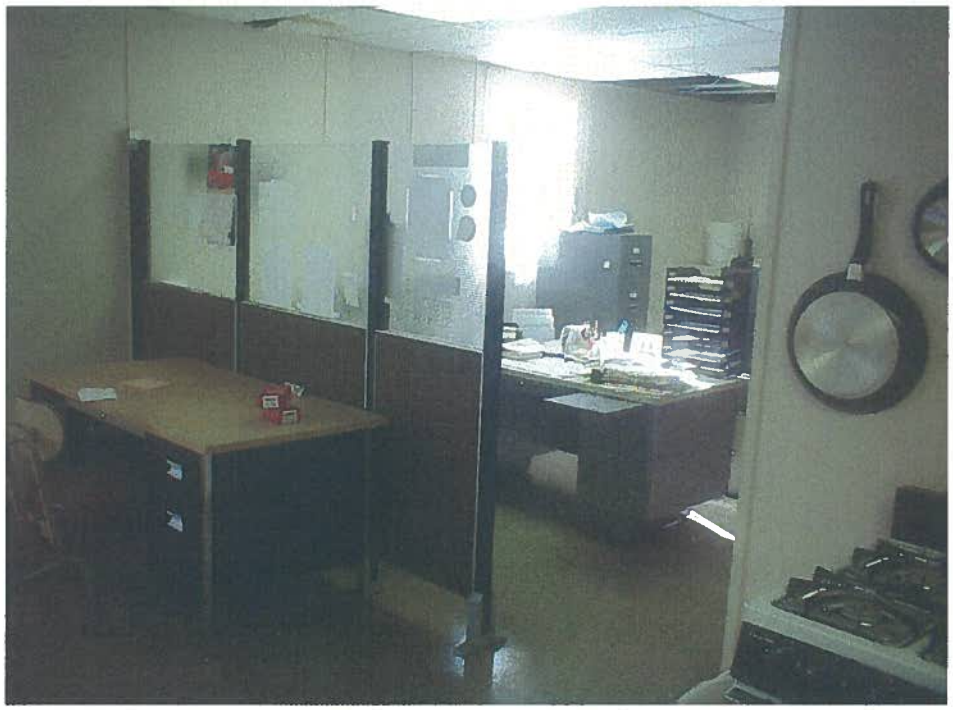
Exterior view of southeast corner.

Exterior view of east side

Exterior view of back facade along north side; mechanical equipment pulled away from building.

INTERIOR PHOTOS

Leak in roof near main entrance; damaged ceiling tiles



Lunch area looking toward entrance

Kitchenette at lunch room; non-accessible sink and stove

Main vehicle bay

Women's toilet room; non-accessible. There are no women on staff.

Men's toilet; non-accessible. Lockers are in this space also.

Section 13 - DPW YARD AND BUILDINGS

Locus Map - Town of Hanover

Building Summary

Address: 229 Ames Way
Gross Area: 6,800 sq. ft. (Highway Garage Building)
Description of Site: Generally level, open, paved area enclosed inside a perimeter fence.
Description of Building:
Highway Garage: Constructed 1977, addition 1980.
Salt Shed: Constructed 1980.
Function of Facility: Public Works Operations Headquarters.
Agency or Department: Public Works Department
Technical Construction Description:
Highway Garage: Metal building on slab-on-grade foundation. Steel frame with metal panel exterior wall siding and roofing. Long-span bays. With office spaces.
Salt Shed: Wood-frame structure, barn-like.

Valuation:
Highway Garage: $444,000 (estimated replacement cost)
Salt Shed: $113,000 (estimated replacement cost provided by town, seems low)

Immediate Needs:
Highway Garage:
- Repair minor roof leaks.
- Replace one overhead door. Replace one man-door.
- Solve air-quality problem, air system for offices draws oil smells from equipment bays into building.
- Improve ventilation of vehicle bays.
- Repair security alarm system.
- Provide accessible entrance and accessible unisex toilet.
- Paint wood trim.
- Repair damaged metal siding.

Salt Shed:
- Demolish; replace with new.

Other / Yard:
- Install automated main gate with camera surveillance.
- Traffic study needed.

Near Term Needs:
Highway Garage:
- Need additional covered space for vehicles; add shed roof on exterior side.
- Fire protection sprinkler system.
- Add auto openers to bay doors on repair bays.
- Improved fire alarm system.

Building Summary (continued)

Salt Shed:

- New Building.

Other / yard:

- I.D. Card system for access to fuel station, with video recording for loss prevention.
- Need new road, outside of fence, to public brush disposal pile.
- Need a new enclosed vehicle wash station, with water reclamation per EPA standards.

Conditions Summary:

- **Highway Garage:** Fair condition; needs maintenance repairs at exterior and systems upgrades at interior. Needs to be made accessible.
- **Salt Shed:** Failed structure; needs to be demolished.
- **Yard / other:** In general, the yard is orderly and well utilized. Paving needs repair in some areas. Fencing needs repairs in some areas. Traffic pattern is problematic. Automated gate and improved security are needed.

Recommendation:

- **Highway Garage:** Make necessary immediate-needs repairs per the above-listed items. Expand building as needed to accommodate full fleet of vehicles, to ensure longevity of expensive equipment. Re-work air ventilation system for office areas. Make entry and at least one uni-sex toilet fully accessible for disabled persons.
- **Salt Shed:** Demolish and replace with new facility.
- **Yard / Other:** Complete a schematic design study to evaluate options for needed improvements to traffic flow, security, and vehicle wash structure.

Conditions Assessment

Site/Architectural

SITE

Site is generally in fair condition. The site is entirely paved, or is bare earth. There is no landscaping. Paving is cracked in some areas, and with some potholes. Pavement is generally aged and needs sealing. Parking is adequate and striping of parking spaces is minimally visible. Perimeter fence is in poor condition.

On April 21, 2010, John M. Schmid, PE, LEED® AP, conducted a site visit to 229 Ames Way Highway Garage in Hanover to evaluate issues previously raised to the Consultant Team regarding utility/infrastructure concerns.

Mr. Schmid met with Victor Diniak to review and discuss overall DPW operations. The most significant concern is to be able to maintain safe daily operations within the yard while maintaining public access to the compost pile. This also includes providing safe access to the Town's fuel tanks for public vehicles. Presently, there could be numerous parties seeking the same route through the site for several different purposes and with limited familiarity with the site.

Nitsch Engineering recommends that the Town seriously consider improving public access to the compost pile before an accident occurs. The effort could be accomplished by reconfiguring several onsite operations; such as the exterior salt pile, public compost pile, and aggregate materials storage bins. This would also include constructing a driveway outside the existing fence line to the rear of the facility. This would allow the public to access the compost piles without having to formally enter the site and engage with daily site activities. The enclosed sketch (p.13-9) illustrates this conceptual scheme. This effort would likely require approval from the Conservation Commission because it appears that the proposed driveway is located within a buffer zone to a regulated area.

The existing gate to the DPW yard is also operated by town personnel 24-hours a day to access the fuel tanks. There have been instances in the past where the gate was left unlocked after personnel used the fuel tank. The town should consider the installation of an automated gate to ensure that the yard is safely secured at all times.

ARCHITECTURAL

Exterior:

- Highway Garage Exterior: The exterior envelope of the building is fair condition, including roof, walls, doors, windows, and foundation systems.
- Metal siding is rusting at some areas, particularly along the lower edges of panels near ground level. There are dents, tears, and holes in the metal siding. There is only one window.

Interior:

- Highway Garage Interior: The interior is in fair condition. Lighting is poor. Ventilation is poor. The building structure is in good condition. Floor drains are properly protected with grease and oil traps, as reported by Owner. The space is too small for the needs of the vehicle fleet of trucks and other equipment; winter time logistics for storing and moving the fleet in storms, are unusually difficult.
- Highway Garage Interior: The staff break room is in very poor condition. This dimly light space serves multiple uses as a break room, lunch room and locker area. The condition of furnishings and finishes is very poor.

Conditions Assessment — Architectural

Highway Garage:
Structural:
- Steel frame. Appears to be in good condition.

Highway Garage:
Roof:
- Painted metal ribbed roof; very low slope, minimally insulated. The roof should be further evaluated to determine when full replacement will be needed. We have estimated a remaining useful service life of 8 years, with maintenance.

Highway Garage:
Building Code:
- This structure is an unprotected steel frame, use group Storage, Moderate-Hazard, Group S-1, and building type III-B.
- No known pre-existing code violations or safety citations by the local building inspector were reported

Salt Shed
- Structural: Wood framed, 'pole barn' construction. Framing members are bowed and in a state of failure, and have been braced in an ad-hoc manner.
- This structure is an unprotected wood frame, use group Storage, Low-Hazard, Group S-2, and building type V-B.
- No known pre-existing code violations or safety citations by the local building inspector were reported

Accessibility:
- The Highway Garage is the only occupied building. It is entirely non-accessible. Although it is not a public building, the existing condition exposes the Town of Hanover to potential complaints from employees, or potential employees, who might feel that the non-accessible conditions are essentially discriminatory against them, if they have special needs and are prevented from performing essential work functions.

Energy & Environmental Sustainability:
- Existing roofs and walls have minimal insulation. Warehouse areas are minimally heated using reclaimed oil. The perimeter of the existing concrete floor is likely not insulated from the cold stemwall foundation, leading to cold floors and heat loss.

Hazardous Materials:
- There are no known hazardous materials in either building. Oil tanks are above ground. Fuel tanks (gasoline and diesel) for vehicles, are double-wall underground tanks with monitoring.

Historical Value:
- This facility does not have any significant historic architectural value, and is not located within any Historic District.

Conditions Assessment

Engineering Systems

Plumbing/Mechanical/Electrical

(Engineering evaluation is for Highway Garage only)

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

EXISTING PLUMBING UTILITIES

Domestic Water:

- Existing Domestic Water Service: The existing building is currently served by a 2" domestic water service which enters the water heater closet. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the buildings domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.

Natural Gas:

- Existing Natural Gas Service: There was no natural gas service to the building noted nor any gas fired equipment noted at this facility.

Sanitary:

- Existing Sanitary Service: The Building's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the building. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.

Fuel Oil:

- There are currently 3 fuel tanks located on the site: one 660 gallon above ground heating oil tank, one underground 10,000 gallon diesel fuel tank, and one underground 10,000 gallon gasoline tank.

PLUMBING FIXTURES AND SPECIALTIES

Existing plumbing fixtures are as follows:

- Water closets are floor mounted tank type; vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are counter mounted vitreous china. Faucets are of the single lever handle type.

DOMESTIC HOT WATER SYSTEMS

- Existing Domestic Hot Water System: The buildings domestic hot water is generated by an 80 gallon electric hot water heater which feeds all the building's hot water needs. The water heater is new and in very good condition.

FIRE PROTECTION SERVICE

- There is no fire protection coverage (sprinklers) currently at the facility.

Conditions Assessment

Engineering Systems

Plumbing/Mechanical/Electrical

(Engineering evaluation is for Highway Garage only)

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing building is heated by oil fired ceiling hung forced hot air heating and ventilating units. Three of these units are utilized to heat the garage space, two of them being older and needing to be replaced, and one being newer and in good condition. These units are also utilized to provide heat to the office and lounge area adjacent to the garage which is an issue that should be corrected for the safety of personnel.
- Exhaust systems servicing the garage area are via thru the wall fans and are in poor condition and should be replaced.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 208/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 200 amps. The service equipment is located in garage bay area and consists of a fused disconnect switch which appears to be in good condition.
- There are a number of electrical panels located throughout the facility. These panel boards all are a mix of newer and older having been added at the time of various building additions and/ or on an as-needed basis. The condition of these panel boards range from good for the newer panel to poor. The majority of the panel boards do not have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 1' x 4' 2-lamp wraparound fluorescent fixtures in the office area and industrial fluorescent fixtures in the garage bays. The lighting throughout the facility is in fair/poor condition and should be upgraded. The light levels appear to be lower than recommended levels.
- The fire alarm system consists of 120 volt smoke detectors. Given the usage of the facility, a fire alarm system (including heat, smoke and carbon monoxide detectors) should be added and

tied into a notification system for prompt response time.

Conditions Assessment

Engineering Systems

Plumbing/Mechanical/Electrical

(Engineering evaluation is for Highway Garage only)

Electrical Systems (continued):

- Site lighting is accomplished via building mounted wall packs and a number of pole mounted flood lights.
- There exists a 45KW oil-fired standby generator. The generator is old and in fair condition. It is housed and exhausted through a combustible wooden shed. This unit is manually transferred upon loss of normal power.
- There was no life safety emergency lighting provided at the facility. Emergency exit lighting is insufficient and was not functioning.
- There is currently a controlled access system at the facility consisting of magnetic contacts on exterior doors. This system is older and should be upgraded and should include the requested exterior CCTV cameras.

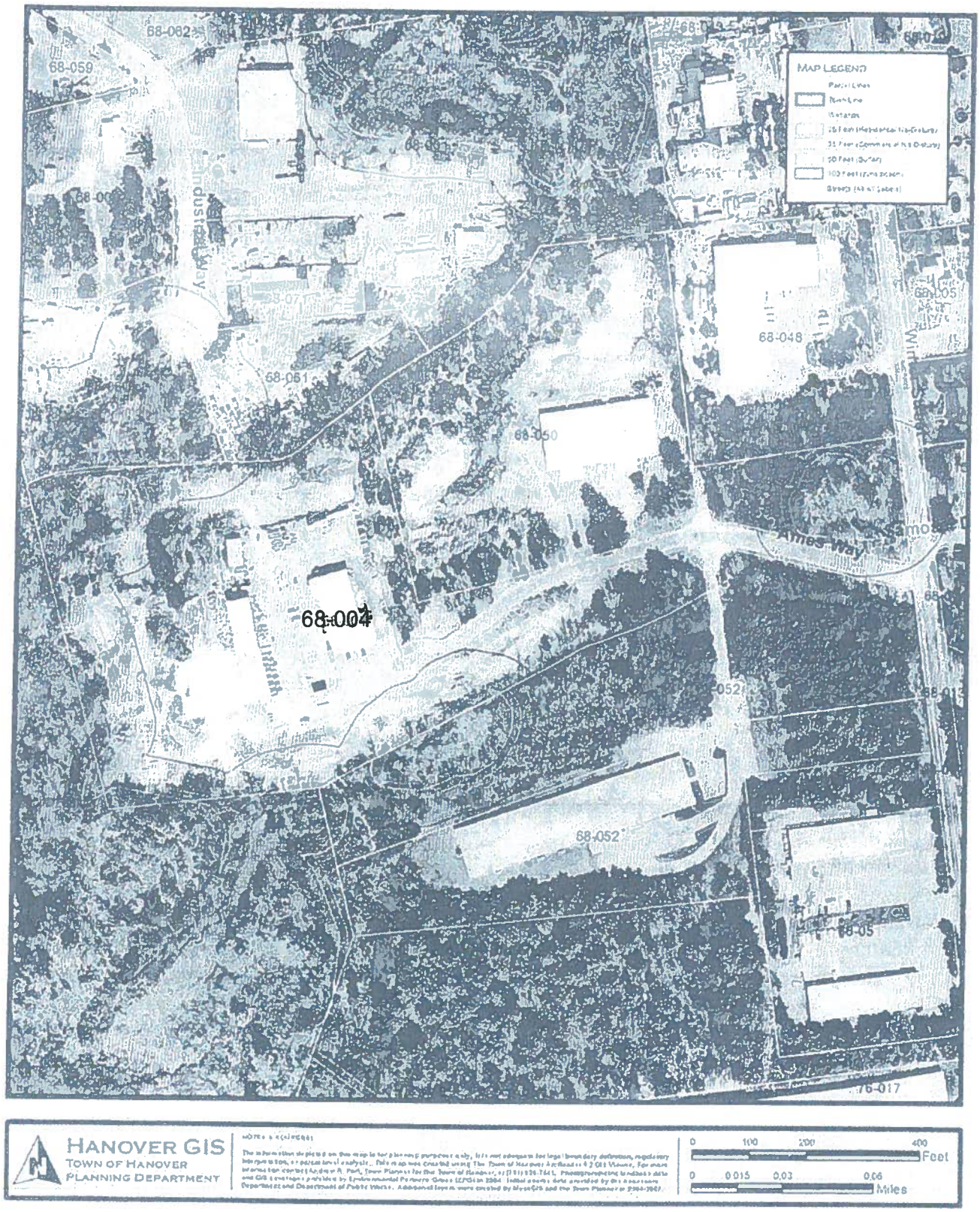
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building, to as recent as 3-5 years old. Some equipment such as the older oil fired unit heaters should be scheduled for replacement in order to improve the reliability, efficiency and to cut down on the operational and maintenance costs associated with the heating system. The office/lounge area should be removed from the garage heating system and provided with an independent HVAC system.

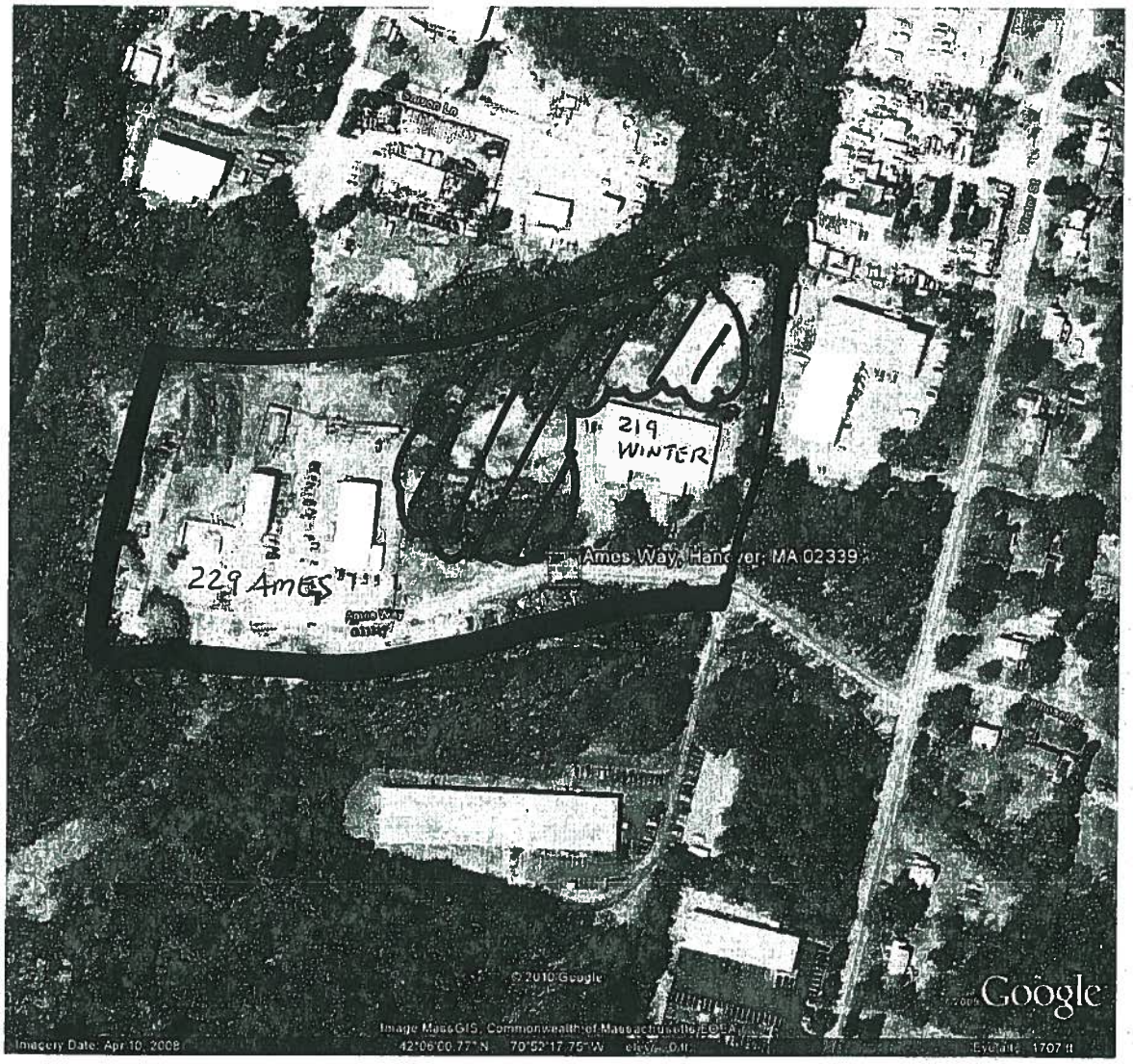
Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on urinals to automatic units should be implemented as a water conservation measure.

The Electrical systems appear to be in good condition and operating without issues. The older distribution equipment (panelboards) should be replaced with newer equipment with additional breaker spaces to meet any future needs and to alleviate the possibility of overloading individual circuits when new equipment and or devices are added to existing circuitry. The lighting systems are older and should be upgraded to newer fixtures utilizing new lamp and ballast technology. The addition of automated lighting controls in some areas should be implemented in order to meet current energy codes and to save on energy costs. Fire alarm system, emergency power generation, emergency lighting and exit lighting systems are all older and/or nonexistent and should be addressed. Existing security system is older and inadequate given the value of much of the equipment on site and should be upgraded.

AERIAL PHOTO



Highway Garage is the building to the left of center of the photo, labeled 68-004.
(Source: Hanover GIS)



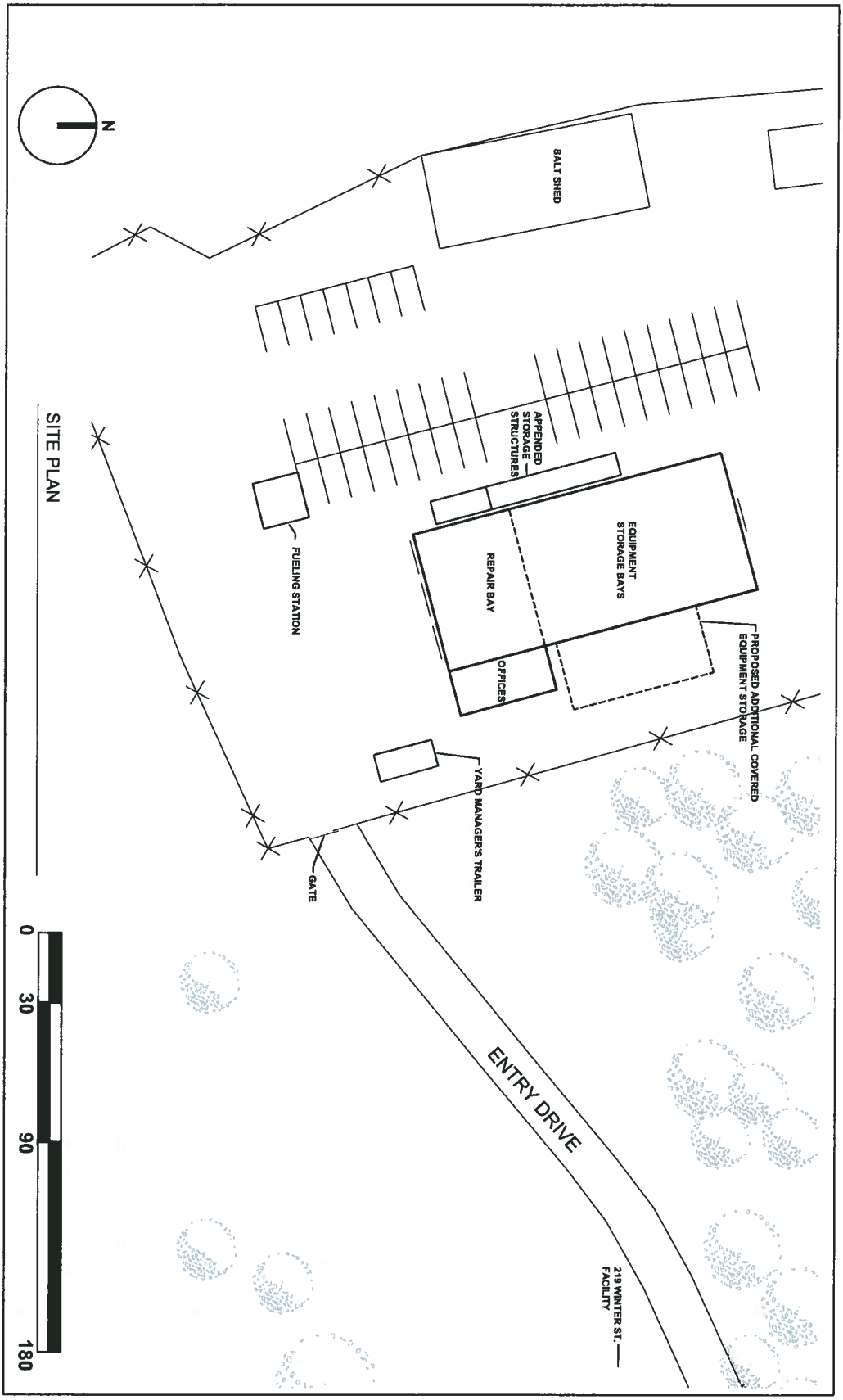
UNDER UTILIZED SPACE

Nitsch Engineering
186 Lincoln Street, Suite 200
Boston, MA 02111-2403

HANOVER DPW YARDS
JUNE 2010
NOT TO SCALE

Sketch provided by Nitsch Engineering. Nitsch recommends the Town consider improving public access to the compost pile before an accident occurs. Refer to the Conditions Assessment Site section of this report on page 13-3 for additional information.

SITE PLAN



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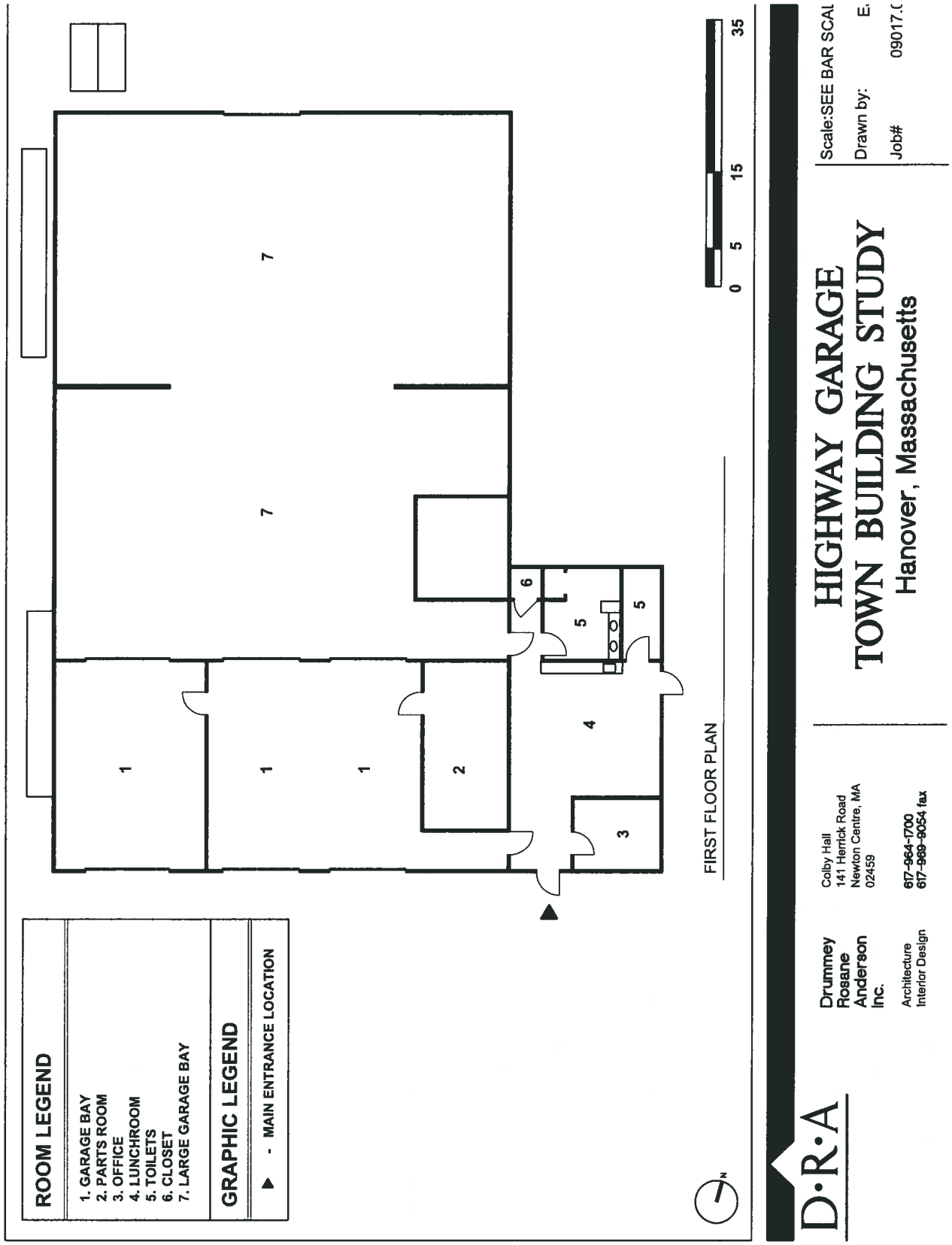
HIGHWAY GARAGE
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLAN


ROOM LEGEND
1. GARAGE BAY
2. PARTS ROOM
3. OFFICE
4. LUNCHROOM
5. TOILETS
6. CLOSET
7. LARGE GARAGE BAY
GRAPHIC LEGEND
▲ - MAIN ENTRANCE LOCATION
FIRST FLOOR PLAN
0 5 15 35
HIGHWAY GARAGE
TOWN BUILDING STUDY
Hanover, Massachusetts
Scale:SEE BAR SCAL
Drawn by: E.
Job# 09017.0
Drummey Rosane Anderson Inc.
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EXTERIOR PHOTOS

Highway Garage exterior south facade.

HIghway Garage outdoor storage area at east facade.

Damage near door.

West side of Highway garage with appended storage structures.

Town-wide re-fueling station.

DPW salt shed, south side exterior.

DPW salt shed, interior of west wall.

Damage near door-salt shed.

Rust at overhead door-salt shed.

DPW Yard manager's trailer office.

INTERIOR PHOTOS

Non-accessible men's toilet room-Highway Garage.

Non-accessible sink at lunchroom locker room-Highway Garage.

Section 14 - TOWN HALL

Locus Map - Town of Hanover

Building Summary

Address: 550 Hanover St.
Gross Area: 17,406 sq. ft.
Description of Site: Gently sloped, open, few ornamental trees, nicely planted and landscaped with shrubs and flowers. Located at major crossroad intersection in the Town center. Parking is adequate. Pavement and striping is in good condition. Recently re-sealed.
Description of Building: Constructed 1863. Historic. Additions made around 1977, and renovations. New roof and windows in 1995 or 1996. Exterior painted in 2002 and 2004. White vinyl siding. Pitched gable roofs with asphalt shingles. This is an attractive building that has been well maintained and is in good condition. Located adjacent to the town library and fire department headquarters; the police station used to be on the lower level, but has been relocated to a new building a mile away.

Function of Facility: Public and administrative town offices.
Agency or Department: Several.
Technical Construction Description: Original historic structure is entirely wood frame construction on a stone foundation, with plaster interior finishes. New building addition is founded on poured in place concrete, with the upper structure being a light gauge steel frame.
Valuation: $1,672,000 (estimated replacement cost per town documents - low)

Immediate Needs:
- Install security system, with cameras and card access for after hours employees.
- Upgrade fire alarm system.
- Test / evaluate emergency generator to determine capacity.
- Repair cupola and associated roof leaks.
- Extend Sprinkler system to attic (dry pipe system).
- Replace carpet at 50% of carpeted area.
- Repair broken sidewalk paving at drives.

Near Term Needs:
- Replace one older boiler.
- Replace pneumatic control system.
- Space study, to accommodate system and departmental procedural changes.
- Remove records storage from basement spaces, to new climate controlled environment to be created, probably off-site.
- Pour concrete slab in basement storage area below original building.
- Study acoustics in main public meeting room.
- Occupancy sensors on lighting, for energy conservation.

BUILDING SUMMARY

Near Term Needs (continued):

- Conduct a full study of accessibility, specifically site accessible routes to main entrances, to find a means of making those public access points also serve the disabled community.

Conditions Summary:

This building consists of an original historic wood frame Town Hall building, with a large contemporary addition on the rear. The building is in very good condition overall. The shingled roof is in good condition, with only minor leaking at the cupola area. The cupola is in fair condition, but is in need of carpentry repairs to prevent further deterioration. Exterior wall systems and windows are in good condition. The foundations are in good condition. The interior of the building ranges from fair to good condition. The windows are replacement thermally insulated units, and are in very good condition. The overall accessibility of the building is acceptable, but improvements could and should be made to be more accommodating.

Recommendation:

This building needs only general ongoing maintenance, in addition to the items of work noted as 'immediate needs', above.

Conditions Assessment

Site/Architectural

SITE

The building is attractively sited at the town center, making both a recognizable landmark and also a welcoming sense of place for residents and visitors. The landform of the site is gently sloped from front to rear, is open and sunny with no overly large trees. There are a few ornamental trees, and nicely planted and landscaped grounds with shrubs and flowers. A veteran's memorial and flagpole are situated in front of the building.

Parking is adequate. Pavement and striping is in good condition. The parking area was recently re-sealed. There is an awkward vehicular approach pattern to the main parking lot entrance, when driving west on Hanover St., cars entering the parking lot make a short turn and then a left turn across Center St. Consideration should be given to re-designing this driveway layout.

One area needing corrective work is broken concrete sidewalk paving at the locations where the driveway entrances cross over.

ARCHITECTURAL

Exterior:

- Shutters not original
- Missing down spout left of front entrance
- Peeling paint on window sills
- Paint poor- repaint quickly, if lead paint advise removal of lead paint before repainting
- Missing down spout on east side of building
- Threshold too high on south entrance
- Holes in siding, next to south entrance, need to be caulked
- Wiring messy on back of building
- Down spout needs tail piece added
- Concealed pipe left of garage behind gutter, looks bad
- Garage doors has vehicle damage
- Tear in screen
- Need carpentry repairs at soffit at west side
- Missing drainage spout

The front, historic section of the building is in generally good condition. The original wood siding is now covered with horizontal vinyl white siding. Wood trim details are mostly remaining, intact. Paint is in generally good condition, with some spot work needed to maintain the appearance. There are some locations that also need some carpentry repair work, particularly at the undersides of roof edge overhangs, to preserve weathertight conditions and protect decorative features. The shutters on this portion of the building are non-functional, non-historic. It is unknown if the original shutters, removed at the time the vinyl siding was installed, are still available to be re-installed. The appearance of window-mounted and through-wall air-conditioning units detracts from the overall attractiveness of the building.

The exterior of the newer portion of the building is in very good condition, with only minor defects and damaged areas that need repair.

Conditions Assessment — Architectural

Exterior (continued):
Windows in the original historic building have been removed and replaced with new thermally efficient windows. The replacement windows are white vinyl, with 5/8" insulated glass, double-hung, with interior muntins and exterior screens. These windows are easy to operate, appear to be tight against air infiltration, and are in very good condition with many years of useful life remaining.

Windows in the newer addition are of two types. At the lower level in the VNA offices, the windows are the same as the windows in the older historic portion of the building. At the upper level, in administrative offices, etc, the windows are aluminum-framed, fixed glass units over hopper-style operable units, with 3/8" insulating glass. There is some clouding and condensation in some of these windows, indicating that the seals may be starting to weaken. These windows probably have about a 10-year remaining useful life.

Interior:
Lower Level
- Child height toilet, not accessible door, hard to open.
- Uneven pavement and not level at entrance.
- Threshold too high.
- Step access problem.
- Doors does not open from office.
- Non accessible sink by VNA reception.

First Floor:
- Entry sidewalk from West side parking lot is too steep for access.
- Acoustics cause echo in Hearing Room.
- Front door is old wooden door with single-pane glass lites. Hardware is in poor condition. Lock can easily be compromised to allow unauthorized access to building. Door does not secure when a person exits so staff must be alert to push door shut to prevent unauthorized entry.

Second Floor:
- Replace carpet in planning board room.
- Sloping floor in corridor.

Historic Building: Interior finishes are in fair to good condition. Carpeting is starting to show wear in some areas. Painted finishes are in good condition. Doors and windows are in good condition. Plaster wall and ceiling finishes are good, with only very minor hairline cracking noted at a couple of locations.

Addition: Interior finishes in the new addition range from very good in the public spaces, to 'fair' in some of the more heavily used lower level spaces. But even those areas that show more wear and tear are only suffering from heavy use, and are not indicative of any systematic failure of interior finish systems.

Conditions Assessment — Architectural

Structure:
No significant structural issues noted in either building. A question was raised during our site visit about files located on the upper floor of the historic portion of the building, and hairline cracking of wall finishes on the floor below. From careful observation of the existing conditions, and discussion with building staff, we can conclude there is no significant over-stressing of the building frame in this area. The staff in the area of concern was advised to continue to observe the condition, and report to administration if any further widening of the cracks occurs. It is also advisable not to further increase the load in the room above, but we see no need to remove the file cabinets from the upper level room at this time.

Roof:
The roof on both the historic and newer portions of the building is shingled with 3-tab composition shingles. The roof is reported to be fairly new, within the past ten years. The roof is in good condition. Gutters and downspouts need to be secured and maintained in good working condition. There is one section of detached gutter on the rear, east side of the building. This same area of the roof has moss growing at the edges of the shingles, and the gutter is full of leaves. There is a large tree directly adjacent. The cupola at the roof peak was observed through a nearby hatch, and evidence of carpentry deterioration was noted. A closer inspection should be made from a proper working platform and a specification for repairs should be developed and implemented. This portion of the roof leaks during wind-driven rainstorms. Custodial staff has rigged up an ingenious system of capturing leaking water inside the attic to prevent damage to spaces and finishes below, but this condition should be remedied as soon as possible.

Building Code:
No known or observed conditions that would constitute life-safety hazards. No existing citations were reported to the investigations team. The historic portion of the building is entirely wood-frame construction, Type V. The newer portion of the building is assumed to be Type III-B.

Accessibility:
- Front door not accessible, 6" step at doors
- Five steps up from driveway may create accessibility issue
- Non-accessible bathroom, ½ toilet under stairs
- Non accessible bathrooms on 2nd floor
- Egress barrier at west walkway, no ramp (step creates barrier)
- Parking needs to be striped and sealed
- Concrete ramp not accessible, too steep and threshold too high

There are a few minor deficiencies. The most significant issue is that the main building entrances and exits are non-accessible. Although an alternative accessible entrance is provided, the objective of the Americans with Disabilities Act is to provide equal services to all persons, and includes making the entry route for disabled persons to be the same as the entry route for all persons wherever possible. Although the topography of the site does present some challenges, it is feasible to construct exterior routes of travel that are properly designed for accessibility, to each of the three main public access doors on the building, including the historic front entrance.
It should be noted that the elevator is in good condition, and the controls appear to be suitable for accessibility.

Conditions Assessment — Architectural

Energy & Environmental Sustainability:
Alternatives should be explored to the through-window and through-wall A/C units. Existing pneu matic heating controls are aging, and should be replaced with a centralized, digital energy management system. Such a system would allow for single point control and monitoring of energy use, which is likely to result in significant operational savings.
The building envelope should be tested for air infiltration using a negative pressure test, and any air leakage should be addressed appropriately.

Hazardous Materials:
There are no known hazardous materials. Lead paint should be suspected in the older portion of the building. For any future work that might disturb painted surfaces, lead testing should be carried out, and protocols should be used to prevent lead dust from being released.

Historical Value:
This facility is individually listed as an historic building, and is located within the Historic District. It is an attractive period building in the American Colonial Federal Style, with classical wood detailing at the entrance columns, doorway, windows, cornices and dentiled soffits. Consideration should be given to a complete historic renovation of this building, restoring the fabric of the existing wood siding, and replacing operable window shutters and other missing elements. This restoration should be done in accordance with the Secretary of the Interior's Standards for Historic Preservation. The paint color scheme should also be reconsidered for historical accuracy, as the original building is evidenced in historic photographs as being much more colorfully painted than the current all-white appearance.

Other Issues:
None.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

EXISTING PLUMBING UTILITIES:

- Existing Domestic Water Service: The existing building is currently served by a 2" domestic water service which enters in the basement of the building. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the buildings domestic water needs. The water distribution system is original to the building and/or each subsequent addition/renovation.
- Existing Natural Gas Service: There is currently a natural gas service to the building serving the boilers and generator. This service enters the side of the building into the basement boiler room area.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

- Existing Sanitary Service: The building's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the facility. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building
- and running to the buildings sanitary waste system.
- Fuel Oil: There is currently no on site fuel storage.

PLUMBING FIXTURES AND SPECIALTIES:

Existing plumbing fixtures are as follows:

- Water closets are a mix of wall mounted and floor mounted tank type; wall mounted units are provided with flush valves, all units are vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung vitreous china. Faucets are a combination of single lever handle and two lever handles.
- Janitor's mop sinks are wall mounted basins with 2-faucets and vacuum breakers. These basins are in good condition.

DOMESTIC HOT WATER SYSTEMS:

Existing Domestic Hot Water System:

- The buildings domestic hot water is generated by 2- 40 gallon electric water heaters which feed all the buildings hot water needs. The water heaters are in good condition.

FIRE PROTECTION SERVICE

- There is full fire protection sprinkler coverage currently at the facility. This service enters the building in the basement at the boiler room and includes valves as well as a full Fire alarm monitoring system. One concern reported by building personnel was that the dry sprinkler system utilizes the compressor for the building's HVAC pneumatic control system rather than a compressor dedicated to the sprinkler system. This should be corrected. The entire system is a dry-pipe system.

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

The existing building is heated by two hot water boilers. The two boilers are both gas fired manufactured by Weil McClain. One unit, rated at 780 MBH, is about 10 years old. It serves the older front section of the building and is in good condition. The second boiler is rated 626 MBH and is approximately 34 years old. It serves the newer rear section of the building and is in fair condition. The older boiler should be replaced as its life expectancy is being approached.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems (continued):

- The present Heating and Ventilating systems consist of finned tube radiation throughout, unit ventilators in some of the smaller areas of the newer rear section of the building and exhaust systems. The heating room is served by a newer closet-mounted HVAC unit which includes an indoor closet-mounted ventilation unit with hot water coil for heating and an outdoor condensing unit for cooling. Some areas included air conditioning such as the office area which was noted to be served by a small individual split system A/C and others with thru-the-wall A/C units. Mechanical equipment is located primarily on exterior walls and in various indoor mechanical spaces within the building.
- Unit Ventilators in some office areas were noted to be McQuay units providing heating and cooling via hot water coils and exterior ground mounted condeners. These units appeared newer and to be in good condition.
- A number of exterior doors are heated via ceiling mounted heating units which appeared to be older and should be checked for proper operation.
- The existing temperature controls in the building are pneumatic. The temperature control system air compressor is located in the Boiler Room and includes an air dryer and appears to be in good condition. Pneumatic tubing associated with the controls system have been failing at the connections to various units and should be replaced.
- Some thru-the-wall/window AC units exist in select small office areas.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 208/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 400 amps. The service equipment is located in the basement of the building. The service equipment is in good/fair condition. Older style 'knob & tube' wiring was observed in the attic level of the historic portion of the building and should be replaced due to its possible degrading from age and heat exposure.
- There are a number of electrical panels located throughout the facility. These panel boards all are a mix of new and old having been added at the time of various building additions and/or on an as-needed basis. The condition of these panelboards range from good to poor. The majority of the panelboards do not have spare circuit breakers available for new circuits to be added, or have space to add new circuit breakers.
- The lighting throughout the facility consists primarily of 1' x 4', 2-lamp wraparound fluorescent fixtures and some 2' x 4' acrylic lens troffers. The lighting throughout the facility is in good condition. The existing 2' x 4' fixtures are older and should be replaced. The light levels appear to be within recommended levels.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems (continued):

- The fire alarm system is a Simplex main FACP the system appears to be in good condition however the signal devices throughout are older and should be replaced with ADA compliant devices.
- Site lighting is minimal. There is one building-mounted wall pack at the rear and four free-standing poles on the west side walks.
- There exists a Winco exterior natural gas fired standby generator that serves the facility. The unit is complete with indoor automatic transfer switch and distribution panel. The Transfer switch is in poor condition and should be replaced. The generator currently powers emergency lighting, one boiler and associated pumps, and some computer related power.
- Life safety emergency lighting is provided via a combination of lighting fixtures wired to the generator and emergency battery units with unit mounted emergency light heads units. Battery units appear to be in good condition, we were however unable to test the lighting connected to the emergency generator.
- There is currently no controlled access or security system located in the facility, however the desire for one was expressed.

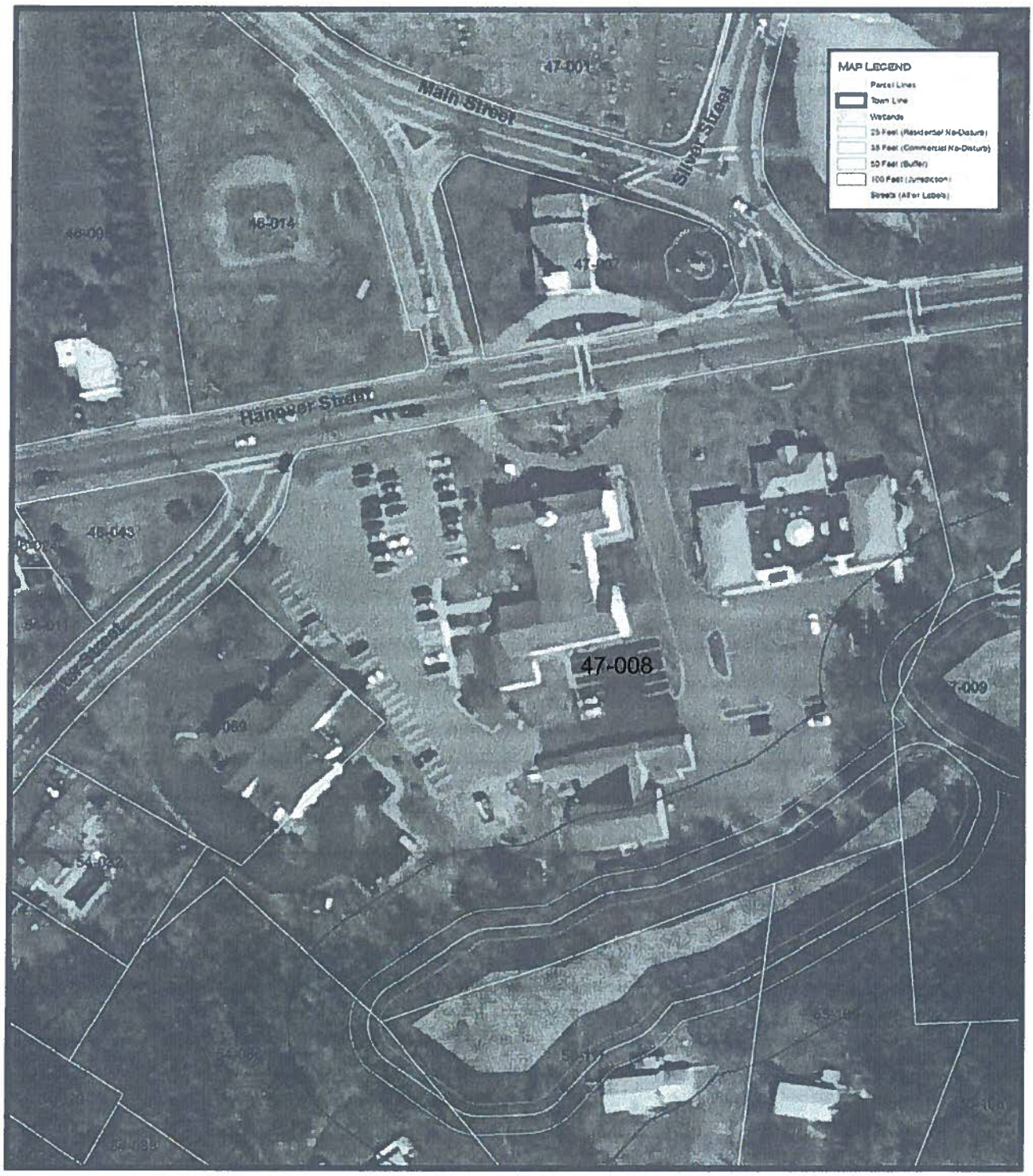
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building to as recent as 3-5 years old. Some equipment such as the older boiler and the pneumatic control system tubing have reached their life expectancy and should be replaced in order to improve the reliability, efficiency and to cut down on the operational and maintenance costs associated with the heating system.

Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on toilets, urinals and sinks to automatic units should be implemented as a water conservation measure. Sprinkler system should have a dedicated air compressor installed for the dry system (including fire alarm system monitoring flow switch.)

The Electrical systems appear to be in good condition and operating without issues. The older distribution equipment (panelboards) should be replaced with newer equipment with additional breaker spaces to meet any future needs and to alleviate the possibility of overloading individual circuits when new equipment and or devices are added to existing circuitry. The lighting systems are newer and in good condition with the exception of the older 2' x 4' fixtures which should be replaced. The addition of automated lighting controls should be implemented in order to meet current energy codes and to save on energy costs. Fire alarm system is older and should be replaced/upgraded to an ADA compliant system. Emergency power generation and exit lighting systems are newer and appear to be in good condition. A security and control access system should be added.

AERIAL PHOTO



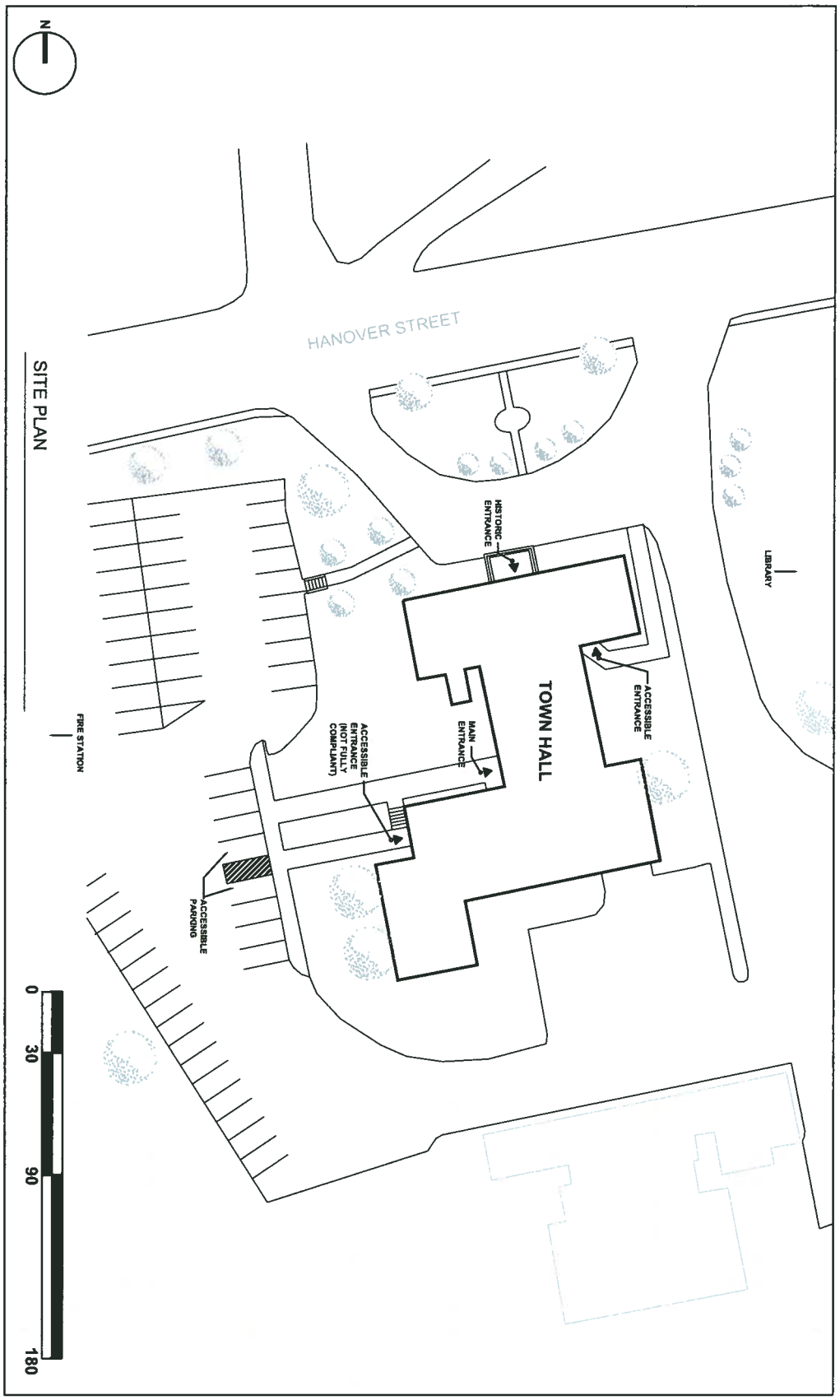
HANOVER GIS
TOWN OF HANOVER
PLANNING DEPARTMENT

NOTES & SOURCES:
The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. This map was created using The Town of Hanover ArcReader 9.3 GIS Viewer. For more information contact Andrew R. Port, Town Planner for the Town of Hanover, at (781) 826-7941. Photogrammetric & adhoc data and GIS coverages provided by Environmental Partners Group (EPG) in 2004. Initial source data provided by the Assessors Department and Department of Public Works. Additional layers were created by MassGIS and the Town Planner in 2004-2011.

0 50 100 200 Feet
0 0.005 0.01 0.02 Miles

Town Hall is the building in the center of the photo, labeled 47-008.
(Source: Hanover GIS)

SITE PLAN



D·R·A

Drummey Rosane Anderson Inc.
Architecture
Interior Design

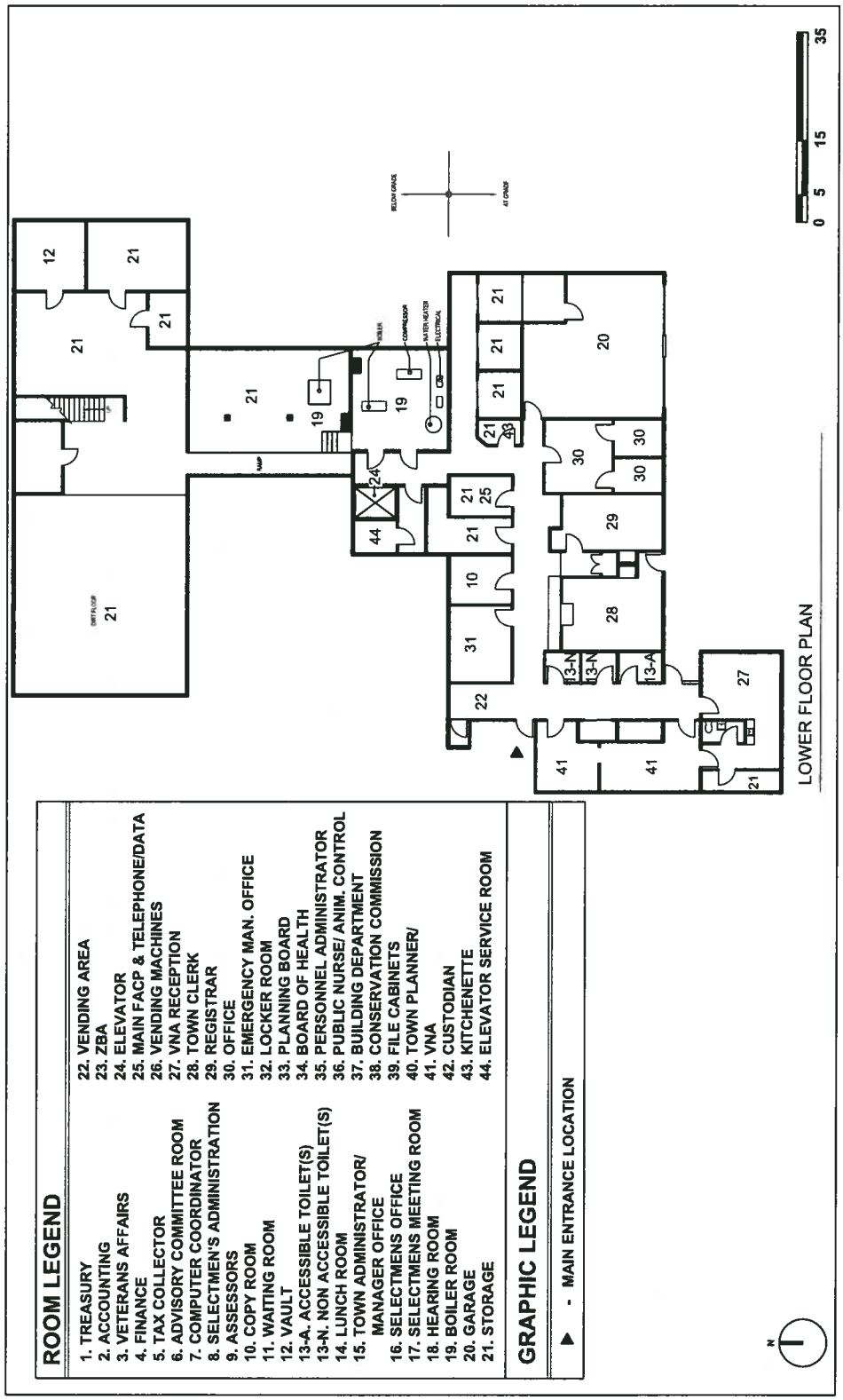
Colby Hall
141 Herrick Road
Newton Centre, MA
02459

617-964-1700
617-969-9054 fax

TOWN HALL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: CHM
Job# 09017.00

FLOOR PLANS



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TOWN BUILDING STUDY
Hanover, Massachusetts

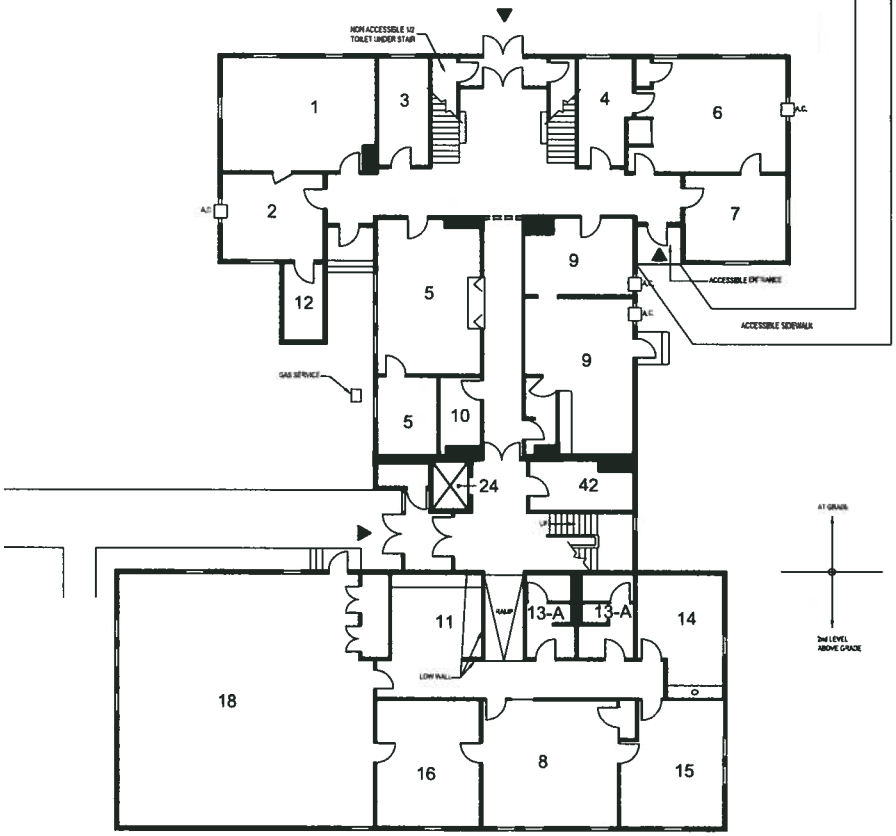
Scale: SEE BAR SCALE
Drawn by: CHM
Job# 09017.00

ROOM LEGEND

1. TREASURY
2. ACCOUNTING
3. VETERANS AFFAIRS
4. FINANCE
5. TAX COLLECTOR
6. ADVISORY COMMITTEE ROOM
7. COMPUTER COORDINATOR
8. SELECTMEN'S ADMINISTRATION
9. ASSESSORS
10. COPY ROOM
11. WAITING ROOM
12. VAULT
13-A. ACCESSIBLE TOILET(S)
13-N. NON ACCESSIBLE TOILET(S)
14. LUNCH ROOM
15. TOWN ADMINISTRATOR/ MANAGER OFFICE
16. SELECTMENS OFFICE
17. SELECTMENS MEETING ROOM
18. HEARING ROOM
19. BOILER ROOM
20. GARAGE
21. STORAGE
22. VENDING AREA
23. ZBA
24. ELEVATOR
25. MAIN FACP & TELEPHONE/DATA
26. VENDING MACHINES
27. VNA RECEPTION
28. TOWN CLERK
29. REGISTRAR
30. OFFICE
31. EMERGENCY MAN. OFFICE
32. LOCKER ROOM
33. PLANNING BOARD
34. BOARD OF HEALTH
35. PERSONNEL ADMINISTRATOR
36. PUBLIC NURSE/ ANIM. CONTROL
37. BUILDING DEPARTMENT
38. CONSERVATION COMMISSION
39. FILE CABINETS
40. TOWN PLANNER/
41. VNA
42. CUSTODIAN
43. KITCHENETTE
44. ELEVATOR SERVICE ROOM

GRAPHIC LEGEND

▶ - MAIN ENTRANCE LOCATION



N

FIRST FLOOR PLAN

0 5 15 35

FLOOR PLANS

D·R·A

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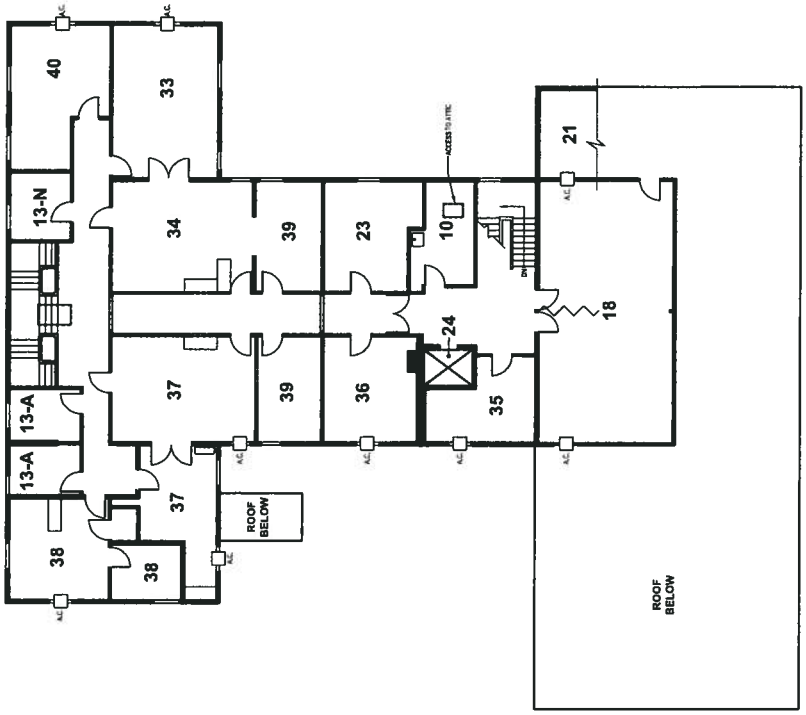
TOWN HALL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCAI
Drawn by: CH
Job# 09017.(

FLOOR PLANS



SECOND FLOOR PLAN

0 5 15 35

ROOM LEGEND

1. TREASURY
2. ACCOUNTING
3. VETERANS AFFAIRS
4. FINANCE
5. TAX COLLECTOR
6. ADVISORY COMMITTEE ROOM
7. COMPUTER COORDINATOR
8. SELECTMEN'S ADMINISTRATION
9. ASSESSORS
10. COPY ROOM
11. WAITING ROOM
12. VAULT
13-A. ACCESSIBLE TOILET(S)
13-N. NON ACCESSIBLE TOILET(S)
14. LUNCH ROOM
15. TOWN ADMINISTRATOR/ MANAGER OFFICE
16. SELECTMENS OFFICE
17. SELECTMENS MEETING ROOM
18. HEARING ROOM
19. BOILER ROOM
20. GARAGE
21. STORAGE
22. VENDING AREA
23. ZBA
24. ELEVATOR
25. MAIN FACP & TELEPHONE/DATA
26. VENDING MACHINES
27. VNA RECEPTION
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29. REGISTRAR
30. OFFICE
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35. PERSONNEL ADMINISTRATOR
36. PUBLIC NURSE/ ANIM. CONTROL
37. BUILDING DEPARTMENT
38. CONSERVATION COMMISSION
39. FILE CABINETS
40. TOWN PLANNER/
41. VNA
42. CUSTODIAN
43. KITCHENETTE
44. ELEVATOR SERVICE ROOM

GRAPHIC LEGEND

▶ - MAIN ENTRANCE LOCATION

N

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Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: CHM
Job# 09017.00

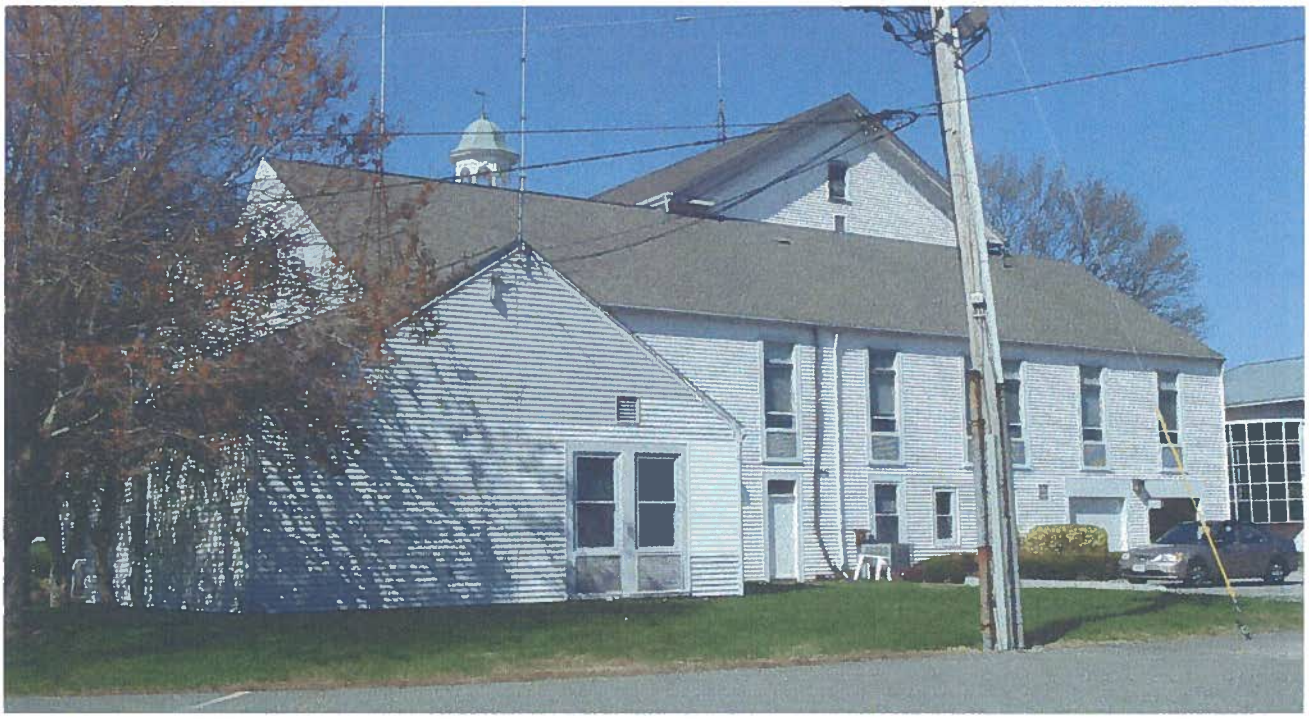
EXTERIOR PHOTOS

Historic Photo.

Exterior view of front facade.

View of side entrance at west facade; ramp is too steep for disabled access.

Basement level public entrance and accessible parking (west side).



Exterior view of rear facade.

View of southeast corner, accessible building entrance at right side of photo.

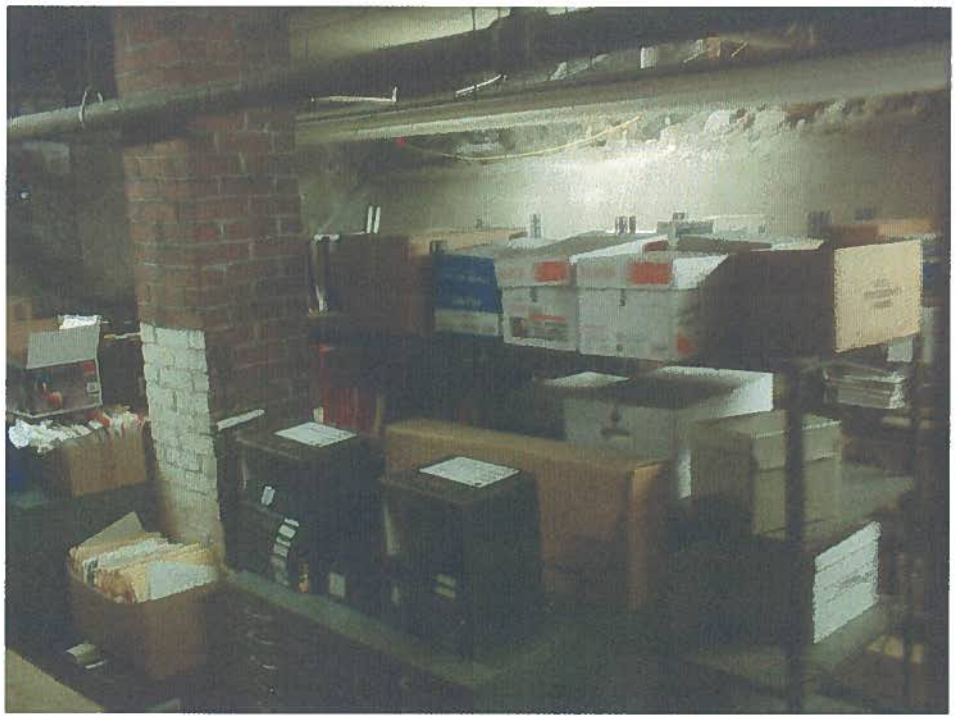
Non-compliant entrance at lower level.
Public entrance has issues; threshold too high, pavement has deep grooves and is not level.

INTERIOR PHOTOS

Hearing room, acoustical issues (echoes and fan noise)

Service counter at Tax Department; non-accessible, too high, no knee space. Others are similar.

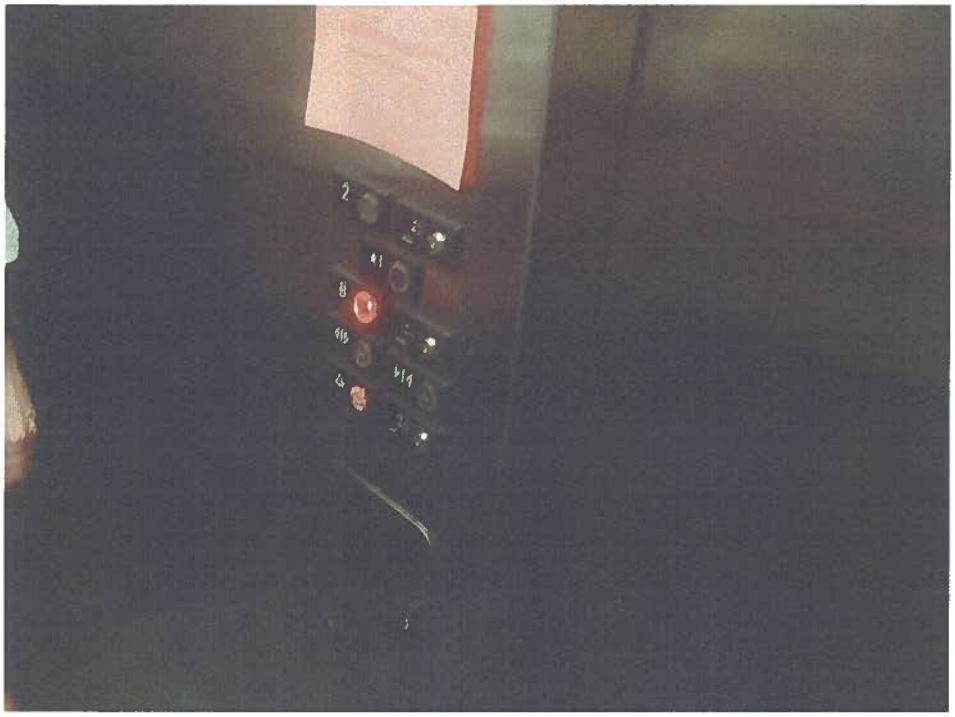
Plans storage in attic space; 2nd floor.
Overloaded roof trusses.



Basement level records area; boiler room.

Non-accessible toilet at VNA office area.

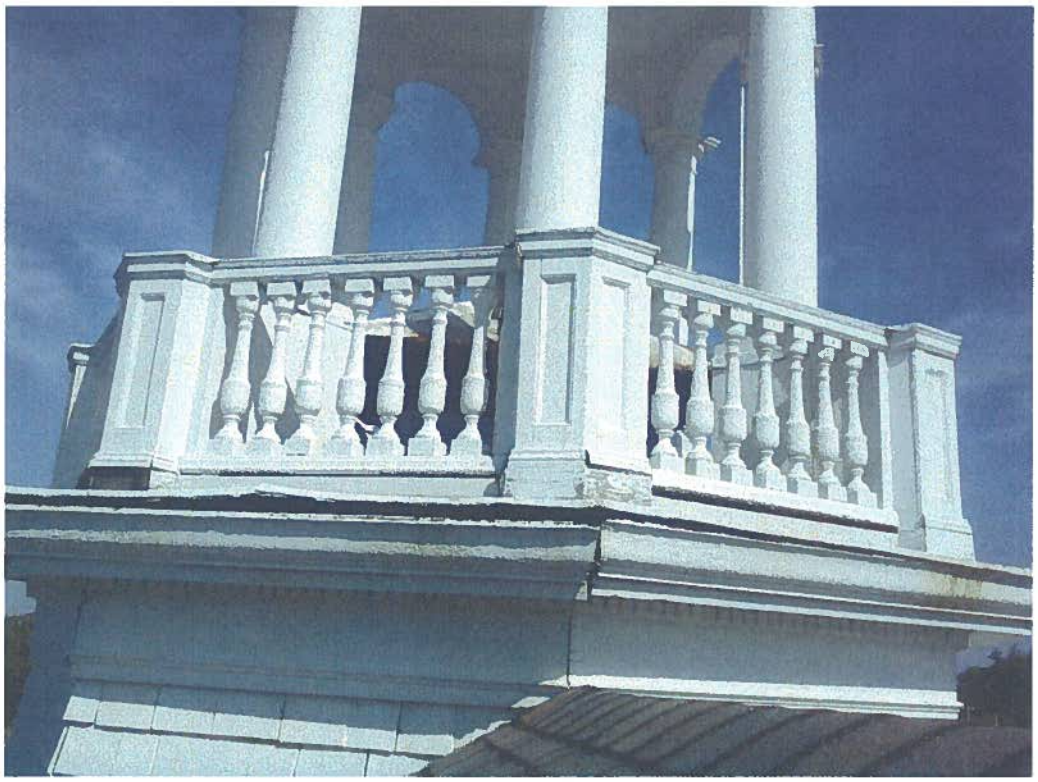
Cells at lower level (former police station; now storage).
Locks need to be deactivated; location of key unknown.



Elevator controls meet access regulations

Non-compliant handrail at ramp; no handrail on opposite wall.

Men's room near Town Manager's office. Urinal mounted too high.



Cuppola conditions.

Section 15 - CURTIS FREE LIBRARY

Locus Map - Town of Hanover

Building Summary

Address: 534 Hanover St.
Gross Area: 17,195 sq. ft.
Description of Site: Open site with grass lawn on the front (north) side, and parking to the rear (south). Wooded area to east. Historic Stetson House is the next property to the east, and the Town Hall is adjacent to the west.
Description of Building: Original building constructed in 1907, and was designed by Edmund Sylvester. A large new addition was constructed in 2002; creating an elegant new building that is a well-utilized focal point for the community. The historic portion of the building is at the front, with the new larger addition to the rear; the main public entrance is now from the rear of the building, where the parking is located. The front original building is a classically styled brick and wood building; the brick and wood is carried around the sides of the new addition, where the building transforms into a contemporary metal panel style at the rear.

Function of Facility: Public Library.
Agency or Department: Library Trustees
Technical Construction Description: Original historic structure is brick masonry construction on a stone foundation, with plaster interior finishes. New building addition is founded on poured in place concrete, with a steel frame and light gauge steel backup for exterior masonry, stone and metal panel finishes. Appears to be Construction Type III A.
Valuation: $1,564,659.00 (estimated replacement cost from Town Records)
(valuation seems to be well below actual replacement costs)

Immediate Needs:

- Water test leaks at central skylight, to determine source, and prepare specifications for repairs.
- Water test, and conduct 'pull tests' on sealants at south wall windows, to determine source of occasional leaks. Prepare specifications for repairs.
- Replace missing slate tiles on roof of historic building (few).
- Install security system with video cameras.
- Investigate exhaust system for elevator shaft, which Owner reports 'was never wired'.
- Install sealant at joint between new and old structures, at foundation.
- Repair cracks in retaining wall.
- Remove organic growth from foundation walls at certain small areas.
- Small areas of brick masonry need pointing.
- General paint and carpentry repairs needed on eaves and soffits at some locations on the historic building, including to the east of the front entrance; there are two missing dentils near the entrance.
- Repair split in copper gutter, and check downspouts.

Building Summary (continued)

Near Term Needs:
General on-going normal building maintenance, following completion of work noted above under 'immediate needs'.

Conditions Summary:
The original historic library building is towards the front, with a large contemporary addition on the rear. The building is in very good condition overall. The historic building has a slate roof, with no reports of leaking. The new addition has a combination of hipped standing seam metal roofs on the sides, with a flat membrane roof in the middle. There has been some leaking during storms around the central skylight in the flat roof section. The exterior wall systems and windows are in good condition. The foundations are in good condition. The interior of the building is in excellent condition. The overall accessibility of the building is very good.

Recommendation:
This building needs only general ongoing maintenance, in addition to the items of work noted as 'immediate needs', above.

Conditions Assessment

Site/Architectural

SITE

Adjacent to Town Hall, this building is attractively sited at the town center, making both a recognizable landmark and also a welcoming sense of place for residents and visitors. The landform of the site is gently sloped from front to rear, is open and sunny with no overly large trees. There are a few ornamental trees, and nicely planted and landscaped grounds with shrubs and flowers. A gracefully curved brick walkway leads to the historic entrance, which is no longer active. Parking is adequate. Pavement, curbs and striping are in good condition.
There are two very contemporarily styled pole light fixtures flanking the historic entrance, made of black metal. These lights appear to be out of place on this side of the building, and would be more appropriate at the rear, with more traditionally styled lights at this location.

ARCHITECTURAL

Exterior:
The Historic Building is in generally good condition. The brick masonry is in good condition, with only a few localized areas that need to be re-pointed with new mortar. The original wood Palladian windows are in surprisingly good condition. Paint is in generally good condition, with some spot work needed to maintain the appearance. There are some locations that also need some carpentry repair work, particularly at the undersides of roof overhangs, to preserve weather-tight conditions and protect decorative features.

The exterior of the newer portion of the building is in excellent condition overall. There is mixture of brick, cut stone veneer, and metal panels as exterior finishes, combined with an aluminum window curtainwall system. All of these elements are in good condition. The owner has reported two problems with the exterior envelope: 1) occasional leaking at the main central skylight (roof), and 2) occasional leaking at only a few location of the metal window system, in the area of the building with metal siding. Examination of the exterior of the building in this area indicates that there have been at least two or three separate attempts to seal the joints in the metal panel system, and at joint abutting the windows. The Owner reports that they believe the sealant at the panels was done on a cold day at the time of the original construction, and it failed to set properly and failed to bond with the adjacent metals.

Interior:
The interior of the building is in excellent condition in all areas. No deficiencies noted. The historic woodwork in the older portion of the building is in good condition. There is some limited damage to gypsum board finishes, due to moisture, at the window surrounds on the south wall.

Structural: No significant structural issues noted in either building.

Roof:
The roof on the historic portion of the building is slate, and appears to be in good condition. No leaking was reported or observed in this area of the building, but the Owner reports that some slates are missing. (not observed during our visit.)

The roof of the addition has both ribbed metal pitched (hip) roofs, and a central flat membrane roof. The hipped metal roofs have an unusual flat perimeter detail, but this has not apparently caused any problems with weather tightness. The type of membrane installed on the flat roof area was not observed for this report. There have been leaks around the main central skylight, in wind-driven storm conditions. The owner reports that this has been repaired at least twice since the building opened, and that it not entirely clear if the most recent repair successfully fixed the problem, or if it is still leaking.

Conditions Assessment — Architectural

Building Code:
No observed conditions that would constitute life-safety hazards. No existing citations were reported to the investigations team. The historic portion of the building was constructed in a manner that appears to be equivalent to Type II-A per today's code. The newer portion of the building is assumed to be Type II-A.

Accessibility:
The building appears to be properly accessible, including the path from the public parking areas, entrance, elevator, and toilets and drinking fountain. No issues observed.

Energy & Environmental Sustainability:
Very up-to-date mechanical, electrical and controls systems, in good operating condition. The only item noted by the Engineers with regard to energy savings, is to install automatic controls on the lights in some areas to turn-off lights when there is adequate daylighting in that area, and / or when there is nobody working in the area (offices).

Hazardous Materials:
There are no known hazardous materials. Lead paint could possibly still be found in some areas in the older portion of the building, but the extent of the renovations made 8 years ago indicates that it is possible that all of these materials were already removed. For any future work that disturbs painted surfaces, lead testing should be carried out, and protocols should be used to prevent lead dust from being released.

Historical Value:
The front (original) building is considered to be an historic structure, and is located within the Historic District. It is an attractive period building in a classical Palladian Style, with classical wood detailing at the entrance columns, doorway, windows, cornices and dentiled soffits. The building has had a recent complete historic renovation, which appears to have been completed in accordance with the Secretary of Interior Standards for Historic Preservation.

Other Issues:
None.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

Plumbing Utilities:

- Existing Domestic Water Service: The existing building is currently served by a 2" domestic water service which enters the water service room located at the rear of the building and has an exterior only entry. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the buildings domestic water needs. The water distribution system is original to the building.
- Existing Natural Gas Service: There is currently a natural gas service to the building which serves the boiler.
- Existing Sanitary Service: The buildings sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the facility. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- Fuel Oil: There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:

- Water closets are wall mounted; with flush valves, vitreous china.
- Urinals are wall mounted vitreous china, with flush valves.
- Lavatories are wall hung vitreous china. Faucets are two lever handle type.

Domestic Hot Water Systems:

- The libraries domestic hot water is generated by an 80 gallon electric fired water heater which feeds all the buildings hot water needs. The water heater is in very good condition.

Fire Protection Service:

- There is full fire protection coverage (sprinklers) currently at the facility. This service enters the building in the water service room located at the rear of the building. This service includes all backflow prevention devices and valves as well as Fire alarm system monitoring. This system is a dry system and includes a dedicated air compressor and fire alarm system monitoring.

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems (continued):

EXISTING MECHANICAL SYSTEMS:

- The existing building is heated by a hot water boiler. The hot water boiler is a Smith with burner currently operating on Natural gas and a capacity of 1082 MBH. This equipment is original to the facility approximately 8 years old and in very good condition.
- The present HVAC systems consist of finned tube radiation, indoor air handlers and central air conditioning units. All units are original to the building and in very good condition. Air conditioning is supplied via DX cooling. Mechanical equipment is located primarily on exterior walls and in various indoor mechanical spaces within the building.
- The existing temperature controls in the library are by Honeywell. The electronic temperature controls system is original to the building and in very good condition.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS:

- The building is served by a 208/120volts, 3-phase, 4-wire electrical service; capacity was noted as being rated 1200 amps. The service equipment switchboard is located on the ground level of the building. The service equipment is in very good condition.
- There are a number of electrical panels located throughout the facility. These panel boards are original to the building and in very good condition.
- The lighting throughout the facility consists primarily of recess mounted 2' x 2'-T8 fluorescent fixtures, fluorescent down lights, 4' pendent mounted direct/indirect fluorescents and a large quantity of incandescent track lights. The lighting throughout the facility is in good condition. Consideration should be given to replace some or all of the incandescent track lights in order to cut down on operating and lamp replacement costs. Automatic lighting controls should be implemented as an energy saving measure in offices and those areas where it is deemed appropriate. The light levels appear to be within recommended levels. It was noted by operations personnel that the lighting level in the two front reading rooms currently lit by chandeliers is insufficient and should be supplemented.
- The fire alarm system is an Edwards addressable main FACP and is original to the building and in very good condition. There are manual fire alarm pull stations, ADA compliant horn strobes and duct smoke detectors located throughout the building. Heat and smoke detectors are located in select areas throughout the building for detection and alarm.
- Site lighting is accomplished via building mounted lights, pole mounted fixtures and Bollards.
- Life safety emergency lighting is provided via emergency light heads powered by a central battery pack located in the boiler room. Emergency light heads units are newer and in good condition.
- Emergency exit lighting is provided via battery powered exit signs and is in very good condition.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

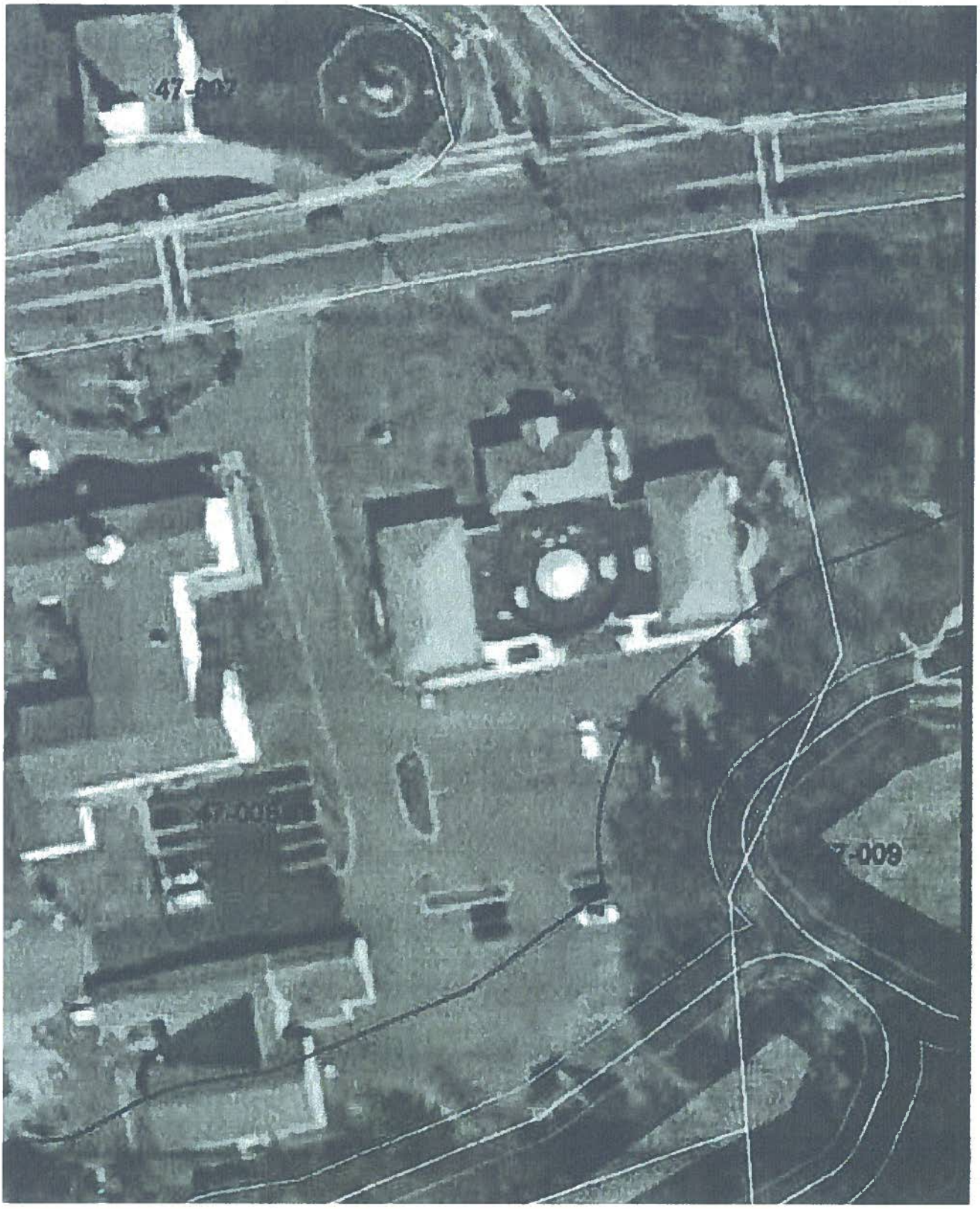
MEP SYSTEMS CONCLUSION

In general, most of the systems are original to the building (8 years old), and in very good physical and operating condition.

Plumbing systems throughout seem to be in good physical and working condition. Replacement of faucets and flush valves on toilets and urinals to automatic units should be implemented as a water conservation measure.

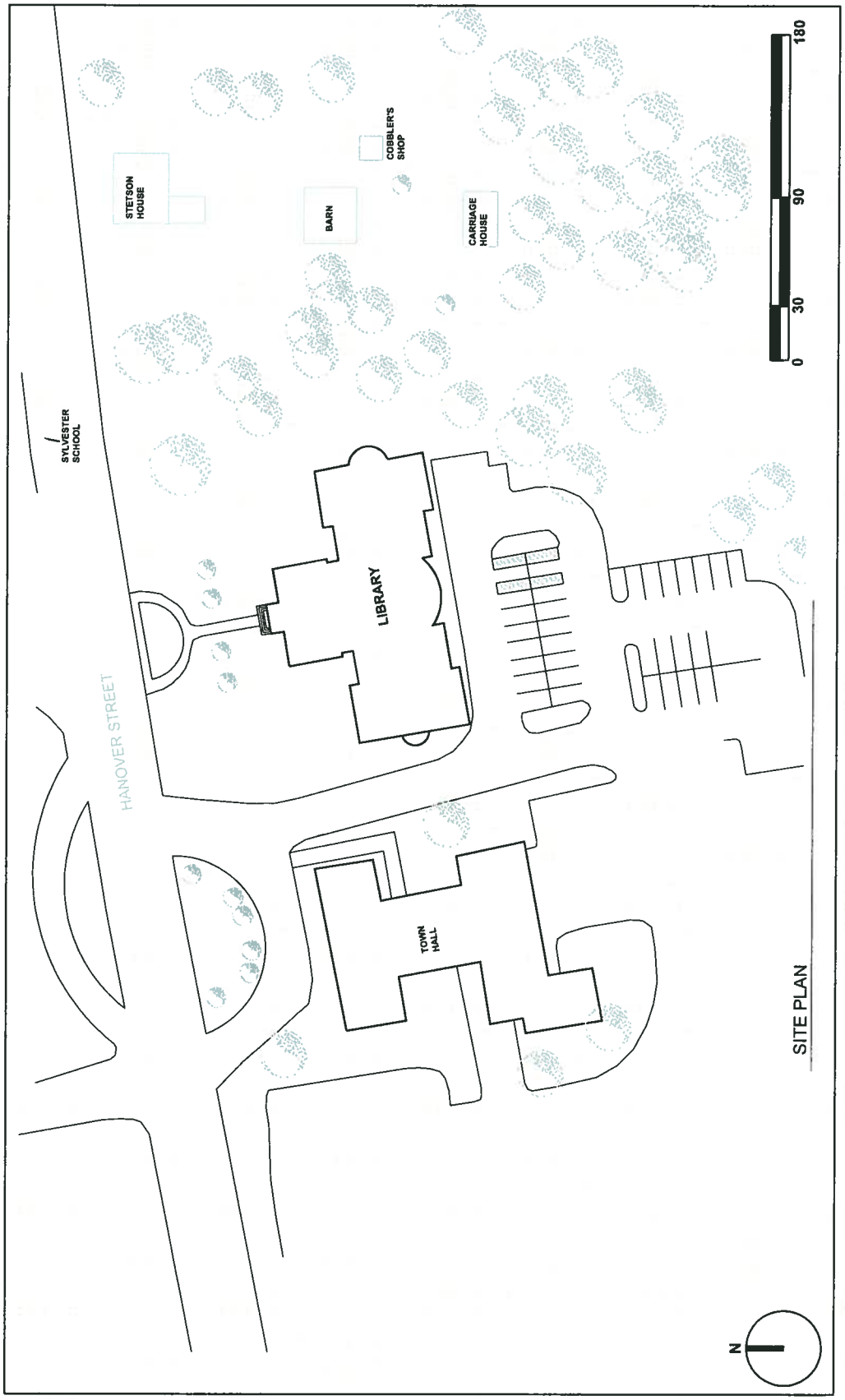
The Electrical systems appear to be in very good condition and operating without issues. The lighting systems are newer and in good condition, the addition of automated lighting controls in the office areas should be implemented in order to meet current energy codes and to save on energy costs. Existing incandescent track lighting should be replaced in order to cut energy costs and re-lamping costs. Fire alarm system, emergency lighting and exit lighting systems are newer and appear to be in very good condition.

AERIAL PHOTO



The John Curtis Free Library is the building in the center of the photo.
(Source: Hanover GIS)

SITE PLAN



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Drummey Rosane Anderson Inc.
Architecture Interior Design

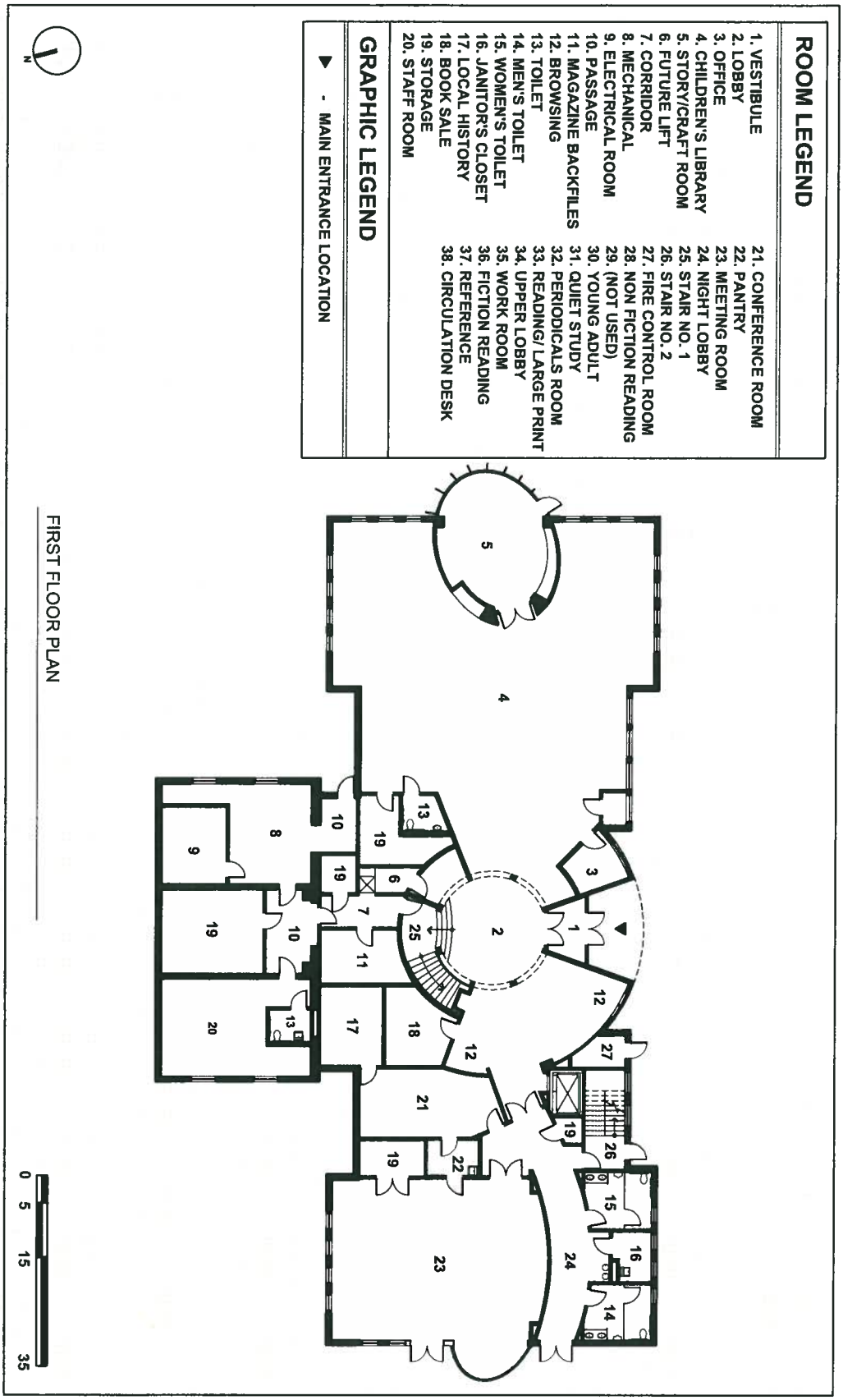
Colby Hall
141 Herrick Road
Newton Centre, MA
02459

617-964-1700
617-969-9054 fax

JOHN CURTIS FREE LIBRARY
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLANS



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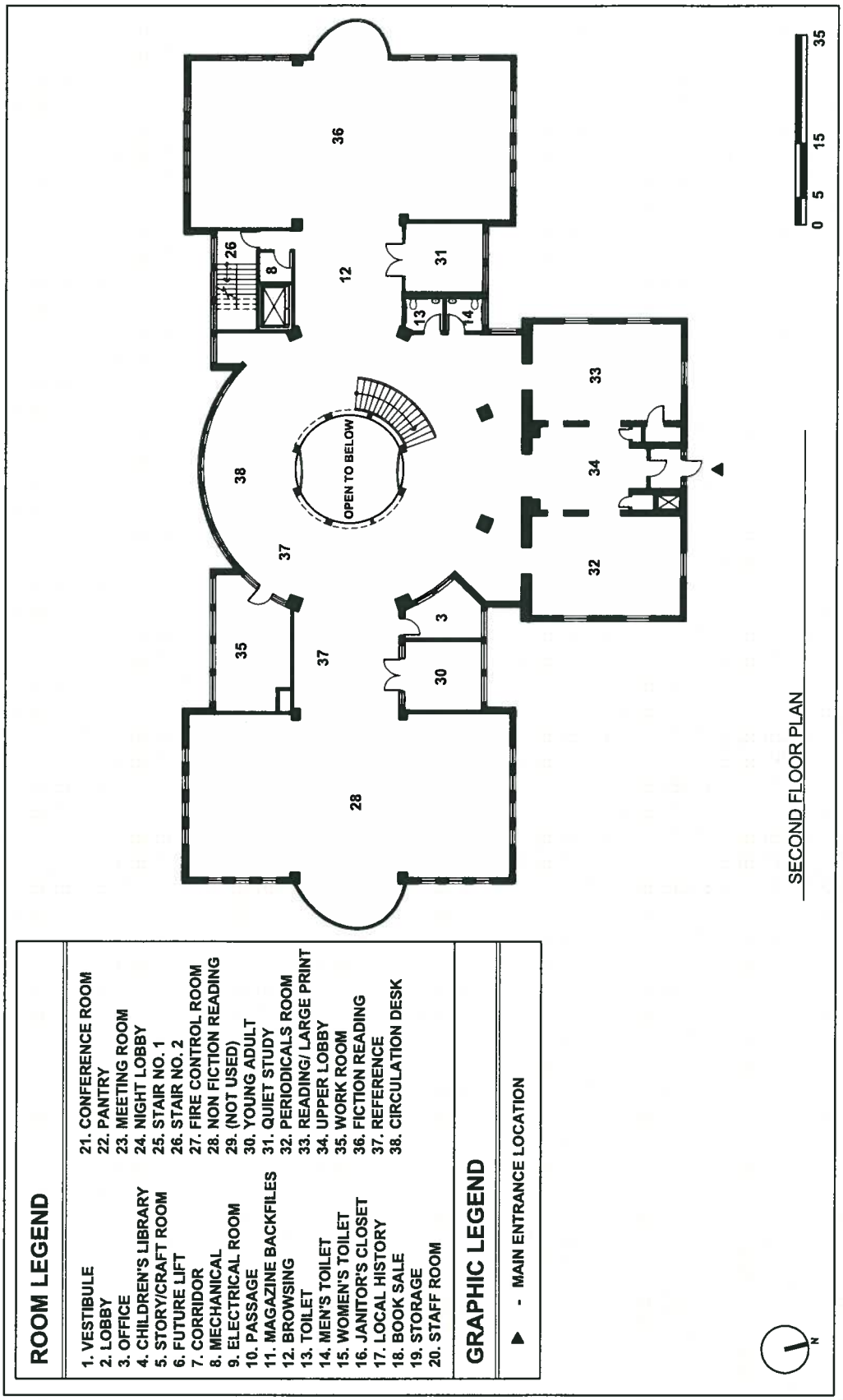
ROOM LEGEND
1. VESTIBULE
2. LOBBY
3. OFFICE
4. CHILDREN'S LIBRARY
5. STORY/CRAFT ROOM
6. FUTURE LIFT
7. CORRIDOR
8. MECHANICAL
9. ELECTRICAL ROOM
10. PASSAGE
11. MAGAZINE BACKFILES
12. BROWSING
13. TOILET
14. MEN'S TOILET
15. WOMEN'S TOILET
16. JANITOR'S CLOSET
17. LOCAL HISTORY
18. BOOK SALE
19. STORAGE
20. STAFF ROOM
21. CONFERENCE ROOM
22. PANTRY
23. MEETING ROOM
24. NIGHT LOBBY
25. STAIR NO. 1
26. STAIR NO. 2
27. FIRE CONTROL ROOM
28. NON FICTION READING
29. (NOT USED)
30. YOUNG ADULT
31. QUIET STUDY
32. PERIODICALS ROOM
33. READING/ LARGE PRINT
34. UPPER LOBBY
35. WORK ROOM
36. FICTION READING
37. REFERENCE
38. CIRCULATION DESK
GRAPHIC LEGEND
- MAIN ENTRANCE LOCATION
OPEN TO BELOW
SECOND FLOOR PLAN
0 5 15 35
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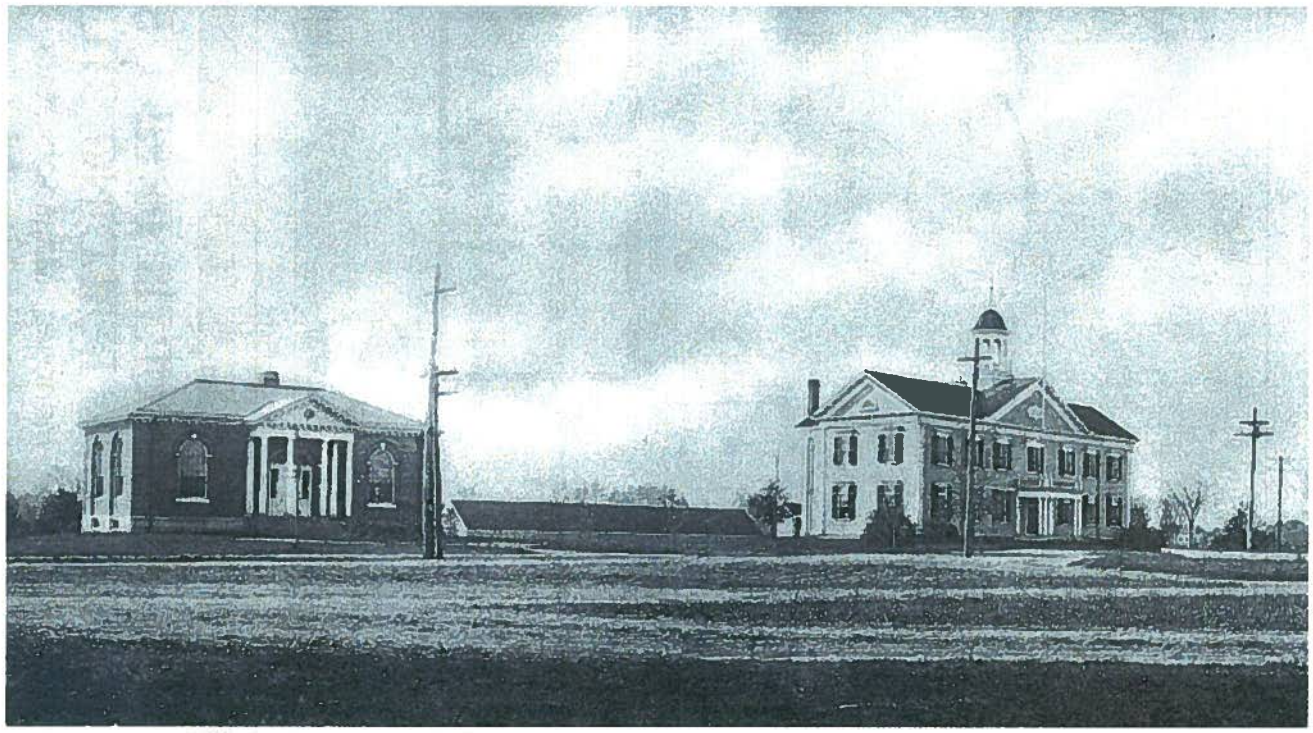


Historic Photograph of Curtis Hall and the Town Hall.

EXTERIOR PHOTOS

Complete exterior view of library.

Exterior, entrance of original library.

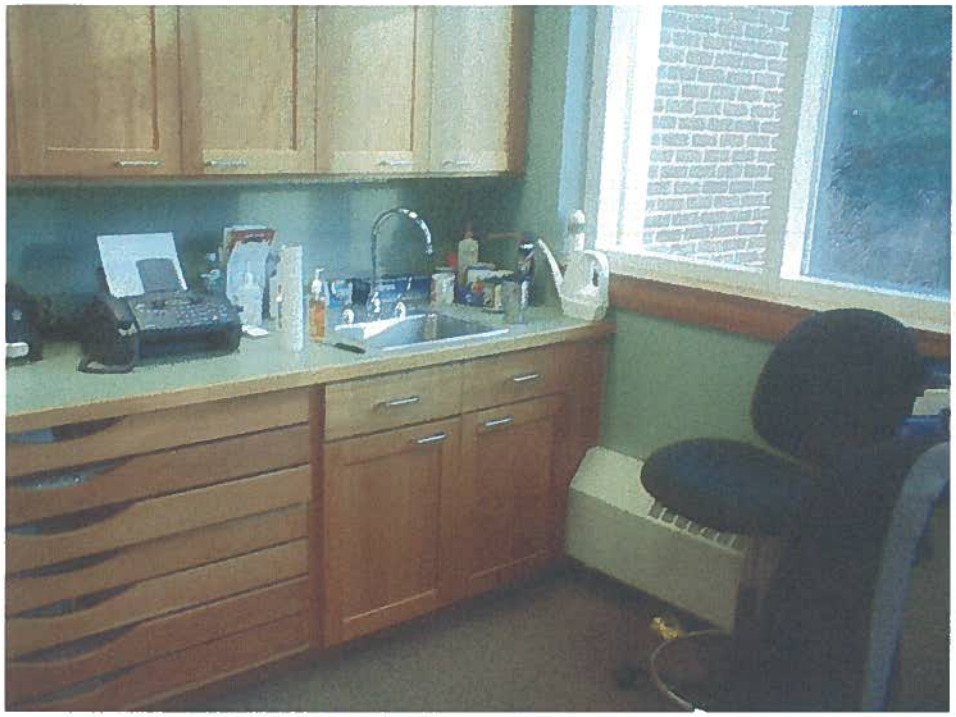
Exterior detailed view of left side of front facade (North Side).

View of rear addition, location of main public entrance.

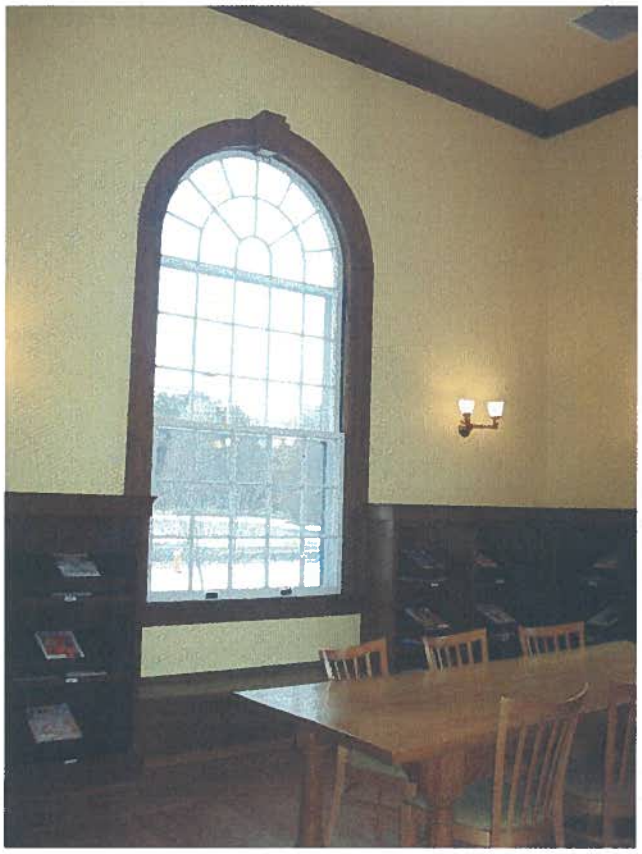
Detailed view of metal panels; leaks at windows in this area.

INTERIOR PHOTOS

Entrance lobby at historic portion of library.



Office with non-accessible sink.



Interior view of reading room on second floor.

Detail at window damage.

Section 16 - STETSON HOUSE

Locus Map - Town of Hanover

Building Summary

Address: 514 Hanover St.
Gross Area: 2,854 sq. ft.
Description of Site: Rolling wooded site with lawn areas around house, barn and other outbuildings to rear. Large trees. Gravel parking area is very small.
Description of Building: A fully restored colonial era homestead, in excellent condition. Part of the National Register Historic District. This is the only building in the town which is individually listed on the National Register of Historic Places.
Function of Facility: Historic Home - Open to the Public.
Agency or Department: Stetson House Trustees and Town of Hanover Historic Commission
Technical Construction Description: Wood frame on stone foundations. Two story with partial basement.
Valuation: $173,258 house; $17,667 outbuildings

Immediate Needs:
- Repair stairs to basement under rear 'el'. (Unstable support.)
- Repair outside bulkhead door to rear 'el' basement, and seal holes in foundation (heat loss and security issue).
- Building needs to have an advance warning / detection perimeter security alarm system, that illuminates the grounds and broadcasts an audible warning, upon after-hours intrusion onto the site.
- General building security system upgrades.
- Study, using Historic Preservation standards, of heating and humidity control in the historic portion of the building.
- Remove type 'BX' electrical cable from the crawl space of the building, and replace with 'romex' of the appropriate type.

Near Term Needs:
- On-going maintenance; was painted summer 2010; 5-year cycle advised.
- A complete Historic Structures Survey and Preservation Strategy Study should be conducted on this important resource, as a guide to future caretakers of the project and to augment interpretation of the history of the property.
- A storage room is needed for historic records, outside of this building, with proper environmental controls.

Conditions Summary:
The building is in very good condition overall, taking into consideration its historic nature.
This historic building has a wood cedar shingle roof, which appears to be in excellent condition, with no reports of leaking. The cedar shingle siding is also in excellent condition. The

Conditions Summary (continued)

foundations are in good to poor condition, depending on location. The interior of the building is in excellent condition. The overall accessibility of the building is very poor, but consideration must be given to the historic value of the property and with the understanding that it would be impossible to provide accessibility to current standards, without damaging that historic value.

Recommendation:
This building needs only general ongoing maintenance, in addition to the items of work noted as 'immediate needs', above. Accessibility should be improved (see discussion below) to the extent feasible without compromising the historic fabric of the building. A complete historic structures survey and maintenance plan should be conducted and written for future reference. Historic records files should be moved to another location, perhaps in a new small climate-controlled building on-site, so that the rooms used for the storage of these records could be added to interpretive space, and for preservation of the records. A sprinkler fire protection system should be installed to protect the structure.

The building and the artifacts inside are particularly vulnerable to a potential 'smash and grab' type of theft. The value of the contents of the building is not known to this study team but the artifacts certainly have historic value to the town and should be protected. A perimeter alarm system, coupled with lighting and security cameras, could help to prevent a theft from occurring and could help with recovery in the event of a theft.

Conditions Assessment

Site/Architectural

SITE

The landform of the site is gently sloping, undulated terrain, higher in front near the road and sloping down to wooded wetland areas at the rear (south). Lawn areas are well maintained. Ornamental trees and shrubs are well maintained. There is a white wooden painted decorative fence in the front, with brick walks and granite stone steps, all in good condition.

ARCHITECTURAL

Exterior:
The Historic Building is in generally good condition. The exterior wood (cedar) shingle siding is in good condition, and paint is in good condition. The building was painted during the summer of 2010.The windows and doors are in good condition. Widows have exterior 'storm' panels installed on a seasonal basis, to protect against winter weather. These storm panels are installed with screw-type fasteners that show some rusting. There is some cracking at mortar joints in the stone foundation, not pervasive. The rear 'bulkhead' door to the 'el' cellar, is in very poor condition, with rotting of wood.

Interior:
The interior of the building is in excellent condition in all areas. At the rear cellar, the wood steps are in poor condition, and there are unprotected openings to the exterior through the foundation sill. No other deficiencies noted.

Structural:
No significant structural issues noted in either the main house, or in any of the out-buildings. The roof line of the building does show some deflection, but this is not unusual for a property of this age, and is not indicative of failure of the roof framing system. The roof does not appear to have deflected any further in recent years, since the new cedar shingles were applied.

The building has two separate cellar spaces and a dirt floor crawl space under the main portion of the building. The older celllar, where the furnace is located, is below the rear 'el'. the newer cellar is located under the east side of the house.

Roof:
The roof is wood (cedar) shingles, and appears to be in excellent condition. No leaking was reported or observed. The barn and other outbuildings also have cedar shingled roofs in good condition. The front of the building has no gutters or downspouts. Gutters and downspouts at the rear of the building are in good serviceable condition, but the appearance does not seem to be correct for this building.

Building Code:
Interpretation of the Code for this property is mitigated by its historic construction and the need to maintain the existing fabric of the building. There are several features of the building that would not meet today's code for a residential building, but it is precisely those features which serve to inform and enlighten the public about the time period in which the house was constructed. In many similar historic buildings, access to upper levels is often restricted due to structural loading concerns, and/or concerns about steep and narrow stairways. It is commendable that the Town of Hanover has determined to maintain the upper level of this building entirely open to the public, with careful guidance about the care needed to proceed safely to observe those rooms and spaces.

Conditions Assessment

Architectural

Accessibility:
The building is not accessible to persons with certain types of disabilities, and the elements of the structure that form barriers cannot be removed or modified without destroying or disturbing the historic fabric of the building. The Rules and Regulations that require public buildings to be accessible have specific provisions that apply to historic buildings, for specifically this reason. Reasonable accommodations to persons with disabilities should be made, where they can be done without impacting the historic value. For example, paving an accessible parking space, adding a free-standing handrail to the approach walk, and providing a temporary moveable wooden ramp at the rear 'el' door, would enable some persons to enter the building who could not otherwise be able to. A video camera system carried by docents, would allow persons who must remain on the first floor level, to still participate to a certain degree in group visits to the upper level.

Energy & Environmental Sustainability:
This is one of the few properties where energy savings, as an objective, should be subordinate to the higher concerns of preservation of the historic fabric of the building. However, there are benefits to both savings and environmental control to sealing cracks in the building and foundation where uncontrolled air infiltrates into the interior. There are numerous such locations on this building which should be sealed and insulated with appropriate products.

Hazardous Materials:
There are no known hazardous materials. Lead paint could remain under coats of newer paint products. For any future work that disturbs painted surfaces, lead testing should be carried out, and protocols should be used to prevent lead dust from being released.

Historical Value:
This home and site with outbuildings, is the most important historic building in the Town. The home is individually listed as an Historic Structure, and is located within the Town of Hanover Historic District. It is an excellent learning tool for residents and visitors of all ages. There is an active program of visitation for the elementary school students in the Town. This property also houses a large archive of historic photographs and documents maintained by the Historical Society. The building has historic value both because of its age, with original construction intact, and also because of the importance of the persons who resided here to the local history. There would be great benefit to digging deeper into that history, and documenting the results. There would also be great benefit to conducting a full historic structures survey of the property, including detailed measurements of existing conditions, documentation of existing, original, and modified construction details, documentation of historic colors and finishes, and archeological survey of the surrounding grounds. All of this would serve well to ensure proper decisions with regard to future maintenance of the property, and interpretation for visitors.

Other Issues:
None.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:
- Existing Domestic Water Service: The existing building is currently served by a 1" domestic water service which enters the basement. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the house's domestic water needs.
- Existing Natural Gas Service: There is currently a natural gas service to the building serving the furnace and hot water heater. This service enters the building into the basement at the furnace room.
- Existing Sanitary Service: The house's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the building. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- Fuel Oil: There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:
- Water closets floor mounted tank type; vitreous china.
- Lavatories are pedestal mounted vitreous china with dual handles.
- Kitchen sink is stainless steel counter mounted with single lever handle

Domestic Hot Water Systems:
Existing Domestic Hot Water System:
- The domestic hot water is generated by gas fired water heater which feeds the buildings hot water needs. The water heater is in good condition.

Fire Protection Service:
- There is no fire protection coverage (sprinklers) currently at the facility.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing house is heated by a gas fired forced hot air furnace located in the basement. This unit appears to be new and in very good condition including ductwork to floor mounted registers. This furnace is a Weathermaker 9200 and is tagged as being Energy Star compliant.
- The present Heating and Ventilating system consists of floor mounted registers. It was noted that the front portion of the house was not heated but that the heating provided in the rear portion of the house seemed to provide sufficient heat to avoid any problems.
- Concern was expressed about winter time humidity control in the front portion of the building, and maintaining stable conditions for preservation of furniture and other artifacts.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 120/240volts, single-phase, 3-wire electrical service; capacity was noted as being rated 100 amps. The service equipment is located in the basement of the house and consists of a circuit breaker panelboard; this panel is older, in fair condition and should be replaced.
- The lighting throughout the house is typical of a single family residence consisting of incandescent lamps and some incandescent track lighting.
- There is no central fire alarm system in the building. There is, however, sporadic 120 volt smoke detectors.
- There is currently a controlled access at the main front entry this system was noted as having been problematic and should be repaired or replaced.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

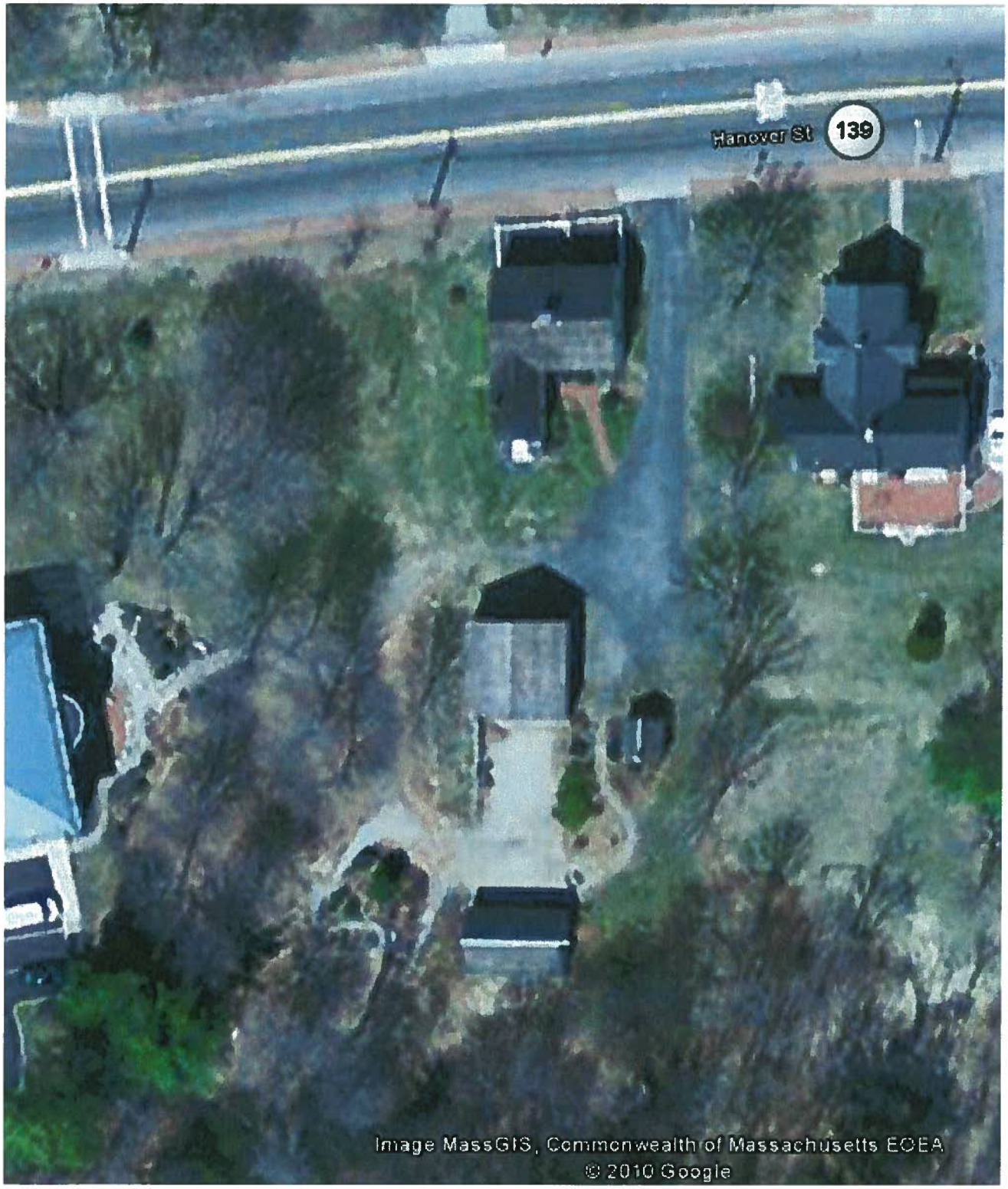
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building to as recent as 3-5 years old. Some equipment such as the heating system furnace are new and in very good condition. There was a desire expressed to add an environmentally controlled document storage room within the facility. It should be noted that the addition of this type of room and the equipment involved may necessitate the upgrade of the electrical service capacity.

Plumbing systems throughout seem to be in good physical and working condition.

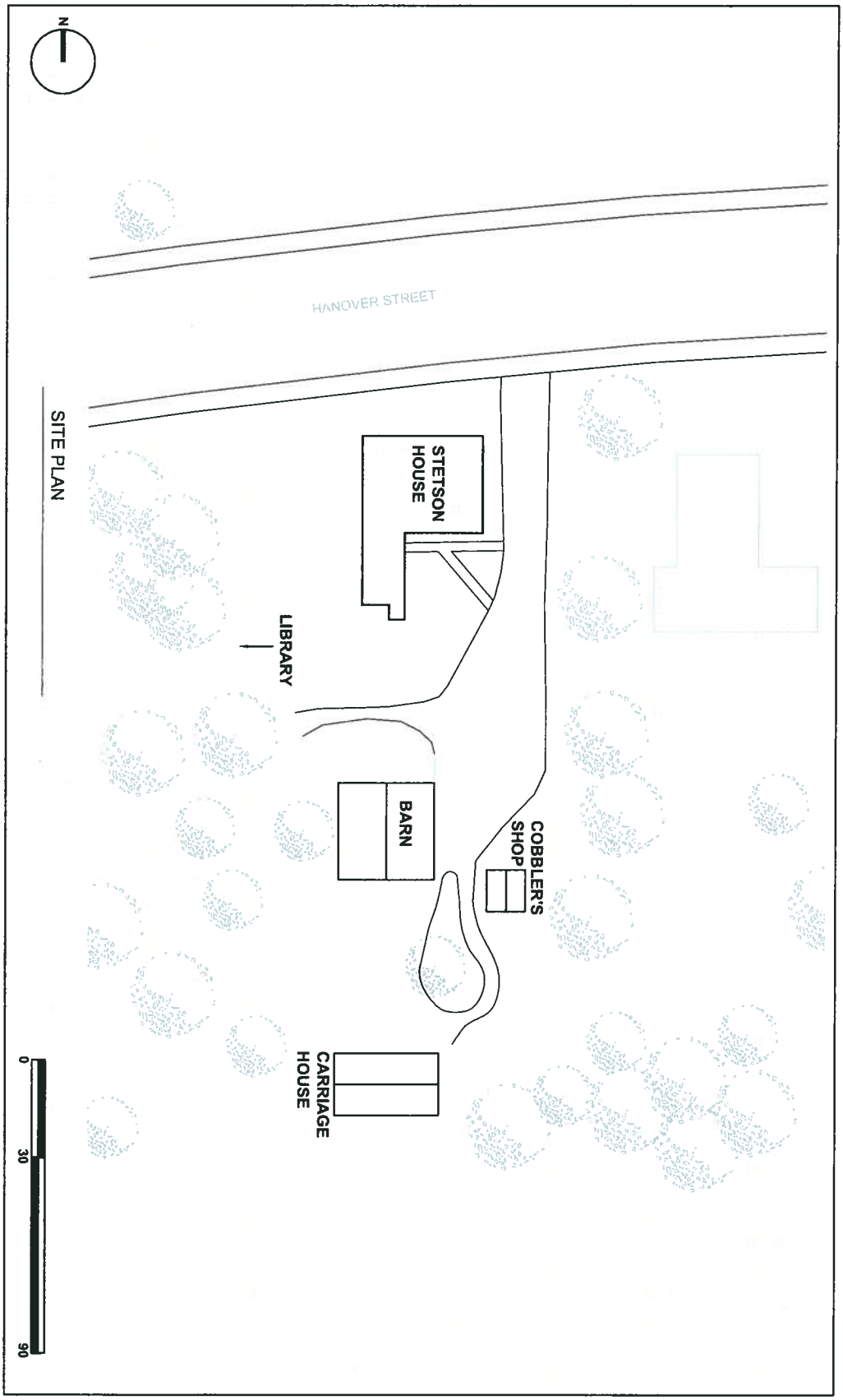
The Electrical systems appear to be in fair condition and operating without issues. The older service panel should be replaced with newer equipment with additional breaker spaces to meet any future needs and to alleviate the possibility of overloading individual circuits when new equipment and or devices are added to existing circuitry. The lighting systems are typical of a home. A fire alarm system should be installed, and should be tied into a notification system. The existing security system should be repaired/replaced.

AERIAL PHOTO



Stetson House is the top center building, with outbuildings shown behind the house.
(Source: Google)

SITE PLAN



SITE PLAN

D·R·A

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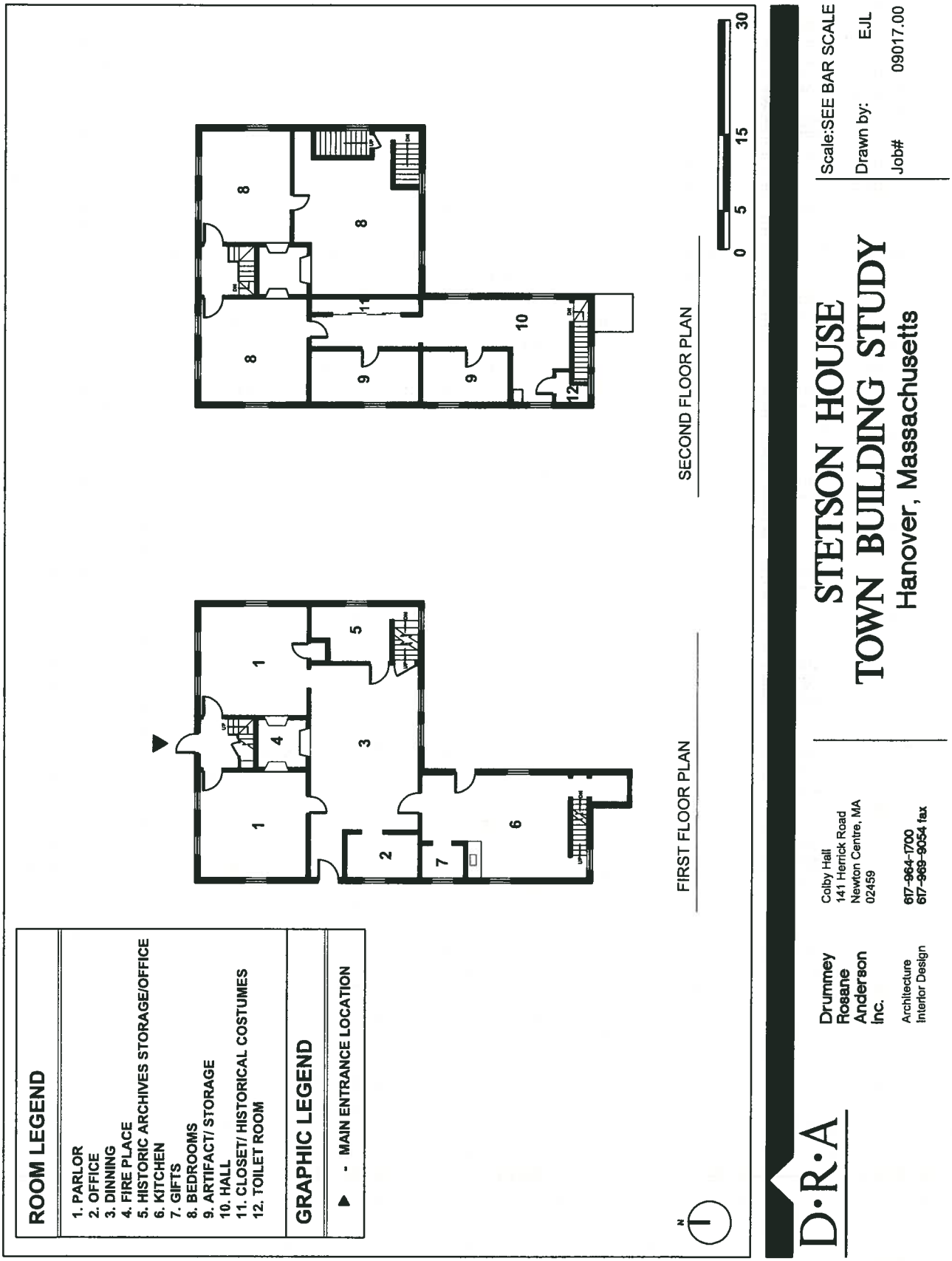
STETSON HOUSE
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00

FLOOR PLANS


ROOM LEGEND
1. PARLOR
2. OFFICE
3. DINNING
4. FIRE PLACE
5. HISTORIC ARCHIVES STORAGE/OFFICE
6. KITCHEN
7. GIFTS
8. BEDROOMS
9. ARTIFACT/ STORAGE
10. HALL
11. CLOSET/ HISTORICAL COSTUMES
12. TOILET ROOM
GRAPHIC LEGEND
▶ - MAIN ENTRANCE LOCATION
FIRST FLOOR PLAN
SECOND FLOOR PLAN
0 5 15 30
STETSON HOUSE
TOWN BUILDING STUDY
Hanover, Massachusetts
Scale:SEE BAR SCALE
Drawn by: EJL
Job# 09017.00
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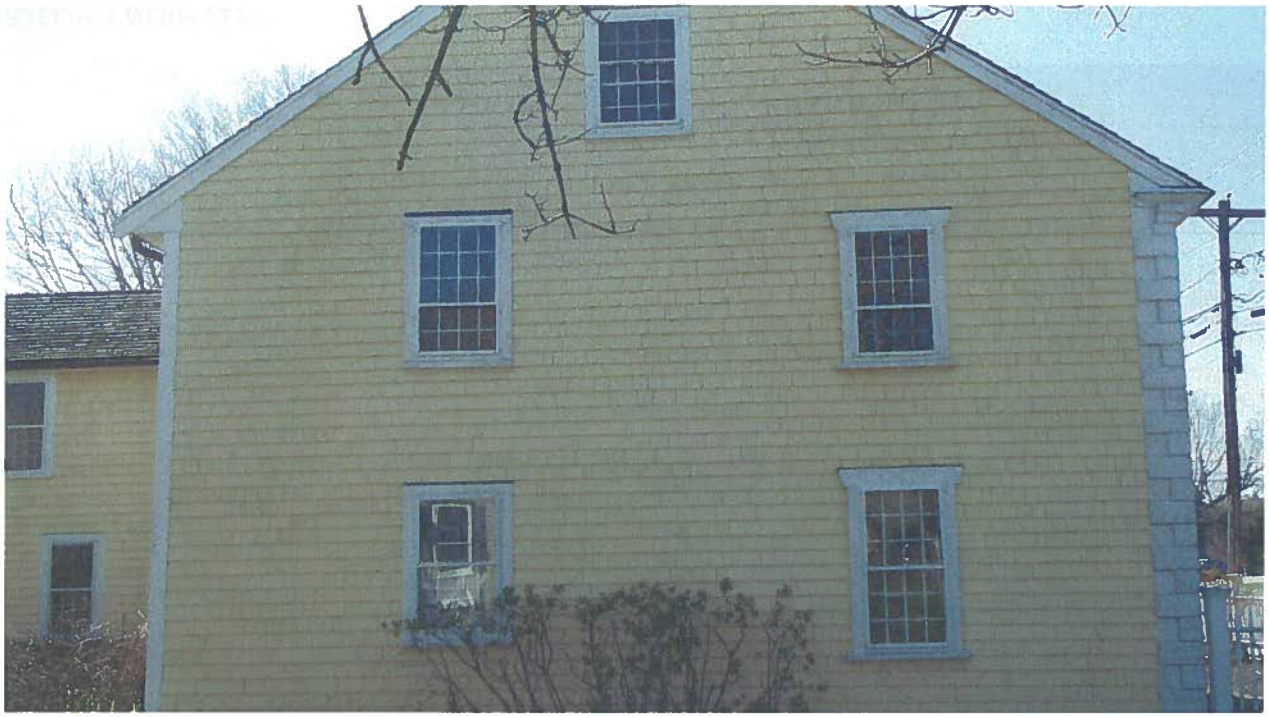
EXTERIOR PHOTOS

View of front entrance. North Facade.

West facade.



Detail view of east facade.

Detailed view of side entrance on east facade; this is the main visitor entrance and it is non-accessible.

Exterior view of back, southeast corner.

Detailed view of foundation, near bulkhead.

Detailed view of window.

OTHER BUILDINGS

Exterior view of other buildings on property.

Back side of existing barn.

View of cobbler's shop.

INTERIOR PHOTOS OF HOUSE

Interior view of kitchen.

Interior view of parlor, looking towards entrance hallway.

Interior, parlor looking out front windows.

Interior view of dining room.

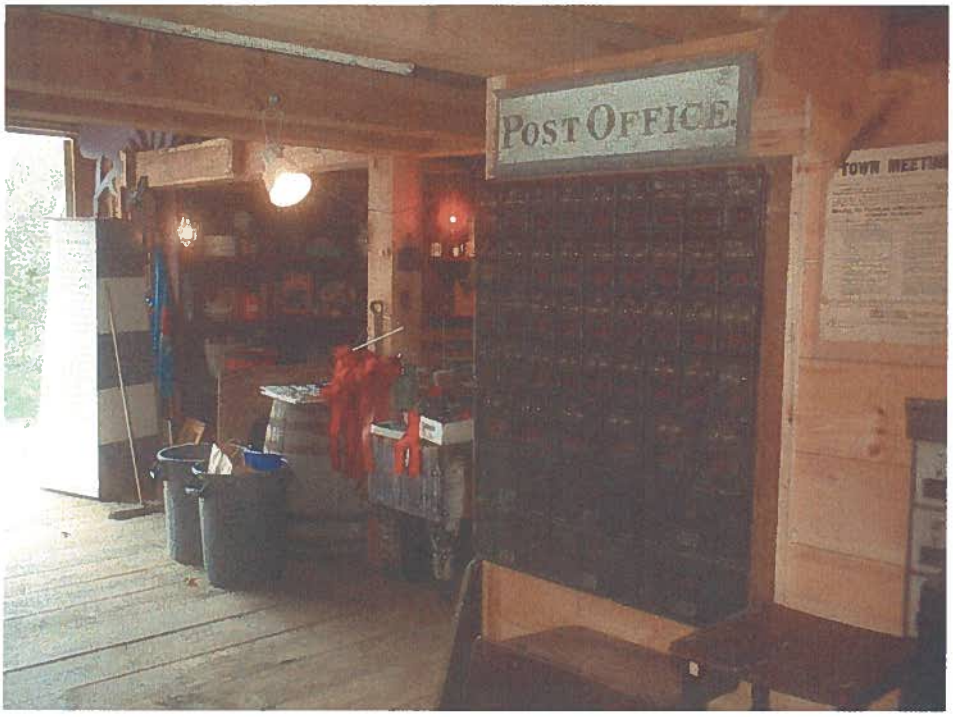
View of toilet.

Interior view of a typical bedroom on second floor.

Interior view of upstairs hallway.

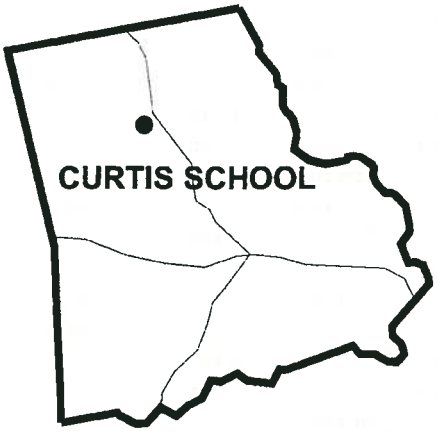
Detail view of framing.

Stair leading from basement.



Interior of barn, displaying historic items.

Section 17 - CURTIS SCHOOL



Locus Map - Town of Hanover

Building Summary

Address: 848 Main St.
Gross Area: 5,215 sq. ft.
Description of Site: Flat. Open. Paved wide turnaround drive in front, with apron parking for about 20 cars. Gently sloping lawn slopes down towards small ball field at rear of narrow back lot; field does not appear to be 'regulation' size, with very limited outfield on the right field side.
Description of Building: Constructed in 1896 as one of the Town's first elementary schools. Considered to have historic value. Wood frame and pitched roof with composition shingles. The building is now sided with vinyl, and some of the ornate period details may have been removed.
Function of Facility: Historic School; no longer in use.
Agency or Department: Town of Hanover
Technical Construction Description: Wood frame on stone foundations.
Valuation: $469,500

Immediate Needs:
- Repairs to roof, walls, doors and windows. Temporary repairs to stabilize the structure and halt infiltration of water and pests.
- Installation of a temporary ventilation system, to prevent further mold and help stabilize the structure.
- Warning signage and area alarm system, to prevent vandalism and reduce Town liability.
- Remove all electrical wiring and boxes from the building as part of the stabilization repairs program. Remove all plumbing fixtures and cap lines. Remove all heating equipment.
- Fully investigate the building and site for all forms of potential and known hazardous materials. Survey should provide an estimated quantity of asbestos, lead, PCB light ballasts, underground oil tanks, and any other hazardous materials.
- Conduct a full market assessment, following the hazardous materials evaluation of building and site, of the value of the property for disposition on the open market.

Near Term Needs:
- Design for re-use; schematic design options should be prepared, and feasibility cost estimates prepared.
- Design study meetings and workshops with Town administrators and the general public, to explore options for re-use.

Building Summary (continued)

Conditions Summary:
The building is in very poor condition overall, and is in danger of deteriorating to a point where re-use would become infeasible. There are observed areas of worn and missing roof shingles, where water is getting into the building. There are broken windows and deteriorated doors. Woodwork is deteriorating at several areas due to moisture.

At the interior, the building is completely deteriorated and dangerous. Ceilings are falling in. There is a large amount of general debris in the building. There is a strong odor indicating mold and/or mildew growth. Many lights, plumbing and heating are all non-functional. The fire alarm system appears to be more recent, appears to be in generally good condition, and is reported to be operational.

In a previous report in 1995, the interior surfaces were noted as 'serviceable', and structure as intact. The essential finding from review of this previous report is that this building was in much better condition in 1995, than it is today. In 1995, under systems, it was noted that 'overall everything is working'.

Recommendation:
Based upon evaluation of this building, and upon consideration of the various needs expressed by members of the community and the Town administration, we offer two viable options.
The first option is to demolish the Curtis School Building with future development choices to be determined later. The second option is to salvage only the basic exterior historic envelope of this building (to the extent possible) and to restructure, redesign, and reconstruct the building to serve as a satellite fire station serving the north end of town.

Prior to undertaking this work, a program of stabilization of the current structure needs to be put into action, in order to prevent further deterioration. A design project should be undertaken, to study the feasibility of re-use in more depth for whatever use is determined by the Town.

The cost of saving the exterior envelope of the building, as compared to simple demolition, have been budgeted within the 15-Year Capital Budget Plan. The costs of selective interior demolition and stabilization, vs. total demolition of the entire building and site repair, are approximately equivalent.

Conditions Assessment

Site/Architectural

The building has served many purposes in recent years, but has been abandoned and unused for the last 6 years or so, since the school administration offices relocated to the Salmond School. An attractive older building, but not listed on any Historic Register. There is debate within the community about the merits of attempting to preserve the structure, or to dispose of it, or to raze it and utilize the site for a new facility. The primary issue with this property is the cost to benefit analysis of potential re-use, which, in turn, is dependent upon the proposed re-use function and community need.

SITE

The landform of the site is generally flat, gently sloping down from front to rear. Paving is in fair conditon. Lawn areas and the ball field are in fair condition. The ball field is used for games and practices for very young children. There is one drive which circles around to a small parking area at the rear of the building, good for only 3 or 4 cars.

ARCHITECTURAL

Exterior:

- Existing exterior cedar shingle siding on the rear of the building is in poor condition. Cracked and weathered.
- Windows are broken and some boarded, in poor condition.
- A previous study notes that the vinyl siding was already installed in 1995; rear shingles were already in poor condition.
- An area of missing siding above a front window.
- Decorative wood brackets covered by sheet metal.
- Granite foundation stones need repointing.
- Paint needed along rear roof line wood trim.
- Brick chimney deteriorated; missing bricks; needs reconstruction. Flashing at chimney base appears deteriorated.
- Rear basement entry choked with plant growth.
- Holes in vertical corner wood trim appear to be caused by pests.
- Broken window on south side, glass debris on ground.
- All foundation stones on south side need repointing.
- Concrete Steps on right side entry are deteriorated.
- Mildew at roof edge.
- Rear garage addition not in keeping with rest of building.

Interior:

- Interior of building is completely dilapidated, with evidence of serious moisture damage and musty smells.
- Original 'tin' ceiling can be seen above drop ceiling at some areas.
- Cracked plaster.
- Peeling paint.
- Fallen plaster from ceilings at locations of leaks.
- Fallen acoustical ceiling tile; damaged and displaced tiles, damaged and displaced ceiling grid.
- Ceilings hung inside taller space split exterior windows half-way up.
- Rear garage space unfinished, with broken overhead door and boarded-up man door.
- Boarded up windows in various locations.

Conditions Assessment

Architectural

Interior (continued):

- Interior divided into smaller spaces using wood framing and wood paneling.
- Broken emergency light at basement.
- Fin-tube covers missing.
- Cracked and uneven concrete floors in basement.
- Low ceiling heights in basement.

Structure:

(This section of this report was prepared by Engineers Design Group, Inc. Minor edits have been made. Please see the full original report in **Appendix G.)**

The building is in fair condition with no evidence of foundation settlement. The exterior and interior walls do not exhibit any distress, although with vinyl siding and plaster covering the main structural elements, there is no guarantee that the wood framing is in sound condition. The floors have deflected over time.

Adaptability of the structure may prove difficult and cost prohibitive.

Any additions should be kept structurally separate and extreme care needs to be taken to avoid any renovations, which would jeopardize the existing structure and resulting compliance with some of the more stringent requirements of Chapter 34 of the 8th Edition of the Massachusetts State Building Code (Repairs, Alterations, Additions, & Change of Use of Existing Buildings).

Change of use to a fire station would require full compliance the 8th Edition code for new construction.

This report is based on an inspection performed on April 19, 2010. No structural or construction drawings of the facility are currently available.
During our site visit, we did not remove any finishes or take measurements so our understanding of the structure is limited to the available drawings and observations at the exterior skin.

The building is in fair condition with no evidence of any foundation settlement.
The framing at the first floor level is spongy with evidence of slopes at various locations.

The basement window levels are in line with the exterior grade, resulting in potential moisture problems.

The building has obviously gone through various remodeling stages. None of which have increased the structural integrity of the building as originally constructed.

The existing wood framed structure may be difficult to adapt to layouts compatible with any renovations or modifications. Further investigation of the wood framed structure by removal of finishes, etc. would be required to assess the capacity of the building to sustain the required Code loading, both lateral and vertical.

Conditions Assessment — Architectural

Structure (continued):

Removal of any load-resisting elements could reduce the existing capacity of the structure and, depending on the extent, various proportional upgrades would be necessary to satisfy the Massachusetts State Building Code. It would appear that there are very few options to allow adjustment of the interior walls. Any layout revision would likely be cost prohibitive with respect to the structural elements.

If any proposed work is permitted after February 6, 2011, then the code requirements would need to comply with the 8th Edition of the Massachusetts State Building Code.

If any repairs, renovations, additions or change of occupancy or use are made to the existing structure, a check for compliance with 780 CMR, Chapter 34 "Existing Structures" (Massachusetts Amendments to The International Existing Building Code 2009) and reference code "International Existing Building Code 2009" (IEBC 2009) would be required. The intent of the IEBC and the related Massachusetts Amendments to IEBC is to provide alternative approaches to alterations, repairs, additions and/or a change of occupancy or use without requiring full compliance with the code requirements for new construction.

The IEBC provides three compliance methods for the repair, alteration, change of use or additions to an existing structure. Compliance is required with only one of the three compliance alternatives. Once the compliance alternative is selected, any project would have to comply with all requirements of that particular method. The requirements from the three compliance alternatives cannot be applied in combination with each other.

The three compliance methods are as follows:
1. Prescription Compliance Method.
2. Work Area Compliance Method.
3. Performance Compliance Method.

The best approach is to evaluate the compliance requirements for each of the three methods and select the method that would yield the most cost effective solution for the structural scope of the project. The selection of the compliance method may have to be re-evaluated after the impact of the selected method is understood and after analyzing the compliance requirements of the other disciplines, Architectural, Mechanical, Fire Protection, Electrical and Plumbing. A detailed analysis of the code provisions would need to be carried out under a feasibility study incorporating various renovation/repair options.

Potential Reuse: There has been interest in the reuse of the building as a satellite fire station. Based on this change of occupancy, Chapter 34 requirements would effectively direct compliance to LEVEL 3 WORK which would entail designing the building in accordance with the code for new construction under I. B. C. 2009 and MA Amendments.

The existing structure would need to be replaced. The exterior walls, consisting of wood studs and sheathing, and the stone foundation walls could be retained, based on a new interior framed structure supported on new concrete foundation walls within the footprint. It is likely that these new walls would be required to underpin the existing stone foundations for excavation to provide headroom for vehicular storage/access at the basement level.

Conditions Assessment — Architectural

Roof: The roof is composition shingles, and appears to be in very poor, failed, condition. There are missing shingles in 3 locations, and evidence of previous patching. In its current condition, the roof appears to be leaking water.

Building Code:
This building is unsafe in its current condition. A stabilization program needs to be undertaken at this time. Building code provisions will be relevant to any proposed re-use of this building.

Accessibility:
The building is not accessible to persons with disabilities, and the elements of the structure that form barriers cannot be removed or modified without disturbing the historic fabric of the building. The Rules and Regulations that require public buildings to be accessible have specific provisions that apply to historic buildings. For any proposed re-use of this building, the regulations will require full conformance to accessibility regulations, because the extent of the re-construction required, will dictate that full accessibility be provided.

Energy & Environmental Sustainability:
Issues regarding environmental objectives will come into consideration in any proposed re-construction of the building. In its current state, this is not a relevant discussion point.

Hazardous Materials:
Lead paint is probably present. Caulking and sealants may also contain lead and or PCB's. Asbestos is also likely. A previous 1995 study identified asbestos in several locations and several materials, but it is not clear what the extent of actual testing was at that time, and it is not clear if any abatement has been done subsequent to that report. Mold and mildew are evidenced by smells and musty conditions inside the building.

Fluorescent light fixtures may have ballasts containing PCB's. Lamps may contain mercury. Underground oil tanks and/or lines may be present. A petroleum odor was noted in the basement mechanical room area. The previous 1995 report also noted this odor, and stated that there were general indicators of possible oil contamination of the concrete slab, and perhaps below the slab. This 1995 report also seems to be unclear on the reported removal in the late 1990's of the main fuel oil single-wall underground storage tank.
A full investigation of the extent of these and possibly other additional hazardous materials should be conducted.

Historical Value:
This building is considered to be one of the more important historic buildings in the Town. The property has been described as 'Victorian' in previous written assessments, and the architect has been reported to be a local architect of some distinction at the time the building was constructed.

The true historical value of this building should be further investigated. An Historic Structures report should be prepared, according to U.S. Dept. of the Interior guidelines, to more fully evaluate both the structure itself, and its use over time. The building is not now listed on the Register of Historic places, and is not in any registered historic district. The appeal of this building may have more to do with the fact that it is an attractive old building, and that it has great sentimental appeal to many members of the community, than with its true historic value.

Other Issues:
None.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing:
APPLICABLE CODES AND STANDARDS
The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:
Domestic Water:
- Existing Domestic Water Service: The existing building is currently served by a decommissioned domestic water service which enters the basement. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the Schools domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation. This service was disconnected at the time of the inspection.

Natural Gas:
- Existing Natural Gas Service: There is currently a decommissioned natural gas service to the building serving the boiler and hot water heater. This service was disconnected at the time the inspection was conducted. This service enters the rear of the building at the boiler room.

Sanitary:
- Existing Sanitary Service: The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.

Fuel Oil:
- There is currently no on site fuel storage.

Plumbing Fixtures and Specialties:
- Existing plumbing fixtures are as follows:
- Water closets are floor mounted; tank type, vitreous china.
- Urinals are floor mounted with flush valve, vitreous china.
- Lavatories are wall hung and counter mounted vitreous china. Faucets are of the two lever handle type.

Domestic Hot Water Systems:
Existing Domestic Hot Water System:
- The Schools domestic hot water is generated by a gas fired water heater which feeds the schools hot water needs.

Fire Protection Service:
- There is no fire protection coverage (sprinklers) currently at the facility.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Mechanical Systems:

APPLICABLE CODES AND STANDARDS

The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS

- The existing building is currently unheated. The current heating system in the building consists of a hot water boiler in the basement which has been decommissioned including the burner having been removed. This equipment appears very old and unsalvageable and would need to be replaced.
- The present Heating and ventilating systems although decommissioned consist of finned tube radiation located throughout the school. Most appear to be in poor condition. Some thru the wall air conditioning units for select small areas in the basement, however their operational capability was unable to be confirmed.
- The only visible exhaust system in the building is a single thru the wall exhaust fan located on the rear wall of the building.

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 120/240 volts, single-phase, 3-wire electrical service. The service equipment is located in the basement of the building. The service equipment is poor condition.
- There are a number of electrical panels located throughout the facility. These panel boards all are older having been added at the time of various building additions and/or on an as-needed basis. The condition of these panel boards is poor.
- The lighting throughout the facility consists primarily of 1' x 4' 2-lamp wraparound fluorescent fixtures and incandescent fixtures. The lighting throughout the facility is in poor condition.
- The fire alarm system is a new system and in very good condition. There are manual fire alarm pull stations, horn strobes and smoke detectors located throughout the building.
- Site lighting is accomplished via building mounted flood lights.
- Life safety emergency lighting is provided via Emergency battery units with unit mounted emergency light heads units.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

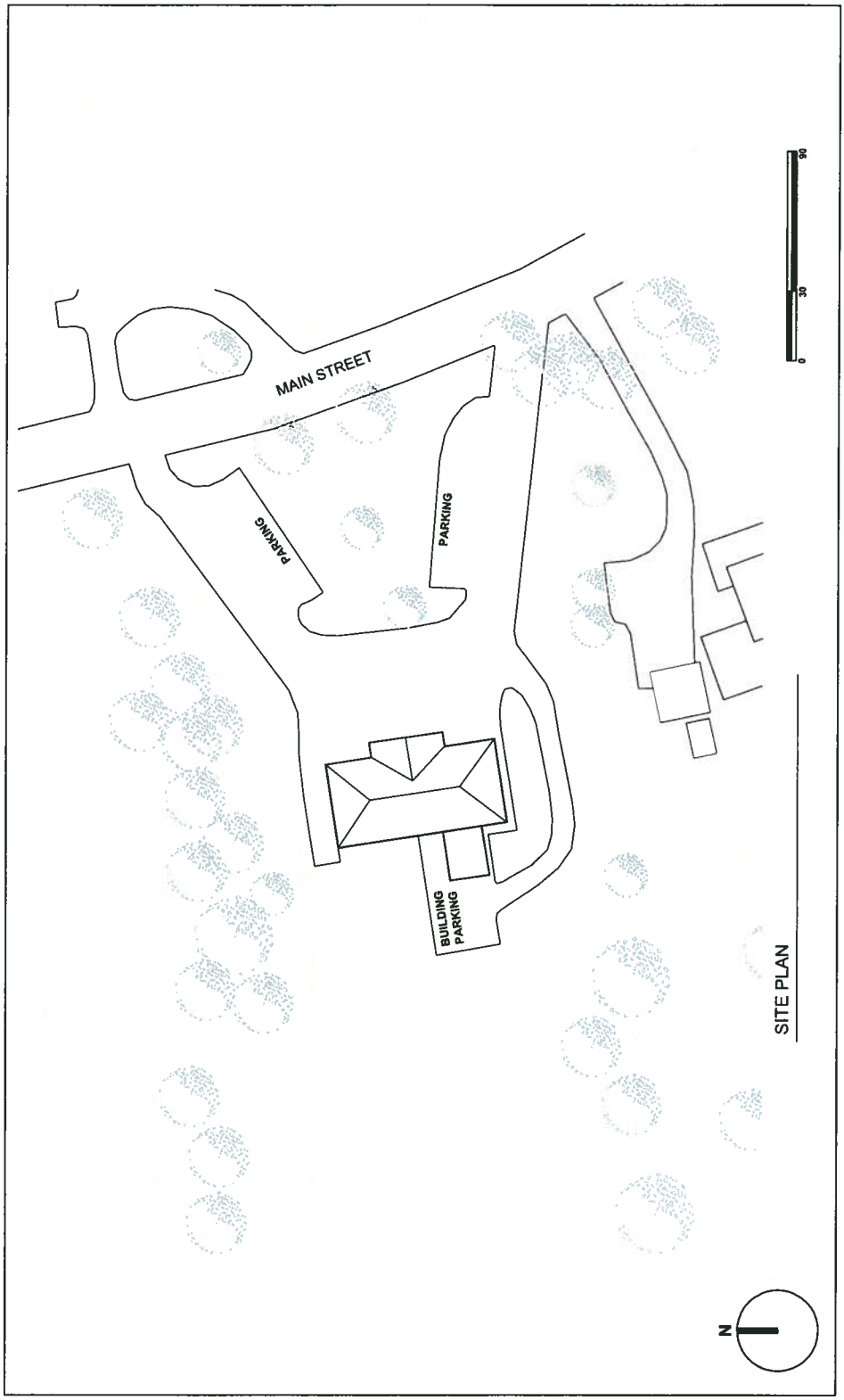
MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building to as recent as 3-5 years old in the case of the fire alarm system which is the only salvageable system. In general all MEP systems are in poor condition and would need to be replaced if the building were to be re-commissioned, including the testing of all incoming and outgoing service lines and systems.

AERIAL PHOTO

Curtis School is the building in the center of the photo.
(Source: Google)

SITE PLAN



D·R·A

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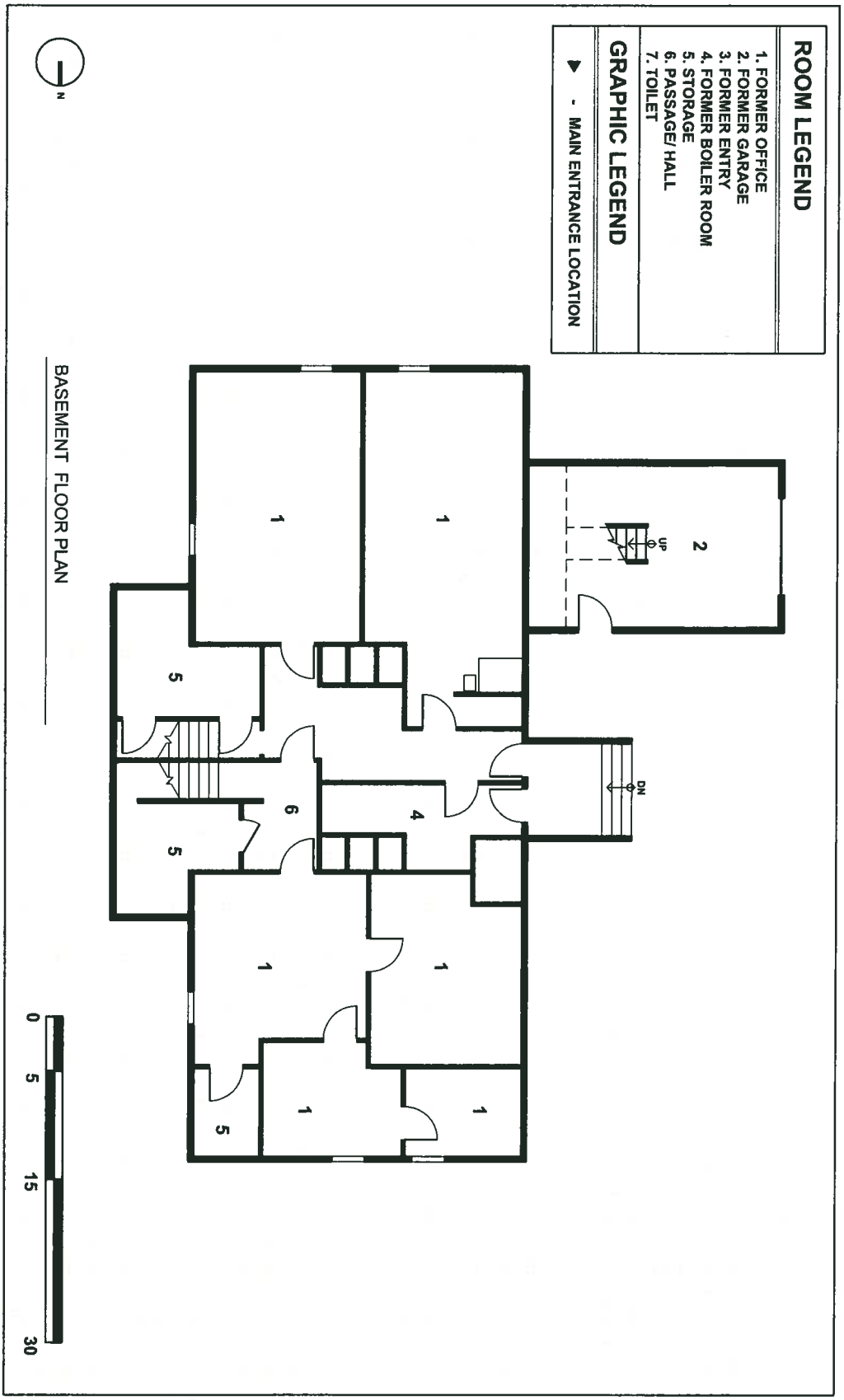
Newton Centre, MA
02459

617-964-1700
617-969-9054 fax

CURTIS SCHOOL
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

FLOOR PLAN



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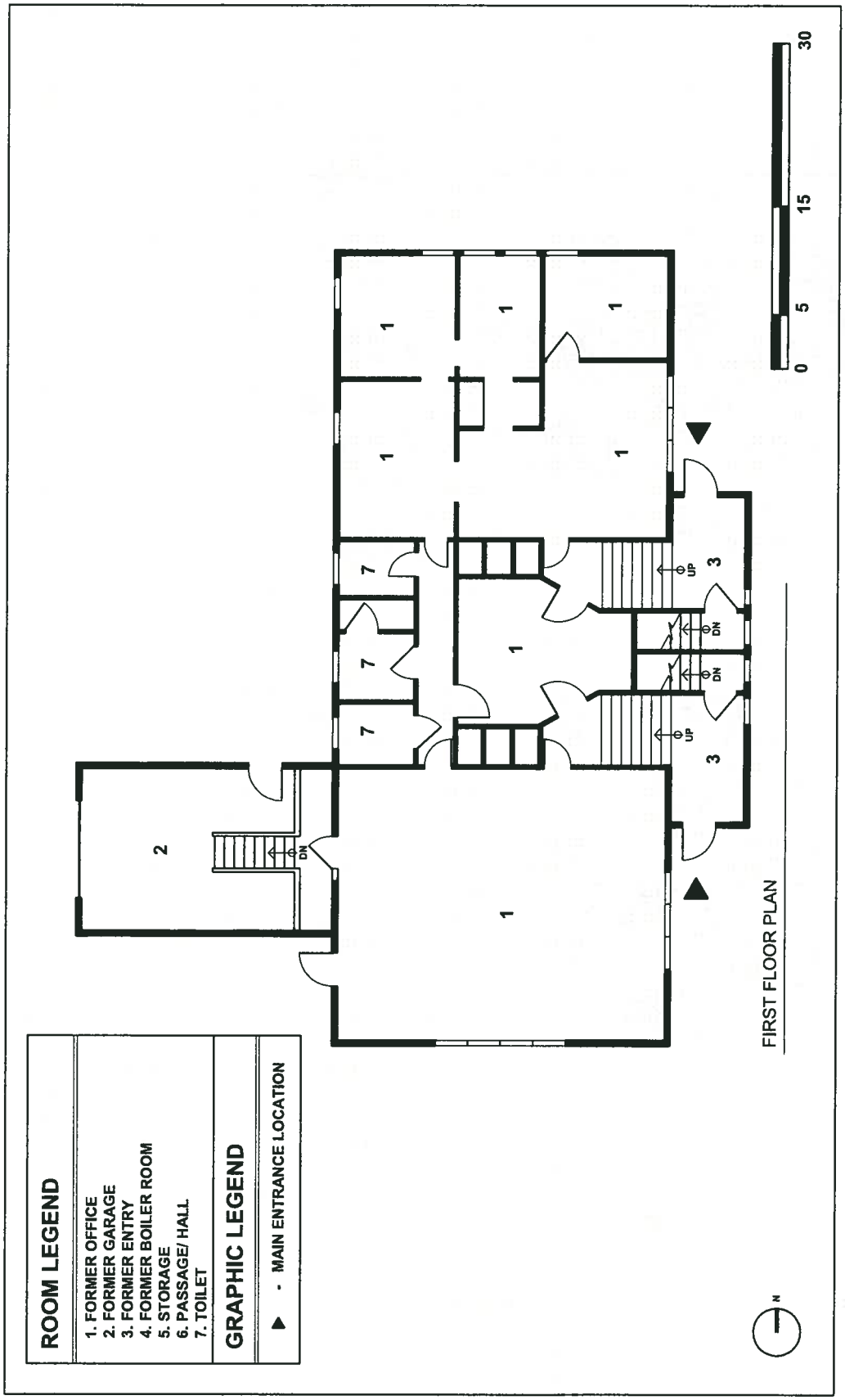

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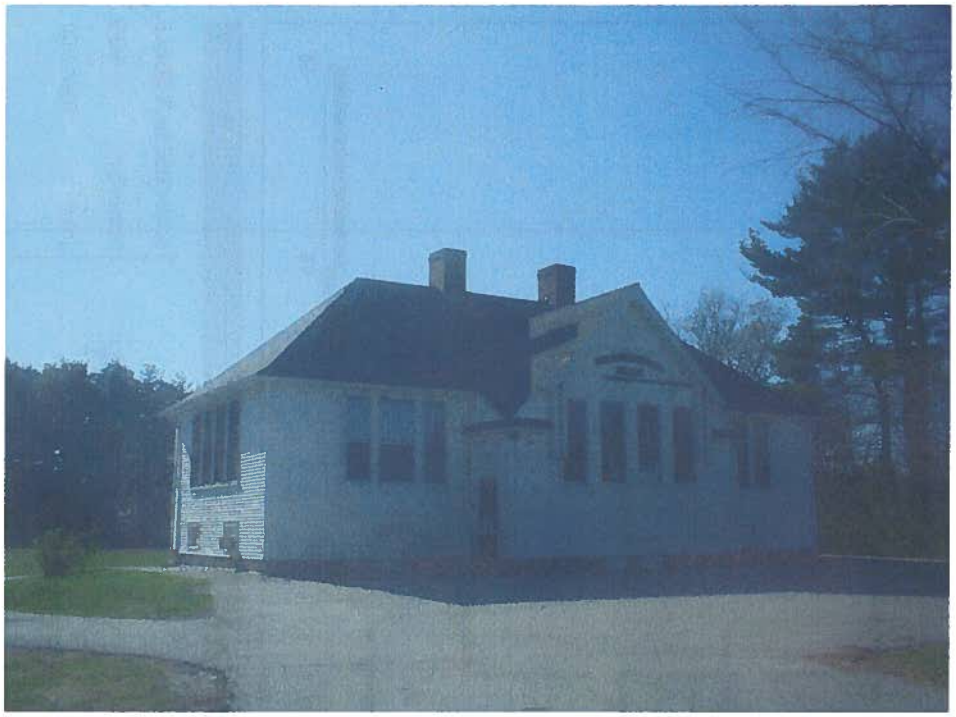
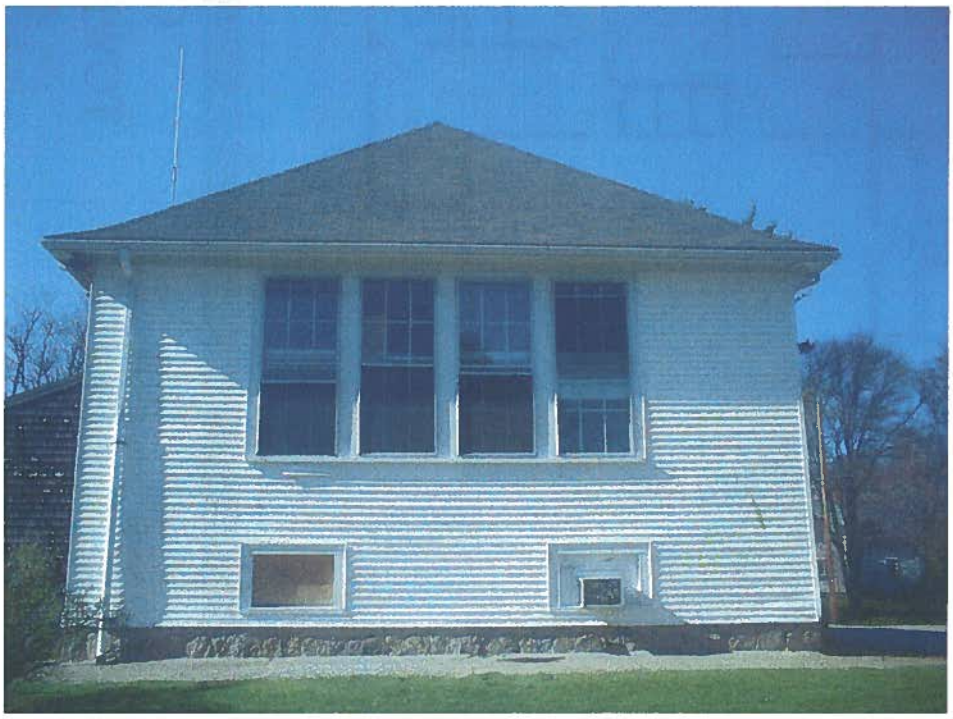
EXTERIOR PHOTOS



Exterior view of front entrance.



Exterior view of south facade, broken glass on ground.

Exterior view of back facade.

Exterior detail view of roof condition.

Exterior, detailed view of front windows.

Exterior, detailed view of stairs. Non-accessible, no guardrails/handrails.

Exterior, view of back facade looking at cedar shingles.

Exterior, doors to basement.

INTERIOR PHOTOS

Interior, view of stairs at main entrance.

Interior, view of conditions of wall and ceiling in stairs.

Interior, empty office.

Interior, view of sink.

Interior, view of exposed wiring conduits.

Section 18 - PARKS AND RECREATION (GRANGE HALL)

Locus Map - Town of Hanover

Building Summary

Address: 624 Circuit St.
Gross Area: 2,374 S.F.
Description of Site: Sloping to rear, parking in front, small grass area at rear, large trees to rear, wetlands and power lines adjacent. Single-family residence on opposite adjacent side.
Description of Building: Considered to have historic value as an example of the 'Arts and Crafts' style of design. Wood frame and pitched roof with composition shingles. The building is now sided with vinyl, and some ornate period details may have been removed.
Function of Facility: Parks and Recreation offices and activity center.
Agency or Department: Parks and Recreation.
Technical Construction Description: Wood frame on stone foundation.
Valuation: $220,300

- **Immediate Needs:**
- Security alarm system.
- General schematic design and feasibility study for conversion to use by the Parks and Recreation department, and specifically accessibility issues. Particularly to study adding an elevator. Assumptions have been made for this report, without conducting such a more detailed study.
- Replace ramp handrails. Add automatic door opener to main entrance door.
- Reconstruct toilet rooms for accessibility.
- Reconstruct kitchen cabinets for accessibility.
- Remove paints and flammable materials from basement.
- Construct appropriate containment around basement oil tank.
- Misc. painting of exterior wood trim, various locations.
- Complete insulation of exterior foundation walls in basement.
- Repair and repoint stone foundation at various locations.

Near Term Needs:
- Add elevator access to lower level.
- Renovate lower level for program use.
- Consider general building renovation to restore historic appearance while also improving energy performance and any remaining accessibility issues.

Building Summary (continued)

Conditions Summary:
The building is in fair condition overall. The primary issues to be addressed for this property, are accessibility for disabled persons, and energy savings.
The building is not now compliant with accessibility regulations, and substantial work will be required in order to achieve compliance on only the main level. Further, we understand that the town desires to use the lower (basement) level also for public program activities of the Parks and Recreation. This is not feasible at this time; substantial renovations, including the addition of an elevator, would be required to accomplish that objective.
Further, all of these proposed accessibility accommodations will cause modifications to the building which will be detrimental to the historic nature of the building. Careful design study is needed to resolve these conflicting issues, and to assess the cost vs. benefit for continued public use of this building.

Recommendation:
A schematic design study should be undertaken to test the feasibility of adding an elevator to the building, taking into consideration also the historic value of the property. The study should include time to further assess the true historic value of the building. For this property, the Town needs to be prepared to spend a considerable sum on renovations, if the Town needs to be able to use the lower level for public programs.

Conditions Assessment

Site/Architectural

SITE

The landform of the site is gently sloping down away from the road, towards the building, and further down towards the rear yard. The site also slopes towards the west, abutting wetlands on this side.

Also on the west side are power lines, and a small electrical transformer sub-station. The old transformer is sitting in the open, unfenced, subject to vandalism. A new transformer is in position and connected, inside a trailer and with a temporary fence around the installation. This area is unsightly and the fence does not seem to be very secure.

Parking seems adequate. Striping and resealing of paving is needed. Curbing would improve the appearance of both the parking area, and the entry drive at the road.

Landscaping is in fair condition, with appropriate shrubs around the building. There is some wetness in the rear yard, where drainage to the wetlands is slow. This is not a major issue as the rear of the property does not seem to be utilized for program needs, and the wetness does not appear to flow towards the building.

ARCHITECTURAL

Exterior:

- Wood, single pane windows need paint, basement level.
- Upper level windows are replacement vinyl units, insulating glass, double hung.
- Foundation is stone on the original building, with two concrete foundations poured on the rear for flanking additions on the back of the building.
- Plexiglas infill on side entrance; wind block; poor quality.
- Chimney needs reconstruction / repointing, loose bricks
- Paint wood trim at windows left of ramp entrance.
- At rear, reconstruct foundation, gap in cement board, or parge with stucco
- Stucco mesh at back foundation
- Replace door in back, wood has deteriorated
- Cement board at rear foundation east side, parge with stucco
- Paint columns and roof edge by right entranceway
- Point / parge stone foundation, various locations
- Hole in siding right of side entrance
- Stone joints damaged on right side; repoint

Interior:

- Basement level is unfinished. Insulation of exterior walls is exposed and is incomplete. The insulation which is in place is only 3-1/2" thick fiberglass bat, with foil face, and is in very poor condition, and is ineffective due to large gaps in the system all around. Effectively, the basement level is completely uninsulated, except at the rear newer additions. Paint cans stored and misc. old furniture, games and toys.
- The underside of the floor above is insulated from the basement with fiberglass batts, unfaced, between the floor joists. There are gaps in this system and it seems to be only very marginally effective.
- Lighting in the basement is very poor.
- Phone and power wiring in the basement is exposed and not neatly attached at some areas.
- Upstairs main room and offices are in good condition, brightly lit, finishes in good condition.
- Storage in side room blocks access to basement door on one side.
- Toilet room are over sized.
- Knob hardware on doors, including toilet room doors (see accessibility).

Conditions Assessment — Architectural

Structure:
Wood frame on stone foundation, some areas of foundation are newer concrete. Steel lolly columns added at basement level to support floor framing above. No apparent or obvious structural defects noted. Roof framing does not sag noticeably, walls appear to be sound, little deflection noted at door frames.

Roof:
The roof is composition shingles, and appears to be in good to fair condition. Appears to have at least 5 years life remaining.

Building Code:
No known citations on this property at this time. The door hardware, entrance door arrangement, and ramp handrails do not meet accessibility regulations; meaning that, under the ADA rules now in force, the Town is exposed to a possible complaint being filed.

Accessibility:
The building is not fully accessible to persons with disabilities, although many modifications have been made with this objective. The accessibility features of the building, in particular the entrance sequence, are deficient. The ramp and handrails and entrance door do not meet regulatory requirements. The residential grade metal 'storm' door does not meet access requirement. The main (inner) entrance door lacks the required 18" clear area on the pull side of the door, and will require an automatic door opener, or reconfiguration of the entrance. Toilet rooms are modified to provide some degree of access, but also are not up to current requirements. There is no rear grab bar at one toilet, and the toilet room door has a knob instead of a lever. The kitchen area (sinks and range) is non-accessible.
It was discussed in meetings that the Town desires to use the lower level of this building for program activities. This will not be possible, due to the lack of an accessible path of travel to the lower level. The ramp from the rear door is not compliant. The door itself is too low to be compliant with the basic building code. It would not be acceptable, under ADA or state regulations, to send a disabled person outside, in order to have them be able to enter the basement level. An elevator is required, or the basement cannot be used for public functions.

Energy & Environmental Sustainability:
- Basement walls are only partially insulated, at the rear newer additions, and only with thin 3-1/2" fiberglass bats. The front portion of the building, with the stone foundation, is effectively uninsulated, with large gaps in the half-completed system. This should be corrected as this is likely a source of much heat loss.
- Basement windows have storm panels, but should be updated for greater energy efficiency.
- Lighting is mostly fluorescent.
- Heat system is fairly recent and in good operating condition; added insulation of the building envelope is the most cost-effective way to improve energy performance in this older building.
- Have the exterior walls been insulated, perhaps at the time the vinyl siding was installed? This condition was not observable without making exploratory cuts through the existing wall finishes.

Conditions Assessment — Architectural

Hazardous Materials:

- Paint cans and other flammable items are stored haphazardly in the basement, and should be removed.
- There is no containment barrier around the oil tank; a containment barrier should be installed to prevent complications from a spill. The oil tank should also be enclosed within a 2-hour rated room, including fire separation from the floor above.
- Lead paint is probably present. Caulking and sealants may also contain lead. Asbestos is also likely.
- Fluorescent light fixtures may have ballasts containing PCB's. Lamps may contain mercury.
- A full investigation of the extent of these and possibly other additional hazardous materials should be conducted.

Historical Value:

- This building is considered to be an important historic building, as an example of the 'Arts and Crafts' period architectural style. It has been heavily modified, however, with two inappropriate additions on the rear, and reconfiguration of the side entry area, and interior wall reconfiguration.
- There may be little remaining of the original fabric of the building that has not been disturbed. The true historical value of this building should be further investigated. The building is not now listed on the Register of Historic places, and is not in any registered historic district.

Other Issues:

None.

Conditions Assessment — Engineering Systems

Plumbing/Mechanical/Electrical

Plumbing:

APPLICABLE CODES AND STANDARDS

The plumbing systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts Fire Prevention Regulations
- Massachusetts State Fuel Gas and Plumbing Code
- ASHRAE 90.1

Plumbing Utilities:

- **Existing Domestic Water Service:**
  The existing building is currently served by a 3/4" domestic water service which enters the basement. The domestic water service equipment includes a water meter and isolation valves. This water service currently serves all of the buildings domestic water needs. The water distribution system is original to the building and each subsequent addition/renovation.
- **Natural Gas:**
  There is currently no gas service to the building.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Plumbing (continued):

- **Existing Sanitary Service:**
  The building's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the facility. The piping material above grade is primarily cast iron. The Plumbing fixtures drain to buried sanitary waste piping exiting the building and running to the buildings sanitary waste system.
- **Fuel Oil:**
  There is currently a heating fuel oil tank located in the basement serving the heating system furnace.

Plumbing Fixtures and Specialties:
Existing plumbing fixtures are as follows:

- Water closets are floor mounted; tank type, vitreous china.
- Lavatories are wall hung vitreous china. Faucets are of the two lever handle type.

Domestic Hot Water Systems:
Existing Domestic Hot Water System:

- The facilities domestic hot water is generated by an 80 gallon electric water heater which feeds all the buildings hot water needs. The water heater is in good condition.

Fire Protection Service:

- There is no fire protection coverage (sprinklers) currently at the facility.

Mechanical Systems:

APPLICABLE CODES AND STANDARDS
The mechanical systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th edition
- Massachusetts Fire Prevention Regulations
- International Mechanical Code
- NFPA, Latest Version
- ASHRAE 90.1

EXISTING MECHANICAL SYSTEMS
The existing building is heated by a forced air furnace. The furnace is a Bryant unit with its burner operating on oil. This equipment is approximately 3-5 years old and in very good condition.
The present Heating and Ventilating systems consist of floor mounted registers providing ducted heated air from the furnace in the basement. All ductwork is newer and in very good condition.
Air conditioning is provided via thru the wall air conditioning units. These units are in good condition.
The existing temperature controls in the building are via electric thermostats.

Conditions Assessment

Engineering Systems
Plumbing/Mechanical/Electrical

Electrical Systems:

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems were reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

- Massachusetts State Building Code 7th Edition
- Massachusetts State Fire Prevention Regulations
- NFPA Latest Edition
- 2008 Massachusetts Electrical Code
- Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
- ASHRAE 90.1

EXISTING ELECTRICAL SYSTEMS

- The building is served by a 120/240 volts, single-phase, 3-wire electrical service; capacity was noted as being rated 200 amps. The service equipment is located in the basement of the building. The service equipment is new and in very good condition.
- The lighting throughout the facility consists primarily of 1' x 4' 2-lamp wraparound fluorescent fixtures, 2' x 4' recessed troffers and fluorescent strip fixtures. The lighting throughout the facility is in good condition. The light levels appear to be within recommended levels.
- The fire alarm system is local with only 120 volt smoke detectors.
- Site lighting is accomplished via building mounted light fixtures and a number of pole mounted lights.
- Life safety emergency lighting is provided via Emergency battery units with unit mounted emergency light heads and battery powered exit lights, units are newer and in good condition.
- There is currently no controlled access or security system located in the facility.

MEP SYSTEMS CONCLUSION

In general, the systems vary in age from original to the building to as recent as 3-5 years old.

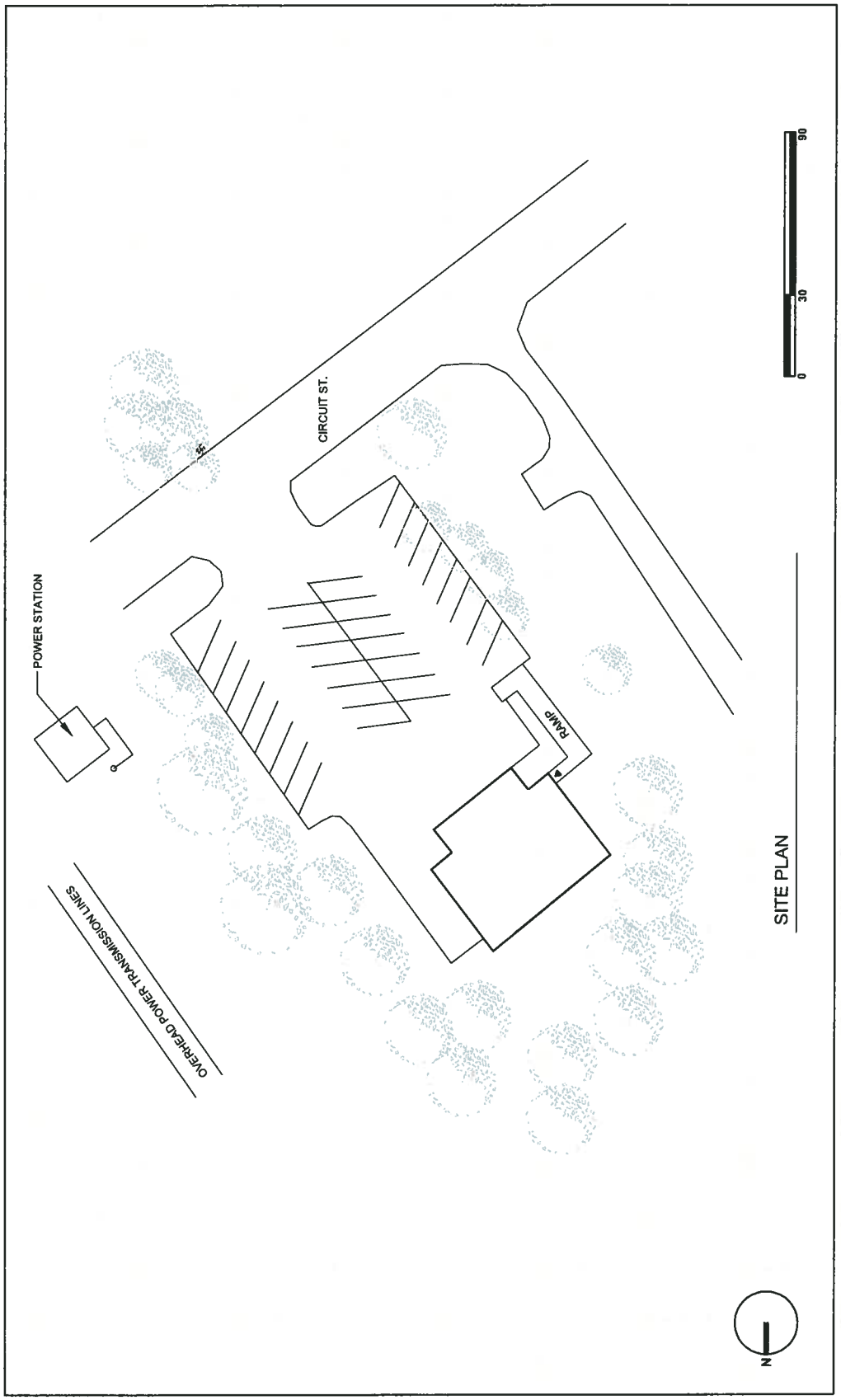
Plumbing systems throughout seem to be in good physical and working condition.

The Electrical systems appear to be in very good condition and operating without issues. The lighting systems are newer and in good condition, the addition of automated lighting controls should be implemented in order to meet current energy codes and to save on energy costs. The fire alarm system should be upgraded to include a notification tie-in for prompt response given the facility is often unoccupied. The emergency lighting and exit lighting systems are newer and appear to be in very good condition. Given that the facility is often unoccupied, the occupants would like a security system installed. This system could incorporate the recommended fire alarm upgrades as well.

AERIAL PHOTO

Council on Aging / Grange Hall is the building in the center of the photo.
(Source: Google)

SITE PLAN



D·R·A

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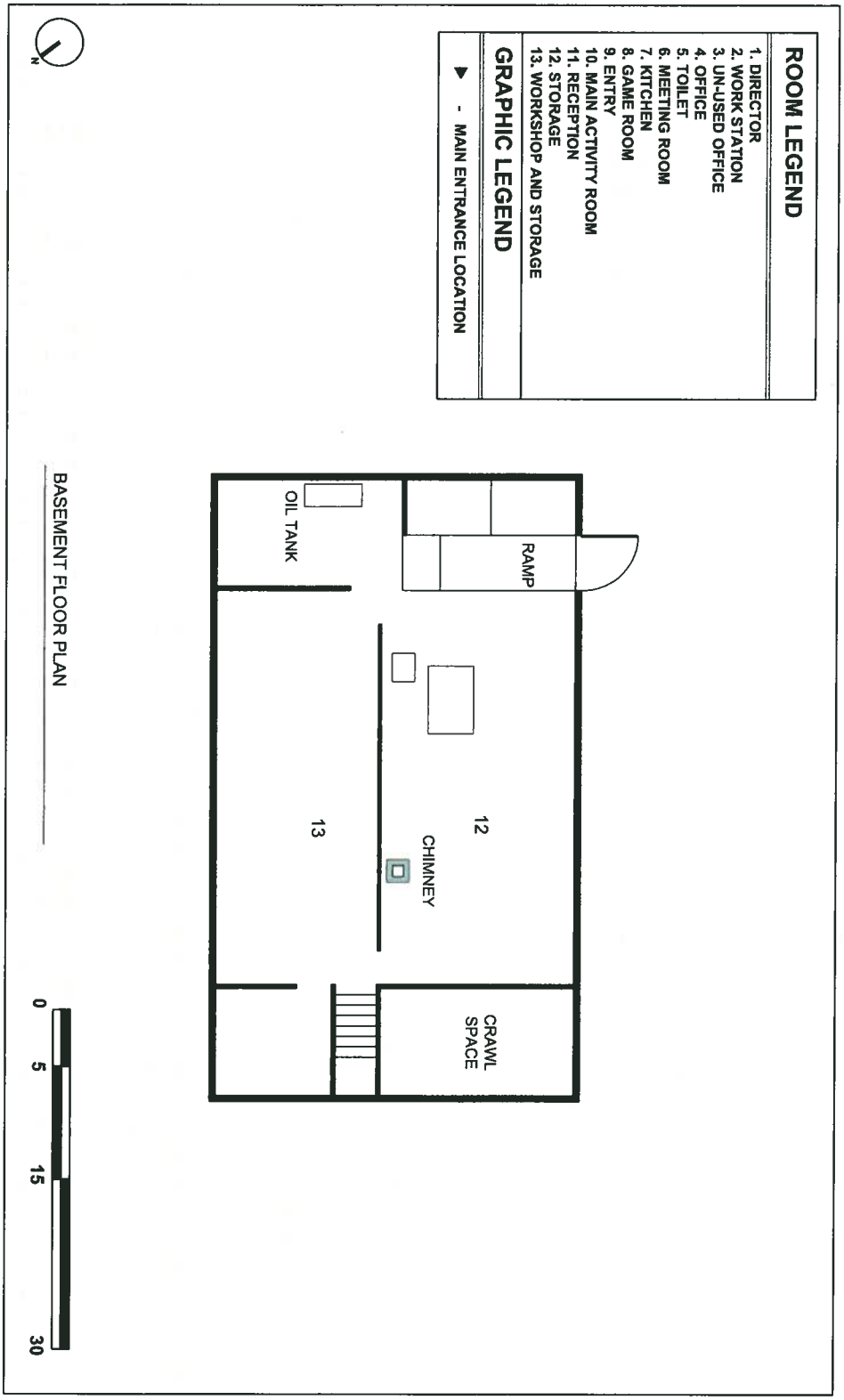
PARKS AND RECREATION
TOWN BUILDING STUDY
Hanover, Massachusetts

Scale: SEE BAR SCALE
Drawn by: MJQ
Job# 09017.00

FLOOR PLAN



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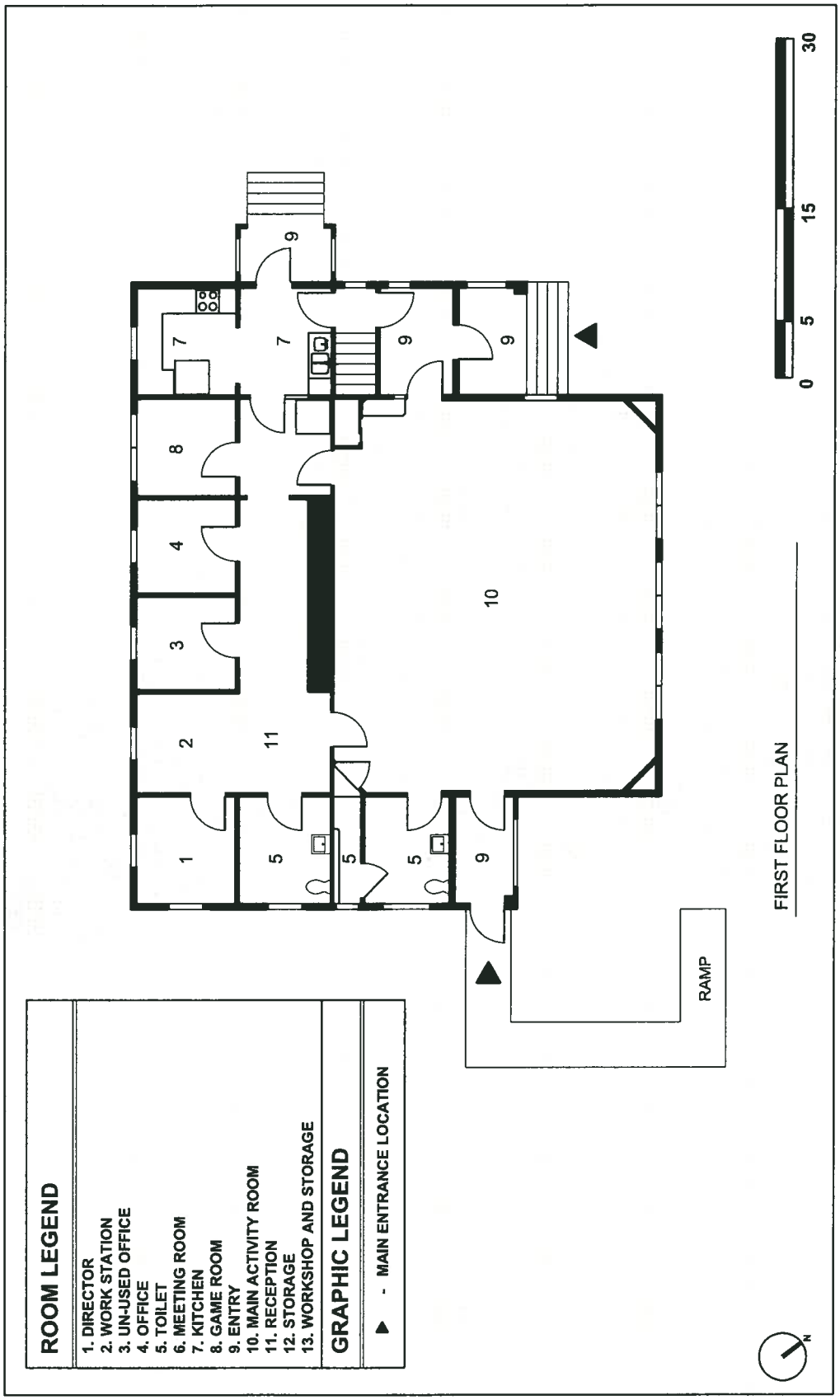

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Hanover, Massachusetts

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Historic photo of Grange Hall.

EXTERIOR PHOTOS

Exterior, front view.

Exterior, back facade. Doors are not suitable for public program access.

Exterior, southeast facade. Entrance and ramp access.

Exterior, detail of roof eave; roof shingles are still serviceable.

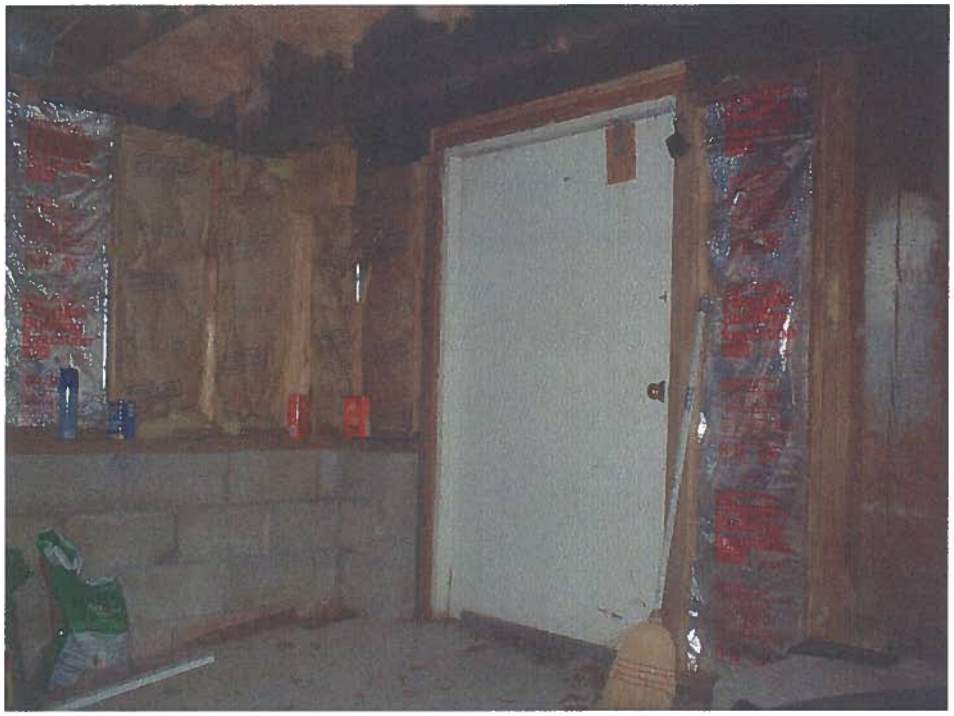
INTERIOR PHOTOS

Interior, main event room.

Non-compliant toilet room. No rear grab bar; side bar incorrectly placed, toilet paper too high.

Interior, non-accessible kitchen area.

Interior, basement area, looking towards boiler room.



Interior, basement ramp entry; not good for accessible entrance.

15-Year Capital Expenditures Plan

15 YEAR ACTION PLAN

Introduction to the 15 Year Capital Budget Plan

Purpose:
The purpose of the following information is to assist the Town of Hanover in establishing a fiscally responsible plan for future capital expenditures for building projects, as a significant element of the overall town budget planning process.

Explanation of Data:

- All dollar values are calculated in present (2011) value. Escalation is not included in the values for years 2 – 15. The Town Finance Department should apply appropriate net present value calculations to future years to establish values in future escalated dollars.
- Row One of each of the 18 individual building spreadsheets is calculated as follows:
  sum the costs of the cells below, and multiply the result by .25 (25%).
  Explanation: The actual raw costs of construction of various trades are in the rows below. This Row One calculation accounts for: General Contractors Costs for Administration, and Co-ordination of the Work, General Contractor's Overhead, General Contractor's Profit, and Contingency.
- The row labels were chosen by the Town of Hanover, as being the categories of costs most reflective of the budgeting needs of the Town.
- Each cell with a dollar value has a corresponding footnote on the subsequent page, explaining the basis of the calculation of the value, or the basis of the assumption behind the value.
- The bottom two rows, "energy" costs and "historic" costs, were also categories requested by the town. To apply values to these rows, the costs of the trades in the rows above were considered, and appropriate proportions of those costs were carried down and summed on these two lines, to represent the proportionate Town investment in energy improvements over time, and in maintaining historic buildings.
- An electronic version of the same information has been provided along with this report.
- This Plan (spreadsheet) is intended to be used as an active tool by the Town. It should be updated annually (or more frequently) to indicate work that has been completed, or not completed and shifted to subsequent years.
- Therefore, if the information is updated as intended, it is likely that the printed information on the following pages will not be the most recent version of the plan when this report is referenced in the future. Printed information should be considered to be historic 'snap-shot' data for comparison to the more up-to-date electronic version.
- We suggest that hard-copy should be printed each time revisions are made to the worksheet. The printed sheets are designed to automatically print the current date in the bottom right corner of the page.

TOTALS (By Building and Year)

	Buildings:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	Fire Station #1	0.00	-112,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-112,500.00
2	Fire Station #2	0.00	-181,250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-181,250.00
3	Fire Station #3	0.00	-56,250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-56,250.00
4	Fire Station #4 (Headquarters)	25,001.25	267,500.00	28,750.00	15,625.00	6,250.00	18,750.00	33,750.00	31,250.00	0.00	31,250.00	68,750.00	0.00	62,500.00	7,500.00	75,000.00	671,876.25
5	Center Elementary School	0.00	966,875.00	775,000.00	386,251.25	115,000.00	168,750.00	12,143,750.00	50,000.00	50,000.00	403,125.00	50,000.00	37,500.00	62,500.00	18,750.00	50,000.00	15,277,501.25
6	Cedar Elementary School	50,000.00	406,875.00	75,000.00	25,000.00	168,750.00	461,250.00	87,500.00	401,875.00	50,000.00	12,500.00	25,000.00	12,500.00	0.00	1,293,750.00	12,500.00	3,082,500.00
7	Hanover Middle School	0.00	845,626.25	525,000.00	561,250.00	250,000.00	1,055,000.00	625,000.00	531,250.00	75,000.00	0.00	0.00	606,250.00	0.00	0.00	0.00	5,074,376.25
8	Sylvester Elementary School	0.00	950,000.00	18,751.25	500,000.00	37,500.00	62,500.00	0.00	375,000.00	9,312,500.00	0.00	0.00	0.00	0.00	0.00	0.00	11,256,251.25
9	Salmond School Administration Bldg.	0.00	390,000.00	239,376.25	287,501.25	15,625.00	40,000.00	20,626.25	0.00	37,500.00	1,250.00	0.00	75,000.00	62,500.00	62,500.00	18,750.00	1,250,628.75
10	Police Station	0.00	53,125.00	0.00	0.00	37,500.00	15,000.00	0.00	25,000.00	0.00	43,750.00	37,500.00	25,000.00	0.00	25,000.00	125,000.00	386,875.00
11	Recreation Area Support Facilities	0.00	88,750.00	1,547,750.00	246,250.00	0.00	0.00	0.00	0.00	6,250.00	0.00	0.00	0.00	0.00	25,000.00	0.00	1,914,000.00
12	Public Works Facility at 219 Winter St.	0.00	158,128.75	373,750.00	0.00	41,876.25	0.00	1,250.00	4,625,002.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,200,007.50
13	Public Works - Highway Garage and Yard	0.00	773,750.00	66,250.00	320,000.00	73,750.00	0.00	1,250.00	562,500.00	96,875.00	40,625.00	0.00	0.00	25,000.00	0.00	228,125.00	2,188,125.00
14	Town Hall	0.00	273,125.00	481,250.00	45,000.00	155,000.00	27,500.00	125,000.00	3,750.00	0.00	125,000.00	75,000.00	62,500.00	37,500.00	137,500.00	71,250.00	1,619,375.00
15	Library	0.00	110,000.00	97,500.00	6,250.00	50,000.00	25,000.00	10,000.00	1,250.00	0.00	0.00	31,250.00	0.00	37,500.00	10,000.00	125,000.00	503,750.00
16	Stestson House	68,750.00	213,126.25	260,625.00	15,001.25	0.00	7,500.00	18,751.25	38,750.00	7,500.00	6,250.00	0.00	33,751.25	31,250.00	0.00	75,000.00	776,255.00
17	Curtis School	75,625.00	250,000.00	2,343,750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,669,375.00
18	Parks and Recreation Bldg. - Grange Hall	0.00	364,376.25	231,875.00	8,750.00	0.00	0.00	30,000.00	6,250.00	8,750.00	9,000.00	0.00	6,250.00	25,000.00	8,750.00	6,250.00	705,251.25
44	TOTALS	219,376.25	5,761,257.50	7,064,627.50	2,416,878.75	951,251.25	1,881,250.00	13,096,877.50	6,651,877.50	9,644,375.00	672,750.00	287,500.00	858,751.25	343,750.00	#######	786,875.00	52,226,147.50

Assumptions used in these totals:

1	Fire Station #1	Fire Station #1 - Sale of Property in Year 2
2	Fire Station #2	Fire Station #2 - Sale of Property in Year 2
3	Fire Station #3	Fire Station #3 - Demolition of building and sale of land.
4	Fire Station #4 (Headquarters)	Fire Station #4 - Headquarters. Normal program of repairs.
5	Center Elementary School	Center Elementary School - Addition in Year 7
6	Cedar Elementary School	Cedar Elementary School - Program of normal repairs.
7	Hanover Middle School	Hanover Middle School - Program of normal repairs
8	Sylvester Elementary School	Sylvester Elementary School - Budget for addition on Center School in year 7; and renovation of this building. Minimal Maintenance until renovation.
9	Salmond School Administration Bldg.	Salmond - School Admin. Building - Program of normal repairs
10	Police Station	Police Station - Program of normal repairs
11	Recreation Area Support Facilities	(B. Everett Hall) Recreation Area Support Facilities - Replace toilet and trailer building with new building; plus program of normal repairs
12	Public Works Facility at 219 Winter St.	Public Works Facility (219 Winter St.) (Mimimal Maintenance until Major Renovation).
13	Public Works - Highway Garage and Yard	Highway Garage - DPW Yard - Program of normal repairs
14	Town Hall	Town Hall - Program of normal repairs
15	Library	J. Curtis Free Library - Program of normal repairs
16	Stestson House	Stetson House - Program of normal repairs
17	Curtis School	Curtis School - Assumes stabilization, followed by renovation for a re-use similar in configuration to most recent use.
18	Parks and Recreation Bldg. - Grange Hall	Parks and Recreation (Grange Hall) - Program of normal repairs

Alternates; not carried forward (see tabbed sheets)

1	Fire Station 1	Fire Station 1 Renovate Option - NOT CARRIED IN TOTALS (upgrade facility in year 3 to be a staffed satelite fire station)	332,063.75
1	Fire Station 1	Fire Station 1 - Assume maintain current use; NOT CARRIED IN TOTALS; no staffing of this facility.	96,562.50
17	Curtis School	Curtis School - Assumes stabilization, followed by reconstruction and reuse as a district fire station.	5,606,875.00

TOTAL (All Buildings)

		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	50,125.25	1,202,251.50	1,944,175.50	483,375.75	190,250.25	376,250.00	2,619,375.50	1,330,375.50	1,928,875.00	134,550.00	57,500.00	171,750.25	68,750.00	317,750.00	157,375.00	11,032,729.50
2	Haz Mat - Asbestos Removal	ASB	0.00	517,000.00	210,000.00	293,000.00	0.00	352,000.00	16,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,388,500.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	75,000.00	77,500.00	8,000.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180,500.00
5	Site Work - Paving	PAVE	0.00	290,001.00	570,000.00	35,000.00	40,000.00	0.00	0.00	20,000.00	70,000.00	0.00	30,000.00	50,000.00	20,000.00	20,000.00	55,000.00	1,200,001.00
6	Site Work - Landscaping	LAND	0.00	35,000.00	40,000.00	200,000.00	0.00	5,000.00	30,000.00	300,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	610,000.00
7	Site Work - Utilities	UTIL	0.00	1.00	0.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,001.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	18,000.00	0.00	20,000.00	0.00	0.00	0.00	20,000.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	78,000.00
9	Site Work - Other	SITE	0.00	15,000.00	52,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67,000.00
10	Doors, Frames and Door Hardware	DOOR	0.00	188,500.00	115,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	303,500.00
11	Windows	WIN	2,500.00	193,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	380,000.00	0.00	0.00	0.00	0.00	0.00	575,500.00
11a	Insulation and Similar	INS	20,000.00	53,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73,500.00
12	Exterior Siding	EXT	0.00	59,500.00	12,000.00	6,000.00	5,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	6,000.00	0.00	20,000.00	17,000.00	131,500.00
13	Masonry	MAS	0.00	30,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00
14	Historical Masonry	HM	0.00	17,500.00	24,000.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	77,500.00
15	Roofing and Flashing	ROOF	45,000.00	641,000.00	31,000.00	7,000.00	0.00	806,000.00	0.00	0.00	6,000.00	0.00	0.00	546,000.00	0.00	1,090,000.00	345,000.00	3,517,000.00
16	Historical Roofing and Flashing	HR	0.00	54,500.00	0.00	0.00	0.00	0.00	24,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78,500.00
17	Painting	PAINT	3,000.00	17,500.00	15,500.00	25,000.00	30,000.00	15,000.00	8,000.00	0.00	7,500.00	17,500.00	0.00	0.00	0.00	24,000.00	47,500.00	210,500.00
18	Historical Painting	HP	0.00	96,000.00	85,000.00	7,000.00	40,000.00	20,000.00	10,000.00	30,000.00	12,000.00	40,000.00	80,000.00	10,000.00	25,000.00	7,000.00	65,000.00	527,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	18,000.00	250,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	275,000.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	6,000.00
21	Lathing & Plastering	PLAS	0.00	20,001.00	0.00	11,000.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	31,003.00
22	Acoustical Tile Ceilings	ACOU	0.00	39,000.00	0.00	6,000.00	0.00	10,000.00	0.00	0.00	0.00	0.00	55,000.00	10,000.00	40,000.00	0.00	0.00	160,000.00
23	Resilient Flooring	RESF	0.00	5,001.00	0.00	1.00	9,000.00	0.00	32,001.00	0.00	0.00	7,200.00	0.00	5,000.00	0.00	20,000.00	0.00	78,203.00
24	Glass & Glazing	GLAS	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60,000.00	60,000.00
26	Carpet	CARPT	0.00	16,000.00	0.00	5,000.00	12,000.00	16,000.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	54,000.00
26a	Accessibility Upgrades	ACCESS	0.00	532,000.00	664,001.00	790,000.00	110,000.00	90,000.00	80,000.00	650,000.00	110,000.00	0.00	40,000.00	0.00	40,000.00	0.00	40,000.00	3,146,001.00
27	Plumbing - Waste Sytems	WAST	0.00	13,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	16,000.00
28	Plumbing - Supply Systems	WATR	0.00	15,000.00	0.00	0.00	0.00	0.00	2,000.00	5,500.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	23,500.00
29	Plumbing - Other	PLMB	0.00	55,000.00	23,000.00	0.00	37,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00	0.00	0.00	165,500.00
30	HVAC - Control Systems	CNTRL	0.00	38,500.00	0.00	0.00	0.00	35,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73,500.00
31	HVAC - Air Systems and Equipment	AIR	0.00	51,500.00	110,000.00	7,500.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	175,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	30,000.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35,000.00	0.00	65,001.00
33	HVAC - Steam Traps	STEAM	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
34	HVAC - Other	HVAC	0.00	60,000.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	50,000.00	0.00	110,002.00
35	Electrical - Power	POWR	20,001.00	119,000.00	5,000.00	5,000.00	17,500.00	132,000.00	75,000.00	5,000.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	383,501.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70,000.00	0.00	0.00	70,000.00
37	Electrical - Alarm Systems	ALARM	35,000.00	73,501.00	31,500.00	0.00	0.00	0.00	0.00	0.00	0.00	35,000.00	0.00	0.00	0.00	0.00	0.00	175,001.00
38	Electrical - Lighting	LIGHT	0.00	58,000.00	21,700.00	170,000.00	34,000.00	0.00	0.00	0.00	0.00	30,000.00	0.00	35,000.00	0.00	0.00	0.00	348,700.00
39	Electrical - Other	ELEC	0.00	116,001.00	44,000.00	0.00	250,000.00	12,000.00	0.00	95,001.00	60,000.00	25,000.00	0.00	0.00	0.00	0.00	0.00	602,002.00
40	Elevators	ELEV	0.00	640,000.00	150,001.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00	0.00	0.00	0.00	805,001.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	175,500.00	0.00	0.00	55,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	230,500.00
42	Other 1	OTHR1	0.00	367,000.00	5,215,000.00	270,001.00	105,000.00	0.00	9,700,000.00	4,190,000.00	7,450,000.00	0.00	0.00	0.00	0.00	0.00	0.00	27,297,001.00
43	Other 2	OTHR2	0.00	60,000.00	70,000.00	50,000.00	0.00	0.00	500,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	680,000.00
44	TOTAL (All Trade Categories)	TOTL	250,626.25	6,011,257.50	9,720,877.50	2,416,878.75	951,251.25	1,881,250.00	13,096,877.50	6,651,877.50	9,644,375.00	672,750.00	287,500.00	858,751.25	343,750.00	1,588,750.00	786,875.00	55,163,647.50
45	Energy Efficiency (Sub-Total)	ENER	0.00	219,000.00	100,000.00	53,500.00	8,000.00	50,000.00	96,000.00	25,000.00	74,500.00	14,000.00	0.00	0.00	0.00	20,000.00	0.00	660,000.00
46																		
47	Historical Building Restoration (Sub-Total)	HIST	68,750.00	213,126.25	320,625.00	22,001.25	40,000.00	27,500.00	42,751.25	43,750.00	14,500.00	46,250.00	80,000.00	33,751.25	61,250.00	0.00	115,000.00	1,129,255.00

Fire Station #1 - Sale of Property in Year 2

1

		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	-22,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-22,500.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	-100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-100,000.00
43	Other: 2	OTHR2	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
44	TOTAL (All Trade Categories)	TOTL	0.00	-112,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-112,500.00
45	Energy Efficiency (Sub-Total)	ENER																0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: E49
Comment: Estimated net proceeds from sale of property; positive cash flow in to the Town is a negative number on this spreadsheet.

Cell: E50
Comment: PBrown:
Legal fees for sale

Fire Station 1 Renovate Option - NOT CARRIED IN TOTALS (upgrade facility in year 3 to be a staffed satelite fire station)

	Work Category	Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	2,750.00	4,687.50	51,850.25	1,625.00	375.00	0.00	0.00	0.00	0.00	1,250.00	500.00	3,375.00	0.00	0.00	0.00	66,412.75
2	Haz Mat - Asbestos Removal	ASB	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
4	Demolition	DEMO	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
5	Site Work - Paving	PAVE	0.00	2,500.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00	0.00	0.00	0.00	15,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
7	Site Work - Utilities	UTIL	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	1,000.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
10	Doors, Frames and Door Hardware	DOOR	0.00	6,000.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,500.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	12,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	5,000.00	0.00	0.00	0.00	20,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,500.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	3,000.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,500.00
21	Lathing & Plastering	PLAS	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
23	Resilient Flooring	RESF	2,500.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,700.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,200.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	2,500.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,000.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,500.00
31	HVAC - Air Systems and Equipment	AIR	0.00	7,500.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,500.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,000.00	0.00	0.00	0.00	4,000.00
35	Electrical - Power	POWR	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
36	Electrical - Data / Tele	D/T	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00	0.00	0.00	0.00	2,000.00
37	Electrical - Alarm Systems	ALARM		1,750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,750.00
38	Electrical - Lighting	LIGHT	2,500.00	0.00	3,500.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,500.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	90,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90,000.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00
42	Other: 1	OTHR1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	TOTAL (All Trade Categories)	TOTL	13,750.00	23,437.50	259,251.25	8,125.00	1,875.00	0.00	0.00	0.00	0.00	6,250.00	2,500.00	16,875.00	0.00	0.00	0.00	332,063.75
45	Energy Efficiency (Sub-Total)	ENER			10,000.00													10,000.00
46					0.00													0.00
47	Historical Building Restoration (Sub-Total)	HIST			0.00													0.00

Cell: D7
Comment: PBrown:
Remove asbestos tile throughout

Cell: F8
Comment: PBrown:
added cost of special procedures for first re-painting of exterior.

Cell: F9
Comment: PBrown:
demo toilets and kitchen cabinets and for elevator

Cell: E10
Comment: PBrown:
seal and stripe paving; misc. repairs

Cell: F10
Comment: PBrown:
partial repave after heavy construction equipment and utilities work

Cell: O10
Comment: PBrown:
seal and stripe paving; misc. repairs

Cell: F11
Comment: PBrown:
after heavy construction

Cell: F12
Comment: PBrown:
general allocation for work associated with new renovations

Cell: D14
Comment: PBrown:
remove perimeter fence

Cell: E14
Comment: PBrown:
new signage at road

Cell: E15
Comment: PBrown:
replace all exterior man-doors with new, for security, with new hardware.

Cell: F21
Comment: PBrown:
Reroof

Cell: I21
Comment: PBrown:
re-roof in year 3 at time of elevator work

Cell: N21
Comment: PBrown:
misc maintenance

Cell: F23
Comment: Pbro Paint wood trim outside; paint interior

Cell: M23
Comment: Pbro Paint wood trim

Cell: O23
Comment: PBrown:
paint interior

Cell: D26
Comment: PBrown:
handrails at staris

Cell: D29
Comment: PBrown:
new floors

Cell: F33
Comment: PBrown:
Costs associated with accessibility are factored into individual line items for general building renovation work.

Cell: F34
Comment: PBrown:
toilet room and kitchen modifications.

Cell: G34
Comment: PBrown:
floor drains in apparatus bays; per code.

Cell: F35
Comment: PBrown:
toilet room and kitchen modifications

Cell: F37
Comment: PBrown:
modifications related to general renovations

Cell: E38
Comment: PBrown:
Equipment Bay Exhaust System replacement

Cell: F38
Comment: PBrown:
Toilet exhause re-do when toillets renovated

Cell: O41
Comment: PBrown:
replace or repair unit heaters in equipment bay.

Cell: F42
Comment: PBrown:
Service upgrade for elevator.

Cell: O43
Comment: PBrown:
replace date/tel service; response to anticipated technological advances.

Cell: E44
Comment: PBrown:
Security Alarm system

Cell: D45
Comment: PBrown:
Emergency Lighting

Cell: F45
Comment: PBrown:
Exterior Lighting; energy saving type; and new lights inside reno areas

Cell: H45
Comment: PBrown:
Automatic Controls

Cell: F47
Comment: PBrown:
elevator required for accessibility

Cell: F48
Comment: PBrown:
sprinklers required for building with sleeping accomodations

Cell: F52
Comment: PBrown:
for exterior lighting and other 'added' costs of project for energy savings

Fire Station 1 - Assume maintain current use; NOT CARRIED IN TOTALS; no staffing of this facility. 1

	Work Category	Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requ	GEN	2750	4687.5	1875	2875	1625	2125	0	0	0	1250	0	2125	0	0	0	$19,312.50
2	Haz Mat - Asbestos Removal	ASB	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$2,000.00
3	Haz Mat - Deleading	LEAD	0	0	1000	0	0	0	0	0	0	0	0	0	0	0	0	$1,000.00
4	Demolition	DEMO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
5	Site Work - Paving	PAVE	0	2500	0	0	0	0	0	0	0	0	0	2500	0	0	0	$5,000.00
6	Site Work - Landscaping	LAND	0	0	0	5000	0	0	0	0	0	0	0	0	0	0	0	$5,000.00
7	Site Work - Utilities	UTIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
9	Site Work - Other	SITE	1000	1000	0	0	0	0	0	0	0	0	0	0	0	0	0	$2,000.00
10	Doors, Frames and Door Hardware	DOOR	0	6000	0	0	0	0	0	0	0	0	0	0	0	0	0	$6,000.00
11	Windows	WIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
12	Exterior Siding	EXT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
13	Masonry	MAS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
14	Historical Masonry	HM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
15	Roofing and Flashing	ROOF	0	0	0	0	0	7500	0	0	0	0	0	0	0	0	0	$7,500.00
16	Historical Roofing and Flashing	HR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
17	Painting	PAINT	0	0	5000	0	5000	0	0	0	0	5000	0	0	0	0	0	$15,000.00
18	Historical Painting	HP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
19	Waterproofing, Damping & Caulking	WDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$3,000.00
21	Lathing & Plastering	PLAS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
22	Acoustical Tile Ceilings	ACOU	0	0	0	0	0	1000	0	0	0	0	0	0	0	0	0	$1,000.00
23	Resilient Flooring	RESF	2500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$2,500.00
24	Glass & Glazing	GLAS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
25	Tile (ceramic wall or floor tile)	TILE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
26	Carpet	CARPT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
27	Plumbing - Waste Sytems	WAST	0	0	0	6500	0	0	0	0	0	0	0	0	0	0	0	$6,500.00
28	Plumbing - Supply Systems	WATR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
29	Plumbing - Other	PLMB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
30	HVAC - Control Systems	CNTRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
31	HVAC - Air Systems and Equipment	AIR	0	7500	0	0	0	0	0	0	0	0	0	0	0	0	0	$7,500.00
32	HVAC - Boilers	BOIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
33	HVAC - Steam Traps	STEAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
34	HVAC - Other	HVAC	0	0	0	0	0	0	0	0	0	0	0	4000	0	0	0	$4,000.00
35	Electrical - Power	POWR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
36	Electrical - Data / Tele	D/T	0		0	0	0	0	0	0	0	0	0	2000	0	0	0	$2,000.00
37	Electrical - Alarm Systems	ALARM		1750	0	0	0	0	0	0	0	0	0	0	0	0	0	$1,750.00
38	Electrical - Lighting	LIGHT	2500	0	1500	0	1500	0	0	0	0	0	0	0	0	0	0	$5,500.00
39	Electrical - Other	ELEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
40	Elevators	ELEV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
41	Fire Protection / Sprinkler Systems	FIRE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
42	Other: 1	OTHR1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
43	Other: 2	OTHR2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0.00
44	TOTAL (All Trade Categories)	TOTL	13750	23438	9375	14375	8125	10625	0	0	0	6250	0	10625	0	0	0	$96,562.50
45	Energy Efficiency (Sub-Total)	ENER			1500													$1,500.00
46	Accessibility Upgrades (Sub-Total)	ACCESS			0													$0.00
47	Historical Building Restoration (Sub-Total)	HIST			0													$0.00

Cell: E7
Comment: PBrown:
Remove asbestos tile throughout

Cell: G8
Comment: PBrown:
added cost of special procedures for first re-painting of exterior.

Cell: F10
Comment: PBrown:
seal and stripe paving; misc. repairs

Cell: P10
Comment: PBrown:
seal and stripe paving; misc. repairs

Cell: H11
Comment: PBrown:
re-seed
new plantings

Cell: E14
Comment: PBrown:
remove perimeter fence

Cell: F14
Comment: PBrown:
new signage at road

Cell: F15
Comment: PBrown:
replace all exterior man-doors with new, for security, with new hardware.

Cell: J20
Comment: PBrown:
re-roof

Cell: G22
Comment: Pbro Paint wood trim

Cell: I22
Comment: PBrown:
interior painting; all areas

Cell: N22
Comment: Pbro Paint wood trim

Cell: E25
Comment: PBrown:
handrails at staris

Cell: J27
Comment: PBrown:
replace first floor ceilings

Cell: E28
Comment: PBrown:
new floors

Cell: H32
Comment: PBrown:
floor drains in apparatus bays; per code.

Cell: F36
Comment: PBrown:
Equipment Bay Exhaust System replacement

Cell: P39
Comment: PBrown:
replace or repair unit heaters in equipment bay.

Cell: P41
Comment: PBrown:
replace date/tel service

Cell: F42
Comment: PBrown:
Security Alarm system

Cell: E43
Comment: PBrown:
Emergency Lighting

Cell: G43
Comment: PBrown:
Exterior Lighting; energy saving type

Cell: I43
Comment: PBrown:
Automatic Controls

Cell: G50
Comment: PBrown:
for exterior lighting

Fire Station #2 - Sale of Property in Year 2

2

		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	-36,250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-36,250.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	-150,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-150,000.00
43	Other: 2	OTHR2	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
44	TOTAL (All Trade Categories)	TOTL	0.00	-181,250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-181,250.00
45	Energy Efficiency (Sub-Total)	ENER	0.00															0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: L34
Comment: rmcaleer:
new gas hot water heater was $1000; removed by PB due to prior sale of building

Cell: G36
Comment: rmcaleer:
new floor drains $6000 if property is held by town.

Cell: E38
Comment: rmcaleer:
side door heater replacement $2500 if building is held by town for continued use.

Cell: E41
Comment: rmcaleer:
Apparatus bay exhaust $8000 if property is held by town for continued use

Cell: E44
Comment: rmcaleer:
new fire alarm and security system $5000 if property is held.

Cell: H45
Comment: rmcaleer:
new exterior lights $2000 if property is held by town.

Cell: D46
Comment: rmcaleer:
new exit and emergency battery units 6500 if property kept

Cell: D47
Comment: PBrown:
If property is held, an elevator is required, budget $150,000 min.

Cell: D48
Comment: PBrown:
If property is held, and if anyone sleeps here, then a F.P. sprinkler system is required. Budget $50000.

Cell: E49
Comment: PBrown:
Estimated net proceeds from sale of property; positive cash flow in to the Town is a negative number on this spreadsheet.

Cell: E50
Comment: PBrown:
Legal fees for sale

Cell: D52
Comment: PBrown:
Half of cost of new alarms.

Fire Station #3 - Demolition of building and sale of land.

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	-11,250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-11,250.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	-75,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-75,000.00
43	Other: 2	OTHR2	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
44	**TOTAL (All Trade Categories)**	**TOTL**	0.00	-56,250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-56,250.00
45	Energy Efficiency (Sub-Total)	ENER																0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: J34
Comment: rmcaleer:
new electrical hot water heater; $1200 if property is held.

Cell: D35
Comment: rmcaleer:
Cleanout of garage drains; $2000 if property is held.

Cell: F35
Comment: rmcaleer:
new plumbing fixtures; $2500 if property is held.

Cell: E38
Comment: rmcaleer:
Apparatus bay exhaust; $8000 if property is held

Cell: N38
Comment: rmcaleer:
new garage unit heaters; $4500 if property is held.

Cell: H42
Comment: rmcaleer:
new service panel; $4000 if property is held.

Cell: M42
Comment: rmcaleer:
replace existing 6KW generator; $6000 if property is held.

Cell: E44
Comment: rmcaleer:
new F/A system; $3500 if property is held.

Cell: G44
Comment: rmcaleer:
new security system; $3000 if property is held.

Cell: J45
Comment: rmcaleer:
new lighting; $2500 if property is held.

Cell: D46
Comment: rmcaleer:
new emergency battery units; $3500 if property is held.

Cell: D49
Comment: PBrown:
Demolition of building and clearing debris and utilities, and regrading site for resale.

Cell: E49
Comment: PBrown:
Proceeds from sale of land; negative value represents positive cash flow in to the Town.

Cell: D50
Comment: PBrown:
Legal fees in preparation for re-sale.

Cell: E50
Comment: PBrown:
Demolition costs

Fire Station #4 - Headquarters. Normal program of repairs.

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requirer	GEN	5,000.25	53,500.00	5,750.00	3,125.00	1,250.00	3,750.00	6,750.00	6,250.00	0.00	6,250.00	13,750.00	0.00	12,500.00	1,500.00	15,000.00	134,375.25
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	0.00	0.00	30,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	120,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120,000.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	20,000.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00
12	Exterior Siding	EXT	0.00	500.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,500.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60,000.00	60,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	5,000.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,000.00	0.00	16,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25,000.00	0.00	0.00	0.00	0.00	26,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	27,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,000.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	2,000.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	6,500.00	20,000.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00	0.00	0.00	50,000.00
37	Electrical - Alarm Systems	ALARM	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25,000.00	0.00	0.00	0.00	0.00	0.00	25,000.00
39	Electrical - Other	ELEC	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	25,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00
42	Other: 1	OTHR1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	TOTAL (All Trade Categories)	TOTL	25,001.25	267,500.00	28,750.00	15,625.00	6,250.00	18,750.00	33,750.00	31,250.00	0.00	31,250.00	68,750.00	0.00	62,500.00	7,500.00	75,000.00	671,876.25
45	Energy Efficiency (Sub-Total)	ENER	0.00	20,000.00	23,000.00	7,500.00						12,500.00						63,000.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: N10
Comment: PBrown:
Re-seal and re-strip paving.

Cell: I12
Comment: PBrown:
Repairs to catchbasin and sub-surface drainage on west side of entry drive.

Cell: E15
Comment: PBrown:
Replace Overhead doors; $20,000 per door; three pairs of doors.

Cell: D16
Comment: PBrown:
Replace broken glass in overhead door at rear.

Cell: D17
Comment: PBrown:
Reinsulate Attic

Cell: E17
Comment: PBrown:
Reinsulate accessible sidewalls

Cell: D18
Comment: PBrown:
Minor immediate repairs to damaged vinyl siding. One man one day with materials.

Cell: E18
Comment: PBrown:
Minor immediate repairs to damaged vinyl siding. One man one day with materials.

Cell: H18
Comment: PBrown:
Misc. repairs to damaged vinyl siding; various locaitons.

Cell: R21
Comment: PBrown:
replace shingles; 5000 s.f. at 12$ per s.f.

Cell: G23
Comment: PBrown:
Painting at first floor level Interior

Cell: I23
Comment: PBrown:
Painting second floor level interior.

Cell: Q23
Comment: PBrown:
Repaint firstr floor interior; after 10 years.

Cell: D26
Comment: PBrown:
Properly brace exhaust flue.

Cell: E26
Comment: PBrown:
Properly brace exhaust flue.

Cell: E28
Comment: PBrown:
Replace stained tiles with new; 500 s.f. at $2/s.f.

Cell: N28
Comment: PBrown:
Replace all accoustical ceilings; 10000 sf at $2.50 per SF

Cell: J29
Comment: PBrown:
Replace all resilient tile floor finishes; remove any carpet and replace with VCT. 9000 sf at 3$/SF

Cell: D36
Comment: rmcaleer:
Apparatus bay drain cleanout

Cell: E36
Comment: rmcaleer:
Apparatus bay drain cleanout

Cell: F36
Comment: rmcaleer:
auto flush valves on toilets sinks and urinals

Cell: D38
Comment: rmcaleer:
heating system evaluation; Pbrown: in combination with re-insulation of attic; and this value should also cover testing the capacity of the emergency generator.

Cell: E38
Comment: rmcaleer:
heating system evaluation; Pbrown: in combination with re-insulation of attic; and this value should also cover testing the capacity of the emergency generator.

Cell: F38
Comment: rmcaleer:
heating system upgrade based on evaluation; Pbrown: placeholder value pending results of re-insulation project.

Cell: G38
Comment: rmcaleer:
replace older univents

Cell: D42
Comment: PBrown:
Test capacity of emergency generator. See "AIR" value above.

Cell: P43
Comment: PBrown:
Replace communications system. This value is a placeholder in anticipation of unexpected technological advances.

Cell: D44
Comment: PBrown:
Expand fire alarm system to include detectors in attic.

Cell: E44
Comment: rmcaleer:
new security system

Cell: M45
Comment: PBrown:
Replacement of lighting systems; per RM email 3/9/11

Cell: E46
Comment: PBrown:
Expand fire alarm system to include detectors in attic.

Cell: K46
Comment: rmcaleer:
new generator

Cell: D48
Comment: PBrown:
Sprinkler system in equipment bay; auto suppression system at day room kitchen stove.

Cell: E48
Comment: PBrown:
Sprinkler system in equipment bay; auto suppression system at day room kitchen stove.

Cell: D52
Comment: PBrown:
Reinsulate Attic

Cell: E52
Comment: PBrown:
Reinsulate attic

Cell: F52
Comment: rmcaleer:
heating system upgrade based on evaluation plus flush valves

Cell: M52
Comment: PBrown:
Half of cost of lighting upgrades

Center Elementary School - Addition in Year 7

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	193,375.00	155,000.00	77,250.25	23,000.00	33,750.00	2,428,750.00	10,000.00	10,000.00	80,625.00	10,000.00	7,500.00	12,500.00	3,750.00	10,000.00	3,055,500.25
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	293,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	293,000.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	500,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
9	Site Work - Other	SITE	0.00	5,000.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55,000.00
10	Doors, Frames and Door Hardware	DOOR	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	320,000.00	0.00	0.00	0.00	0.00	0.00	320,000.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	630,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	630,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00	0.00	15,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	5,000.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	5,000.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16,000.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00	0.00	0.00	20,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,000.00
26a	Accessibility Upgrades	ACCESS	0.00	40,000.00	40,000.00		40,000.00		40,000.00		40,000.00		40,000.00		40,000.00		40,000.00	320,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	2,500.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,500.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	25,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25,000.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	100,000.00	75,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	175,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	0.00	30,000.00
39	Electrical - Other	ELEC	0.00	60,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60,000.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	2,000.00	0.00	0.00	30,000.00	0.00	9,600,000.00	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,672,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	TOTAL (All Trade Categories)	TOTL	0.00	966,875.00	775,000.00	386,251.25	115,000.00	168,750.00	12,143,750.00	50,000.00	50,000.00	403,125.00	50,000.00	37,500.00	62,500.00	18,750.00	50,000.00	15,277,501.25
45	Energy Efficiency (Sub-Total)	ENER	0.00	20,000.00	30,000.00			10,000.00	96,000.00			500.00						156,500.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: G7
Comment: PBrown:
Floor tile abatement; value from School Department estimates on file.

Cell: F10
Comment: PBrown:
Sitework project to expand parking capacity, etc. Placeholder value; scope of work unknown at this time.

Cell: E13
Comment: PBrown:
Repair basketball hoops and general play area improvements. Allowance.

Cell: D14
Comment: PBrown:
Design Study for drives and parking.

Cell: E14
Comment: PBrown:
Design Study for drives and parking.

Cell: F14
Comment: PBrown:
Design Fees for Sitework Project.

Cell: D15
Comment: PBrown:
Repair exit door at gym

Cell: E15
Comment: PBrown:
Repair exit door at gym

Cell: M16
Comment: PBrown:
Replace windows in S.E. wing; 16 locations at 20K per location.

Cell: H19
Comment: PBrown:
Misc. masonry and pointing repairs. Allowance.

Cell: D21
Comment: PBrown:
40,000 sf of roof at $20 per SF

Cell: E21
Comment: PBrown:
40,000 sf of roof at $20 per SF

Cell: G23
Comment: PBrown:
Exterior spot painting; allowance.

Cell: Q23
Comment: PBrown:
Exterior painting; all previously painted surfaces. Allowance.

Cell: Q25
Comment: PBrown:
Sealant replacement at same time as painting project. Allowance.

Cell: D27
Comment: PBrown:
Destructive cutting to observe rain leader inside wall classroom 12, and patch back

Cell: E27
Comment: PBrown:
Destructive cutting to observe rain leader inside wall classroom 12, and patch back

Cell: G27
Comment: PBrown:
Misc wall and finish repairs, as noted in report. 3 men 7 days at $500/man day incl. Materials.

Cell: I28
Comment: PBrown:
Budget for periodic partial replacement; about 5000 s.f. at $2 per S.F.

Cell: P28
Comment: PBrown:
Budget for periodic partial replacement; about 5000 s.f. at $2 per S.F.

Cell: G29
Comment: PBrown:
See asbestos removal

Cell: H32
Comment: PBrown:
Carpet Replacement. $3 per s.f. and 4000 s.f. allowed for.

Cell: D33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: E33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: F33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: H33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: J33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: L33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: N33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: P33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: R33
Comment: PBrown:
Misc. Accessibility Improvements; budget value every other year for a variety of specific needs as noted in the report.

Cell: M34
Comment: rmcaleer:
new gas hot water heater

Cell: E36
Comment: rmcaleer:
auto controls for sinks toilets and urinals

Cell: I37
Comment: rmcaleer:
pneumatic controls tubing replacement

Cell: F38
Comment: rmcaleer:
auditorium and caff H and V unit replacement

Cell: D41
Comment: PBrown:
Placeholder value inserted by PB for energy management system updating

Cell: E41

Comment: PBrown:
Placeholder value inserted by PB for energy management system updating

Cell: I42
Comment: PBrown:
Emergency Generator project, including associated architectural work; value added by PB. Placeholder pending review by CES.

Cell: J42
Comment: rmcaleer:
Satilite electrical panel replacement approximatly 50%

Cell: O45
Comment: PBrown:
Partial replacement of lighting system as advised by RM in 3/10/11 rmail

Cell: D46
Comment: PBrown:
Intercom (and clock) system upgrades; moved value here from year 10.

Cell: E46
Comment: PBrown:
Intercom (and clock) system upgrades; moved value here from year 10.

Cell: M46
Comment: rmcaleer:
paging system replacement; Pbrown moved 60K value to year 1

Cell: D49
Comment: PBrown:
Safety repairs to deteriorated cover over mechanical areaway. 1 man 4 days plus materials.

Cell: E49
Comment: PBrown:
Safety repairs to deteriorated cover over mechanical areaway. 1 man 4 days plus materials.

Cell: H49
Comment: PBrown:
Refinish hardwood floors; 10 locations at 3K per room.

Cell: J49
Comment: PBrown:
30,000 SF addition onto the Center school, at $400 per SF. For students from Sylvester School.

Cell: K49
Comment: PBrown:
Replace exterior storage wooden structures with appropriate masonry construction. Allowance.

Cell: D52
Comment: PBrown:
portion of roofing costs for insulation upgrade above code min.; plus portion of energy management system upgrade

Cell: E52
Comment: PBrown:
portion of roofing costs for insulation upgrade above code min.; plus portion of energy management system upgrade

Cell: I52
Comment: PBrown:
Portion of controls project

Cell: J52
Comment: PBrown:
one percent of base costs of new additoin and renovations, for premium costs for green design

Cell: M52
Comment: PBrown:
premium value of water heater above min.

Cedar Elementary School - Program of normal repairs.

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	10,000.00	81,375.00	15,000.00	5,000.00	33,750.00	92,250.00	17,500.00	80,375.00	10,000.00	2,500.00	5,000.00	2,500.00	0.00	258,750.00	2,500.00	616,500.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	352,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352,000.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	5,000.00	30,000.00	300,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	335,000.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	20,000.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	60,000.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000,000.00	0.00	1,040,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	10,000.00	0.00	0.00	0.00	10,000.00	0.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	10,000.00	40,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	2,000.00	0.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,000.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00	0.00	0.00	0.00	40,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	80,000.00	40,000.00	0.00	40,000.00	0.00	40,000.00	0.00	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	240,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,500.00
29	Plumbing - Other	PLMB	0.00	12,000.00	0.00	0.00	25,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37,000.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35,000.00	0.00	35,000.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00
35	Electrical - Power	POWR	0.00	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	17,000.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37,000.00
39	Electrical - Other	ELEC	0.00	0.00	20,000.00	0.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70,000.00
40	Elevators	ELEV	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,500.00
42	Other: 1	OTHR1	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	**TOTAL (All Trade Categories)**	TOTL	50,000.00	406,875.00	75,000.00	25,000.00	168,750.00	461,250.00	87,500.00	401,875.00	50,000.00	12,500.00	25,000.00	12,500.00	0.00	1,293,750.00	12,500.00	3,082,500.00
45	Energy Efficiency (Sub-Total)	ENER	0.00	50,000.00			4,000.00									20,000.00		74,000.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: I7
Comment: PBrown:
Floor tile abatement and replacement; per cost estimates on file in school department.

Cell: I11
Comment: PBrown:
Landscape design improvements preliminary design study.

Cell: J11
Comment: PBrown:
Landscape design project fee.

Cell: K11
Comment: PBrown:
Landscape project; placeholder value, scope unkown t this time.

Cell: G13
Comment: PBrown:
Improvements to playground equipment; allowance.

Cell: K13
Comment: PBrown:
Further improvements to playground equipment; allowance.

Cell: N13
Comment: PBrown:
Further improvements to playground equipment; allowance.

Cell: D21
Comment: PBrown:
Repairs at rear entrance area; allowance.

Cell: Q21
Comment: PBrown:
Anticipated roof replacement; 63,000 S.F. at $20 per S.F.

Cell: E23
Comment: PBrown:
Painting work inside and out; allowance. 2 men, for 10 days worth of work including materials.

Cell: I23
Comment: PBrown:
Painting work inside and out; allowance. 2 men, for 10 days worth of work including materials.

Cell: M23
Comment: PBrown:
Painting work inside and out; allowance. 2 men, for 10 days worth of work including materials.

Cell: R23
Comment: PBrown:
Painting work inside and out; allowance. 2 men, for 10 days worth of work including materials.

Cell: E25
Comment: PBrown:
General sealant work at same time as painting. 4 man-days worth of allowance.

Cell: I25
Comment: PBrown:
General sealant work at same time as painting. 4 man-days worth of allowance.

Cell: E28
Comment: PBrown:
New ceiling in kitchen, includes relocating lights and other devices, etc. Allowance.

Cell: O28
Comment: PBrown:
Budget for periodic partial replacement of accoustical ceiling tiles.

Cell: D33
Comment: PBrown:
Improve access at main entrance and at stage; 40K allowed for each item.

Cell: E33
Comment: PBrown:

Improve access at main entrance and at stage; 40K allowed for each item.

Cell: F33
Comment: PBrown:
Further accessibility improvements as noted in report. Allowance.

Cell: H33
Comment: PBrown:
Further accessibility improvements as noted in report. Allowance.

Cell: J33
Comment: PBrown:
Further accessibility improvements as noted in report. Allowance.

Cell: L33
Comment: PBrown:
Further accessibility improvements as noted in report. Allowance.

Cell: K35
Comment: rmcaleer:
new gas hot water heater

Cell: E36
Comment: rmcaleer:
auto flush on sinks toiletss and urinals

Cell: H36
Comment: rmcaleer:
new ADA classroom sinks

Cell: D38
Comment: PBrown:
Test and investigate shaking air-handling unit in kitchen; allowance for tests and repairs.

Cell: E38
Comment: PBrown:
Test and investigate shaking air-handling unit in kitchen; allowance for tests and repairs.

Cell: Q39
Comment: rmcaleer:
new boiler

Cell: D41
Comment: PBrown:
upgrade old building energy management system. Placeholder value needs to be confirmed by CES engineers. Inserted by PB

Cell: E41
Comment: PBrown:
upgrade old building energy management system. Placeholder value needs to be confirmed by CES engineers. Inserted by PB

Cell: D42
Comment: PBrown:
Emergency Generator. Temporary placeholder value input by PB; needs to be confirmed by CES engineers.

Cell: E42
Comment: PBrown:
Emergency Generator. Temporary placeholder value input by PB; needs to be confirmed by CES engineers.

Cell: E45
Comment: rmcaleer:
new exits and emergency battery units

Cell: H45
Comment: rmcaleer:
replace approximatly 20% of lighting

Cell: F46
Comment: rmcaleer:
repair/replace existing paging system

Cell: H46
Comment: rmcaleer:
replace existing clock system

Cell: E48
Comment: rmcaleer:
new kitchen hood fire supression system

Cell: D49
Comment: PBrown:
modify divider curtain in gym. Allowance.

Cell: E49
Comment: PBrown:
modify divider curtain in gym. Allowance.

Cell: H52
Comment: PBrown:
premioun value of various repairs for energy savings.

Cell: Q52
Comment: PBrown:
cost of added roof insulation abouve code min.; estimate. And includes 'premium' value of energy effiecient boiler.

Hanover Middle School - Program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	169,125.25	105,000.00	112,250.00	50,000.00	211,000.00	125,000.00	106,250.00	15,000.00	0.00	0.00	121,250.00	0.00	0.00	0.00	1,014,875.25
2	Haz Mat - Asbestos Removal	ASB	0.00	487,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	487,000.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	20,000.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70,000.00
6	Site Work - Landscaping	LAND	0.00	5,000.00	40,000.00	200,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	245,000.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	1,500.00	70,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71,500.00
11	Windows	WIN	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	800,000.00	0.00	0.00	0.00	0.00	0.00	480,000.00	0.00	0.00	0.00	1,280,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	12,000.00	200,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	212,000.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	100,000.00	40,000.00	40,000.00	0.00	40,000.00	0.00	350,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	570,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00
30	HVAC - Control Systems	CNTRL	0.00	5,000.00	0.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,000.00
31	HVAC - Air Systems and Equipment	AIR	0.00	21,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	15,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	154,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	154,000.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	200,000.00	0.00	0.00	70,000.00	60,000.00	0.00	0.00	0.00	0.00	0.00	0.00	330,000.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
43	Other: 2	OTHR2	0.00	10,000.00	0.00	50,000.00	0.00	0.00	500,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560,000.00
44	TOTAL (All Trade Categories)	TOTL	0.00	845,626.25	525,000.00	561,250.00	250,000.00	1,055,000.00	625,000.00	531,250.00	75,000.00	0.00	0.00	606,250.00	0.00	0.00	0.00	5,074,376.25
45	Energy Efficiency (Sub-Total)	ENER	0.00	10,000.00		30,000.00	0.00	40,000.00										80,000.00
46							0.00	0.00										0.00
47	Historical Building Restoration (Sub-Total)	HIST					0.00	0.00										0.00

Cell: E7
Comment: PBrown:
Floor tile abatement; separate value from sub-surface water mitigation. This value from school department estimates, includes cost of special top-side waterproofing.

Cell: D10
Comment: PBrown:
Misc. paving and curbing repairs; allowance.

Cell: E10
Comment: PBrown:
Misc. paving and curbing repairs; allowance.

Cell: F10
Comment: PBrown:
See LAND

Cell: D11
Comment: PBrown:
Schematic design fees for parking area expansion, and specification of immediate repairs.

Cell: E11
Comment: PBrown:
Schematic design fees for parking area expansion, and specification of immediate repairs.

Cell: F11
Comment: PBrown:
Parking expansion design fees; grading plan design fees for water mitigation project. Allowance. Scope unknown until completion of preliminary studies.

Cell: G11
Comment: PBrown:
Final landscaping work after water mitigation project, including implementation of expanded parking. Placeholder value; scope unknown at this time.

Cell: D15
Comment: PBrown:
Repair one set of broken doors.

Cell: E15
Comment: PBrown:
Repair one set of broken doors.

Cell: F15
Comment: PBrown:
replace 10 pairs of smoke partition doors; 5000 per door plus 2k per door electrical work. Allowance.

Cell: D16
Comment: PBrown:
Repair leaks at one set of particularly leaky windows. Includes brief further study, and specification of what is assumed to be a simple repair.

Cell: E16
Comment: PBrown:
Repair leaks at one set of particularly leaky windows. Includes brief further study, and specification of what is assumed to be a simple repair.

Cell: I21
Comment: PBrown:
50,000 sf of roof replacement at $20 per S.F. Calculated: Building area of 133K, about 40% is two levels; equals roof area of 80,000 s.f, less area of gym and science roofs to be done later.

Cell: O21
Comment: PBrown:
30,000 S.F. of roof area (science and gym roofs) not done in year 6 at $20 per S.F.

Cell: D25
Comment: PBrown:
Further study of sub-slab moisture problems, to find root cause. Allowance.

Cell: E25
Comment: PBrown:
Further study of sub-slab moisture problems, to find root cause. Allowance.

Cell: F25
Comment: PBrown:
Allowance for sub-surface water mitigation; scope of work unknown until completion of study. Note that this is a SEPARATE cost from the cost of floor tile replacement with special top-side waterproofing, related to asbestos abatement.

Cell: E29
Comment: PBrown:

See asbestos removal line

Cell: D33
Comment: PBrown:
remediate barriers to access at about 5 exterior doors/steps. Allowance of 20000 per location.

Cell: E33
Comment: PBrown:
remediate barriers to access at about 5 exterior doors/steps. Allowance of 20000 per location.

Cell: F33
Comment: PBrown:
Further accessibility improvements as noted in report. Allowance.

Cell: G33
Comment: PBrown:
Further accessibility improvements as noted in report. Allowance.

Cell: I33
Comment: PBrown:
Further accessibility improvements as noted in report. Allowance.

Cell: K33
Comment: PBrown:
Reconfigure classroom doors to comply with accessibility regualtions. 35 at $10,000 each allowed.

Cell: F36
Comment: rmcaleer:
auto flush on sinks toilets and urinals

Cell: D37
Comment: PBrown:
Study air system issues in gym, report on findings. Placeholder value to be reviewed by CES.

Cell: E37
Comment: PBrown:
Study air system issues in gym, report on findings. Placeholder value to be reviewed by CES.

Cell: I37
Comment: rmcaleer:
new temperature controls system compressor

Cell: E38
Comment: rmcaleer:
replace two h and V units in gym

Cell: G42
Comment: rmcaleer:
Expected repairs to underground wiring system

Cell: K42
Comment: rmcaleer:
Expected repairs to underground wiring system

Cell: O42
Comment: rmcaleer:
Expected repairs to underground wiring system

Cell: G45
Comment: rmcaleer:
upgrade lightign for efficiancy

Cell: H46
Comment: rmcaleer:
replace older Satellite electric panels

Cell: K46
Comment: rmcaleer:
replace paging system

Cell: L46
Comment: rmcaleer:
replace clock system

Cell: D49
Comment: PBrown:
Remove sealent from unit ventilator condensate lines. Replace missing condensate drain lines. This is primarily plumbing work but may include some masonry work also. Allowance.

Cell: E49
Comment: PBrown:
Remove sealent from unit ventilator condensate lines. Replace missing condensate drain lines. This is primarily plumbing work but may include some masonry work also. Allowance.

Cell: D50
Comment: PBrown:
Schematic design study for expansion of cafeteria.

Cell: E50
Comment: PBrown:
Schematic design study for expansion of cafeteria.

Cell: G50
Comment: PBrown:
Full design services for expansion of Cafeteria. Scope of work unknown at this time. This is an allowance of 10% of a project project budget of $500,000. Simple seating area expansion only envisioned.

Cell: J50
Comment: PBrown:
Cafeteria seating area expansion project. Budget placeholder.

Cell: E52
Comment: PBrown:
portion of hvac work above code min.

Cell: G52
Comment: PBrown:
Cost of lighting above code min.

Cell: I52
Comment: PBrown:
value of insulation above code min.

Sylvester Elementary School - Budget for addition on Center School in year 7; and renovation of this building. Minimal Maintenance until renovation.

8

		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	190,000.00	3,750.25	100,000.00	7,500.00	12,500.00	0.00	75,000.00	1,862,500.00	0.00	0.00	0.00	0.00	0.00	0.00	2,251,250.25
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
22	Acoustical Tile Ceilings	ACOU	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	40,000.00	1.00	400,000.00	30,000.00	50,000.00	0.00	300,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	820,001.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,000.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	Electrical - Other	ELEC	0.00	20,000.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35,000.00
40	Elevators	ELEV	0.00	590,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	590,000.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	20,000.00	0.00	0.00		0.00	0.00	0.00	7,450,000.00	0.00	0.00	0.00	0.00	0.00	0.00	7,470,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	**TOTAL (All Trade Categories)**	**TOTL**	0.00	950,000.00	18,751.25	#####	37,500.00	62,500.00	0.00	375,000.00	9,312,500.00	0.00	0.00	0.00	0.00	0.00	0.00	11,256,251.25
45	Energy Efficiency (Sub-Total)	ENER		15,000.00							74,500.00							89,500.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: D20
Comment: PBrown:
Minimal repairs to exterior masonry. Allowance.

Cell: E20
Comment: PBrown:
Minimal repairs to exterior masonry. Allowance.

Cell: D24
Comment: PBrown:
Minimal painting work and related carpentry repairs on exterior of building. Allowance.

Cell: E24
Comment: PBrown:
Minimal painting work and related carpentry repairs on exterior of building. Allowance.

Cell: D27
Comment: PBrown:
Minimal maintenance to damaged wall and ceiling finishes.

Cell: E27
Comment: PBrown:
Minimal maintenance to damaged wall and ceiling finishes.

Cell: D28
Comment: PBrown:
Minimal maintenance to stained and damaged ceilings.

Cell: E28
Comment: PBrown:
Minimal maintenance to stained and damaged ceilings.

Cell: D33
Comment: PBrown:
Design for accessible toilet rooms

Cell: E33
Comment: PBrown:
Design for accessible toilet rooms

Cell: F33
Comment: PBrown:
See Elevator line.

Cell: G33
Comment: PBrown:
Single accessible toilet room on each floor level. 100 K x 4.

Cell: H33
Comment: PBrown:
Fee for design of historically compatible ramp at main entrance.

Cell: I33
Comment: PBrown:
Handrails at stairs; reconfigure to meet access codes.

Cell: K33
Comment: PBrown:
Implement installation of historically compatible ramp at main entrance. Value based upon about 1000 sf project area x $300 per sf general renovation cost budget

Cell: K35
Comment: rmcaleer:
replace existing hot water heater; $1200 value removed by PB in favor of later general building re-hab.

Cell: E36
Comment: rmcaleer:
auto flush on sinnks toilets and urinals

Cell: E40
Comment: rmcaleer:
replace existing nonoperational steam traps

Cell: H42
Comment: rmcaleer:

replace older Satellite elctrical panels; $75,000 value removed by PB, in favor of later renovation project.

Cell: G45
Comment: rmcaleer:
upgrade older lighting fixtures approximatly 30%; $18,000 removed by PB, in favor of later renovation project.

Cell: E46
Comment: rmcaleer:
replace existing paging suystem;designed to facilitate future conversion of building use.

Cell: F46
Comment: rmcaleer:
replace existing clock system

Cell: E47
Comment: PBrown:
$590,000 New elevator for accessibility. Budget value provided by School Department. Review design to ensure full compatability with later conversion of building to senior housing.

Cell: D49
Comment: PBrown:
Carpentry repairs to gymnasium floor.

Cell: E49
Comment: PBrown:
Carpentry repairs to gymnasium floor.

Cell: J49
Comment: PBrown:
30,000 SF addition onto the Center school, at $300 per SF. See Center School

Cell: L49
Comment: PBrown:
31,000 s.f. renovation of building to re-use as senior housing. $300 per S.F. 7.4m base costs plus 1.9m gen'l req.ts = 9.3m approx.

Cell: L52
Comment: PBrown:
one percent of base costs for new project as budget for premium costs for green design

Salmond - School Admin. Building - Program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	78,000.00	47,875.25	57,500.25	3,125.00	8,000.00	4,125.25	0.00	7,500.00	250.00	0.00	15,000.00	12,500.00	12,500.00	3,750.00	250,125.75
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	16,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16,500.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	10,000.00	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00	40,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,000.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00
11	Windows	WIN	0.00	180,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180,000.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	24,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24,000.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60,000.00	0.00	0.00	0.00	60,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
18	Historical Painting	HP	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	8,000.00	160,000.00	200,000.00	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	398,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	1,000.00
29	Plumbing - Other	PLMB	0.00	6,500.00	0.00	0.00	12,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00	0.00	0.00	69,000.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
33	HVAC - Steam Traps	STEAM	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00	0.00	50,000.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	32,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	4,500.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,000.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	TOTAL (All Trade Categories)	TOTL	0.00	390,000.00	239,376.25	287,501.25	15,625.00	40,000.00	20,626.25	0.00	37,500.00	1,250.00	0.00	75,000.00	62,500.00	62,500.00	18,750.00	1,250,628.75
45	Energy Efficiency (Sub-Total)	ENER	0.00	30,000.00	7,500.00							1,000.00						38,500.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: J7
Comment: PBrown:
Floor tile abatement and replacement; this value from quotes held by school department. Allowance for remaining work after other major accessability project already completed.

Cell: D10
Comment: PBrown:
wheelstops at parking spaces near building, other misc. work. Allowance.

Cell: E10
Comment: PBrown:
wheelstops at parking spaces near building, other misc. work. Allowance.

Cell: G10
Comment: PBrown:
Seal paving and drives, re-stripe.

Cell: R10
Comment: PBrown:
Seal paving and drives, re-stripe.

Cell: E13
Comment: PBrown:
Remove playground equipment; regrade area.

Cell: E15
Comment: PBrown:
Replace hardware on 40 doors, 1K per door, for access project.

Cell: D16
Comment: PBrown:
Replace 36 windows at $5000 per window.

Cell: E16
Comment: PBrown:
Replace 36 windows at $5000 per window.

Cell: F20
Comment: PBrown:
Crew of 4 for 12 days for misc. masonry repairs and repointing.

Cell: O21
Comment: PBrown:
approx. 6000 s.f. at $12 per S.f.

Cell: G23
Comment: PBrown:
General interior painting work. 3 men for 10 days.

Cell: E24
Comment: PBrown:
crew of 4 for 10 days. 40 man days x 500 .

Cell: D27
Comment: PBrown:
allowance for immediate cosmetic interior finish work not associated with other projects.

Cell: E27
Comment: PBrown:
allowance for immediate cosmetic interior finish work not associated with other projects.

Cell: J29
Comment: PBrown:
See abatement line item

Cell: D33
Comment: PBrown:
Preliminary design study for front entranc re-do, and other issues.

Cell: E33
Comment: PBrown:
Preliminary design study for front entranc re-do, and other issues.

Cell: F33
Comment: PBrown:
Allowance for accessible entrance and parking, and accessible toilet on main floor. Toilets completed 2010. Value reduced.

Cell: G33
Comment: PBrown:
Estimated cost of elevator.

Cell: L33
Comment: PBrown:
Modify stair handrails for aceess compliance

Cell: M35
Comment: rmcaleer:
replace hot water heater

Cell: E36
Comment: rmcaleer:
auto flush on sinks toilets and urinals

Cell: H36
Comment: rmcaleer:
ADA sinks and drinking fountains

Cell: P36
Comment: PBrown:
Unspecified alowance for future plumbing system repair work.

Cell: D39
Comment: PBrown:
New Boiler; replace existing. Done 2010

Cell: G39
Comment: rmcaleer:
new boiler; Value moved to year 1 by PB

Cell: D40
Comment: rmcaleer:
repair/replace non-operational steam traps

Cell: E40
Comment: rmcaleer:
repair/replace non-operational steam traps

Cell: Q41
Comment: PBrown:
Unspecified allowance for future HVAC system repair work.

Cell: I42
Comment: rmcaleer:
replace older Satellite electrical panels

Cell: E45
Comment: rmcaleer:
replace existing poor condition exit signs approxiamatly 20%

Cell: F45
Comment: rmcaleer:
replace 50% of older basement lighting

Cell: F47
Comment: PBrown:
Seee access line.

Cell: D49
Comment: PBrown:
Repair and refinish wood floors; not at other project areas.

Cell: E49
Comment: PBrown:
Repair and refinish wood floors; not at other project areas.

Cell: D52
Comment: PBrown:

Value of projects related directly to energy savings measures.

Cell: E52
Comment: PBrown:
Value of projects related directly to energy savings measures.

Police Station - Program of normal repairs

10

		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	10,625.00	0.00	0.00	7,500.00	3,000.00	0.00	5,000.00	0.00	8,750.00	7,500.00	5,000.00	0.00	5,000.00	25,000.00	77,375.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00	0.00	20,000.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00	50,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	60,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	5,000.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	0.00	0.00	30,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00	20,000.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,000.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,000.00
30	HVAC - Control Systems	CNTRL	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,500.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35,000.00	0.00	0.00	0.00	0.00	0.00	35,000.00
38	Electrical - Lighting	LIGHT	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,000.00
39	Electrical - Other	ELEC	0.00	10,000.00	0.00	0.00	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22,000.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00	0.00	0.00	0.00	15,000.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	**TOTAL (All Trade Categories)**	**TOTL**	0.00	53,125.00	0.00	0.00	37,500.00	15,000.00	0.00	25,000.00	0.00	43,750.00	37,500.00	25,000.00	0.00	25,000.00	125,000.00	386,875.00
45	Energy Efficiency (Sub-Total)	ENER	0.00	15,500.00														15,500.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: K10
Comment: PBrown:
Re-seal and re-stripe parking.

Cell: Q18
Comment: PBrown:
Allowance for siding repairs.

Cell: R21
Comment: PBrown:
Re-roof building. Estimate based on 5000 sf at $10 per s.f.

Cell: H23
Comment: PBrown:
Complete painting inside and exterior. Crew of 4, 3 weeks.

Cell: R23
Comment: PBrown:
Complete painting inside and exterior. Crew of 4, 3 weeks.

Cell: O26
Comment: PBrown:
allowance for exterior handrail repairs.

Cell: N28
Comment: PBrown:
Replace accoustical ceiling tiles. 10000 sf at $3 per sf

Cell: R31
Comment: PBrown:
Allowance for replacement of floor tile in high traffic areas.

Cell: E34
Comment: rmcaleer:
septic system investigation

Cell: E36
Comment: rmcaleer:
auto flush on sinks toilets and urinals

Cell: D37
Comment: rmcaleer:
investigation of HVAC controls system to determine cause of problems

Cell: E37
Comment: rmcaleer:
investigation of HVAC controls system to determine cause of problems

Cell: D42
Comment: Had 10K for block heater for emerg generator; but took it out; RM agrees not needed

Cell: M44
Comment: PBrown:
Fire alarm and security system upgrades per RM email 3/9/11

Cell: E45
Comment: rmcaleer:
lighting system upgrades

Cell: D46
Comment: PBrown:
Study for lighting storm power loss problem. Placeholder value by DRA for review by CES.

Cell: E46
Comment: PBrown:
Study for lighting storm power loss problem. Placeholder value by DRA for review by CES.

Cell: I46
Comment: rmcaleer:
replacement of CCTV cameras

Cell: O47

Comment: PBrown:
unspecified allowance for future elevator upgrade work.

Cell: D49
Comment: PBrown:
Architectural design study of issues around 'lantern' building feature. Allowance.

Cell: E49
Comment: PBrown:
Architectural design study of issues around 'lantern' building feature. Allowance.

(B. Everett Hall) Recreation Area Support Facilities - Replace toilet and trailer building with new building; plus program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	17,750.00	309,550.00	49,250.00	0.00	0.00	0.00	0.00	1,250.00	0.00	0.00	0.00	0.00	5,000.00	0.00	382,800.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	10,000.00	8,000.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38,000.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00	0.00	40,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	10,000.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,000.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	12,000.00	25,000.00	150,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	187,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	8,000.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,200.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	10,000.00	1,200,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,210,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	TOTAL (All Trade Categories)	TOTL	0.00	88,750.00	1,547,750.00	246,250.00	0.00	0.00	0.00	0.00	6,250.00	0.00	0.00	0.00	0.00	25,000.00	0.00	1,914,000.00
45	Energy Efficiency (Sub-Total)	ENER																0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: D9
Comment: PBrown:
Demolish toilet room building. Crew of 4 plus equipment. 1 week. 2000 labor. 2000 equipment. 2000 disposal. 4000 site restoration.

Cell: E9
Comment: PBrown:
Demolish toilet room building. Crew of 4 plus equipment. 1 week. 2000 labor. 2000 equipment. 2000 disposal. 4000 site restoration.

Cell: F9
Comment: PBrown:
Demolish shed #1

Cell: G9
Comment: PBrown:
Demolish Shed #3. 4 man crew two weeks; larger building = higher equipment and disposal costs and site restoration, fence removal, etc.

Cell: G10
Comment: PBrown:
Allowance to seal pavement and re-stripe. Every 10 years.

Cell: Q10
Comment: PBrown:
Allowance to seal pavement and re-stripe. Every 10 years.

Cell: F14
Comment: PBrown:
Remove office trailer.

Cell: D18
Comment: PBrown:
Gazebo Carpentry repairs and ramp. 3 person crew. 2 weeks. 15 man days. = 7500 plus 2500 materials.

Cell: E18
Comment: PBrown:
Gazebo Carpentry repairs and ramp. 3 person crew. 2 weeks. 15 man days. = 7500 plus 2500 materials.

Cell: F18
Comment: PBrown:
Shed 2 carpentry repairs. 2 men 2 days.

Cell: G21
Comment: PBrown:
Re-roof gazebo using cedar shingles

Cell: D24
Comment: PBrown:
Gazebo Painting. 2 men 1 week. 10 man days . Every 8 years.

Cell: E24
Comment: PBrown:
Gazebo Painting. 2 men 1 week. 10 man days . Every 8 years.

Cell: L24
Comment: PBrown:
Gazebo Painting. 2 men 1 week. 10 man days . Every 8 years.

Cell: D33
Comment: PBrown:
Ramp at Office Trailer.
Metal ramp solution.
Allowance.

Cell: E33
Comment: PBrown:
Ramp at Office Trailer.
Metal ramp solution.
Allowance.

Cell: F33
Comment: PBrown:
Allowance for improved signage and striping at accessible parking spaces.

Cell: G33
Comment: PBrown:

Allowance for paving improvements for accessible pathway from parking to courts and fields

Cell: E35
Comment: rmcaleer:
new plumbing fixtures in restroom building

Cell: D42
Comment: rmcaleer:
repair court lighting controls at exterior of shed

Cell: E42
Comment: rmcaleer:
repair court lighting controls at exterior of shed

Cell: D45
Comment: PBrown:
replace gazebo lighting. Value to be reviewed by CES.

Cell: E45
Comment: PBrown:
replace gazebo lighting. Value to be reviewed by CES.

Cell: F45
Comment: rmcaleer:
replace toilet building lighting

Cell: D49
Comment: PBrown:
Schematic Design study for new facility

Cell: E49
Comment: PBrown:
Schematic Design study for new facility

Cell: F49
Comment: PBrown:
New Facility Project. Budget 2000 S.F. at $300 per S.F. plus 4000 s.f. at $150. Raw costs plus general Req.s at 25%.

Public Works Facility (219 Winter St.) (Mimimal Maintenance until Major Renovation).

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	31,625.75	74,750.00	0.00	8,375.25	0.00	250.00	925,000.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,040,001.50
2	Haz Mat - Asbestos Removal	ASB	0.00	30,000.00	200,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	230,000.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	17,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17,500.00
5	Site Work - Paving	PAVE	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
6	Site Work - Landscaping	LAND	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
7	Site Work - Utilities	UTIL	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	5,000.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	5,000.00	34,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39,000.00
27	Plumbing - Waste Sytems	WAST	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,500.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00
29	Plumbing - Other	PLMB	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
35	Electrical - Power	POWR	0.00	0.00	5,000.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13,500.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	15,000.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23,000.00
38	Electrical - Lighting	LIGHT	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
39	Electrical - Other	ELEC	0.00	1.00	9,000.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,002.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	25,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25,000.00
42	Other: 1	OTHR1	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	3,700,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,710,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	**TOTAL (All Trade Categories)**	TOTL	0.00	158,128.75	373,750.00	0.00	41,876.25	0.00	1,250.00	4,625,002.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,200,007.50
45	Energy Efficiency (Sub-Total)	ENER																0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: D7
Comment: PBrown:
professional evaluation and testing of oil in floor, and asbestos, lead, etc. . Allowance.

Cell: E7
Comment: PBrown:
professional evaluation and testing of oil in floor, and asbestos, lead, etc. . Allowance.

Cell: F7
Comment: PBrown:
Remediation of oil and other haz mat. Placeholder value. Scope not known at this time. This work is needed even if total rebuild project goes forward, so might as well do it early and get it done.

Cell: D9
Comment: PBrown:
Clean debris out of facility. Crew of 5 plus disposal equipment. 1 week. 25 man days. Plus disposal costs of (allow) 5000. 25 x 5 = 12,500.

Cell: E9
Comment: PBrown:
Clean debris out of facility. Crew of 5 plus disposal equipment. 1 week. 25 man days. Plus disposal costs of (allow) 5000. 25 x 5 = 12,500.

Cell: E10
Comment: PBrown:
No pavement maintenance, pending reconstruction of new facility.

Cell: D11
Comment: PBrown:
Perimeter chain-link security fence; allowane.

Cell: E11
Comment: PBrown:
Perimeter chain-link security fence; allowane.

Cell: E12
Comment: PBrown:
Delay drainage work pending decision to re-build entire facility.

Cell: F15
Comment: PBrown:
Replace selected doors. Allow 5 at 3k each.

Cell: D18
Comment: PBrown:
3 men 3 days. Minor repairs at damaged siding.

Cell: E18
Comment: PBrown:
3 men 3 days. Minor repairs at damaged siding.

Cell: F18
Comment: PBrown:
More extensive siding repairs. Double previous scope of work. Allowance.

Cell: D21
Comment: PBrown:
2 men 2 days. Repair minor leaks.

Cell: E21
Comment: PBrown:
2 men 2 days. Repair minor leaks.

Cell: F23
Comment: PBrown:
Paint roof. 5 men 2 weeks. 10 mandays plus 3000 paint materials.

Cell: D30
Comment: PBrown:
2 men 2 days replace broken glass.

Cell: E30
Comment: PBrown:
2 men 2 days replace broken glass.

Cell: D33
Comment: PBrown:

Design study to make one entrance and one toilet accessible.

Cell: E33
Comment: PBrown:
Design study to make one entrance and one toilet accessible.

Cell: F33
Comment: PBrown:
Accessible entrance and toilet project. Placeholder value at 80 s.f x 300 = 24,000 plus entry work at 10K.

Cell: D34
Comment: PBrown:
Title V sewage system evaluation. Professional fees estimate.

Cell: E34
Comment: PBrown:
Title V sewage system evaluation. Professional fees estimate.

Cell: J35
Comment: rmcaleer:
replace electric water heater

Cell: E36
Comment: rmcaleer:
auto controls on sinks toilets and urinals

Cell: H41
Comment: PBrown:
General HVAC work at time of building upgrade. Need Value. Did I remove a value here? Check previous CES report version. Then remove this comment.

Cell: K41
Comment: PBrown:
General HVAC work for building reno, is included in overal value.

Cell: F42
Comment: rmcaleer:
testing of switchboard

Cell: H42
Comment: rmcaleer:
new panels in unoccupied portion of building

Cell: E44
Comment: rmcaleer:
new fire alarm system

Cell: F44
Comment: rmcaleer:
new security system

Cell: F45
Comment: rmcaleer:
temp lighting in unoccupied space

Cell: E46
Comment: PBrown:
Owner comment: Install emergency generator. Needed only when new offices move here. Need value. Did I remove a CES value here?

Cell: F46
Comment: rmcaleer:
install auto lighting controls

Cell: K46
Comment: PBrown:
Emergency Generator; costs included in overall project costs.

Cell: H48
Comment: rmcaleer:
install sprinkler system at time of building upgrade

Cell: D49
Comment: PBrown:
Architectural design study; options for future use and reconstruction. Feasibility estimate.

Cell: E49
Comment: PBrown:
Architectural design study; options for future use and reconstruction. Feasibility estimate.

Cell: K49
Comment: PBrown:
Major building renovation project, and moving offices here, and moving storage here. Allowances as follows: General re-construction of exterior envelope on existing frame and foundation: 22,000 s.f. at $150 per S.F. = $3.3M. 8000 S.F. Of improved space at additional $50 per s.f. = 400K

Highway Garage - DPW Yard - Program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	154,750.00	13,250.00	64,000.00	14,750.00	0.00	250.00	112,500.00	19,375.00	8,125.00	0.00	0.00	5,000.00	0.00	45,625.00	437,625.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00
5	Site Work - Paving	PAVE	0.00	250,000.00	0.00	0.00	0.00	0.00	0.00	0.00	70,000.00	0.00	0.00	0.00	0.00	0.00	0.00	320,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
10	Doors, Frames and Door Hardware	DOOR	0.00	25,000.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55,000.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,500.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	175,000.00	180,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	7,500.00	7,500.00	0.00	0.00	0.00	0.00	0.00	7,500.00	7,500.00	0.00	0.00	0.00	0.00	7,500.00	37,500.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,000.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	34,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00
29	Plumbing - Other	PLMB	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	6,000.00	10,000.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00	0.00	0.00	20,000.00
37	Electrical - Alarm Systems	ALARM	0.00	5,000.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,500.00
38	Electrical - Lighting	LIGHT	0.00	4,500.00	0.00	0.00	14,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18,500.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25,000.00	0.00	0.00	0.00	0.00	0.00	25,000.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
42	Other: 1	OTHR1	0.00	200,000.00	0.00	250,000.00	0.00	0.00	0.00	450,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	900,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	TOTAL (All Trade Categories)	TOTL	0.00	773,750.00	66,250.00	320,000.00	73,750.00	0.00	1,250.00	562,500.00	96,875.00	40,625.00	0.00	0.00	25,000.00	0.00	228,125.00	2,188,125.00
45	Energy Efficiency (Sub-Total)	ENER		8,500.00	2,000.00		4,000.00			22,000.00								36,500.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: D9
Comment: PBrown:
Demolish salt shed. Estimate.

Cell: E9
Comment: PBrown:
Demolish salt shed. Estimate.

Cell: E10
Comment: PBrown:
Placeholder value for new drive to brush pile, new security gate with camera.

Cell: L10
Comment: PBrown:
Sealing and striping of asphalt pavement. Budget value allowance.

Cell: D14
Comment: PBrown:
Schematic design study for future improvements, including security gate and new drive.

Cell: E14
Comment: PBrown:
Schematic design study for future improvements, including security gate and new drive.

Cell: F14
Comment: PBrown:
Placeholder

Cell: D15
Comment: PBrown:
Replace one overhead door; 20 K. Replace one man-door. 5K

Cell: E15
Comment: PBrown:
Replace one overhead door; 20 K. Replace one man-door. 5K

Cell: F15
Comment: PBrown:
Add auto openers on bay doors . 3 at 10K each.

Cell: D18
Comment: PBrown:
3 people working for one week.; repair metal siding. Minor materials.

Cell: E18
Comment: PBrown:
3 people working for one week.; repair metal siding. Minor materials.

Cell: D21
Comment: PBrown:
3 men 3 days repair roof leaks.

Cell: E21
Comment: PBrown:
3 men 3 days repair roof leaks.

Cell: R21
Comment: PBrown:
Anticipated replacement of metal roof on highway garage building. 7000 s.f at $25.

Cell: D23
Comment: PBrown:
3 people 1 week. Paint wood trim. Every 8 years.

Cell: E23
Comment: PBrown:
3 people 1 week. Paint wood trim. Every 8 years.

Cell: F23
Comment: PBrown:
Interior paint at office areas. 3 men 1 week.; every 7 years.

Cell: L23
Comment: PBrown:

3 people 1 week. Paint wood trim. Every 8 years.

Cell: M23
Comment: PBrown:
Interior paint at office areas. 3 men 1 week.; every 7 years.

Cell: R23
Comment: PBrown:
3 people 1 week. Paint wood trim. Every 8 years.

Cell: G28
Comment: PBrown:
General replacement of ceilings in offices area. 200 sf at 3$.

Cell: H29
Comment: PBrown:
Replace resilitent tile floors. 3000 s.f. at $3 per sf.

Cell: D33
Comment: PBrown:
Accessible entrance and toilet project. Placeholder value at 80 s.f x 300 = 24,000 plus entry work at 10K.

Cell: E33
Comment: PBrown:
Accessible entrance and toilet project. Placeholder value at 80 s.f x 300 = 24,000 plus entry work at 10K.

Cell: J35
Comment: rmcaleer:
new hot water heater

Cell: E36
Comment: rmcaleer:
auto flush on sinks toilets and urinals

Cell: E38
Comment: rmcaleer:
new office heating and ventilation unit

Cell: F38
Comment: rmcaleer:
Apparatus bay exhaust

Cell: H38
Comment: rmcaleer:
new garage heaters

Cell: D42
Comment: rmcaleer:
replace electric panels

Cell: E42
Comment: rmcaleer:
replace electric panels

Cell: P43
Comment: PBrown:
Replace fleet radio communications system; value is a placeholder anticipating unknown technological advances.

Cell: E44
Comment: rmcaleer:
security system

Cell: F44
Comment: rmcaleer:
new fire alarm system

Cell: D45
Comment: rmcaleer:
new exit and emergency battery units

Cell: E45
Comment: rmcaleer:
new exit and emergency battery units

Cell: H45
Comment: rmcaleer:
replace existing lighting

Cell: M46
Comment: rmcaleer:
replace existing generator

Cell: H48
Comment: rmcaleer:
new sprinkler system

Cell: E49
Comment: PBrown:
New Salt Shed. Value from Victor. 2000 ton shet = 100k; but too small; 5 year old quote.

Cell: G49
Comment: PBrown:
New shed on side of building for covered vehicular spaces. Extimate is 5000 s.f. at $50 per S.f.

Cell: K49
Comment: PBrown:
Enclosed vehicle wash station. New project. Placeholder budget based upon a 3000 s.f. building at 150 per s.f.

Cell: F52
Comment: PBrown:
portion of exhause system for heat recovery

Cell: H52
Comment: PBrown:
estomated value of 'premium' costs for energy efficient items

Cell: K52
Comment: PBrown:
estimated 'premium' value of energy-savings measures on new construction.

Town Hall - Program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	54,625.00	96,250.00	9,000.00	31,000.00	5,500.00	25,000.00	750.00	0.00	25,000.00	15,000.00	12,500.00	7,500.00	27,500.00	14,250.00	323,875.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00	0.00	0.00	0.00	60,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60,000.00	0.00	0.00	0.00	0.00	0.00	60,000.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	17,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17,000.00	34,000.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90,000.00	0.00	90,000.00
16	Historical Roofing and Flashing	HR	0.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	8,000.00	60,000.00	0.00	40,000.00	0.00	0.00	0.00	0.00	40,000.00	60,000.00	0.00	0.00	0.00	40,000.00	248,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	30,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00	0.00	20,000.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	16,000.00	0.00	0.00	0.00	16,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32,000.00
26a	Accessibility Upgrades	ACCESS	0.00	8,000.00	250,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	258,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,000.00
29	Plumbing - Other	PLMB	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,500.00
30	HVAC - Control Systems	CNTRL	0.00	15,000.00	0.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21,000.00
31	HVAC - Air Systems and Equipment	AIR	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	6,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	12,000.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22,000.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	16,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16,000.00
39	Electrical - Other	ELEC	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00
40	Elevators	ELEV	0.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,000.00
42	Other: 1	OTHR1	0.00	0.00	5,000.00	20,000.00	75,000.00	0.00	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	200,000.00
43	Other: 2	OTHR2	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00
44	**TOTAL (All Trade Categories)**	**TOTL**	0.00	273,125.00	481,250.00	45,000.00	155,000.00	27,500.00	125,000.00	3,750.00	0.00	125,000.00	75,000.00	62,500.00	37,500.00	137,500.00	71,250.00	1,619,375.00
45	Energy Efficiency (Sub-Total)	ENER		6,000.00	30,000.00	16,000.00				3,000.00								55,000.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST	0.00		60,000.00		40,000.00					40,000.00	60,000.00				40,000.00	240,000.00

Cell: F7
Comment: PBrown:
Allowance for work associated with new boiler.

Cell: D10
Comment: PBrown:
Repair broken paving at sidewalk drives. 3 man crew 5 days. Plus 2500 trucking, concrete, disposal. Etc.

Cell: E10
Comment: PBrown:
Repair broken paving at sidewalk drives. 3 man crew 5 days. Plus 2500 trucking, concrete, disposal. Etc.

Cell: O10
Comment: PBrown:
Allowance for sealing of asphalt paving and striping.

Cell: M16
Comment: PBrown:
Replace 20 units in rear addition, upper level. Allow 3K per window unit.

Cell: D18
Comment: PBrown:
Skilled carpenter time at $75 per hour for misc. carpentry repairs on exterior of historic building, as noted in report. Allow 20 days worth of work. 20 x 8 x 75. plus 5K materials.

Cell: E18
Comment: PBrown:
Skilled carpenter time at $75 per hour for misc. carpentry repairs on exterior of historic building, as noted in report. Allow 20 days worth of work. 20 x 8 x 75. plus 5K materials.

Cell: R18
Comment: PBrown:
Skilled carpenter time at $75 per hour for misc. carpentry repairs on exterior of historic building, as noted in report. Allow 20 days worth of work. 20 x 8 x 75. plus 5K materials.

Cell: Q21
Comment: PBrown:
Anticipated roof replacement. Allow 6000 s.f. at $15.

Cell: D22
Comment: PBrown:
Repair cupola. Carpentry and etc. Scaffold allow 5K. Work allow 3 men one month. (22 days) materials allow. 5K. 3x22 x 500 = 33000 plus 10K.

Cell: E22
Comment: PBrown:
Repair cupola. Carpentry and etc. Scaffold allow 5K. Work allow 3 men one month. (22 days) materials allow. 5K. 3x22 x 500 = 33000 plus 10K.

Cell: D23
Comment: PBrown:

Cell: D24
Comment: PBrown:
Exterior Painting.
4 person crew 4 days for spot work.

Cell: E24
Comment: PBrown:
Exterior Painting.
4 person crew 4 days for spot work.

Cell: F24
Comment: PBrown:
Periodic painting inside every 8 years. 5 person crew. 20 days. 50K plus 10 K mateials. Includes all related expenses like moving furniture, minor plaster repairs, etc.

Cell: H24
Comment: PBrown:
Comprehensive exterior painting every 5 years to protect historic building. 5 person crew for 15 days. Plus materials..

Cell: M24
Comment: PBrown:
Comprehensive exterior painting every 5 years to protect historic building. 5 person crew for 15 days. Plus materials..

Cell: N24
Comment: PBrown:
Periodic painting inside every 8 years. 5 person crew. 20 days. 50K plus 10 K mateials.

Cell: R24
Comment: PBrown:
Comprehensive exterior painting every 5 years to protect historic building. 5 person crew for 15 days. Plus materials..

Cell: P28
Comment: PBrown:
Replace accoustical ceiling tiles. Allowance based upon 10000 S.f. at $3.

Cell: Q29
Comment: PBrown:
Selected replacement of resilient flooring. Aloowance for 5000 s.f. at $4.

Cell: D32
Comment: PBrown:
Replace carpet at 50% of area. Assume 4000 s.f. at $4 per s.f. ($36 per S.Y.).

Cell: E32
Comment: PBrown:
Replace carpet at 50% of area. Assume 4000 s.f. at $4 per s.f. ($36 per S.Y.).

Cell: I32
Comment: PBrown:
Replace carpet at 50% of area. Assume 4000 s.f. at $4 per s.f. ($36 per S.Y.).

Cell: D33
Comment: PBrown:
Preliminary design study for improved accessibility. Professional fees.

Cell: E33
Comment: PBrown:
Preliminary design study for improved accessibility. Professional fees.

Cell: F33
Comment: PBrown:
Implement construction of results of design study. Placeholder value. Scope of work unknown at this time. This value intended to include respective exterior sitework, walks, railings, etc.

Cell: K35
Comment: rmcaleer:
2 new electric water heaters

Cell: E36
Comment: rmcaleer:
auto flush on sinks toilets and urinals

Cell: E37
Comment: rmcaleer:
new pneumatic tubing

Cell: I37
Comment: rmcaleer:
replace temp control compressor

Cell: E38
Comment: rmcaleer:
replace existing heaters at exterior doors

Cell: F39
Comment: rmcaleer:
new boiler

Cell: D42
Comment: PBrown:
Test / evaluate emergency generator. DRA set this value; to be checked by CES.

Cell: E42
Comment: PBrown:
Test / evaluate emergency generator. DRA set this value; to be checked by CES.

Cell: H42
Comment: rmcaleer:
Satellite panels replaced with new

Cell: E44
Comment: rmcaleer:

new security system

Cell: F44
Comment: rmcaleer:
replace existing F/A devices with ADA units

Cell: G45
Comment: rmcaleer:
replace approximatly 20% of the older lighting

Cell: D46
Comment: rmcaleer:
new transfer switch to replace existing

Cell: E46
Comment: rmcaleer:
new transfer switch to replace existing

Cell: D47
Comment: PBrown:
Repairs and upgrades to existing elevator. Service tech quote recvd by email 4/12/2011

Cell: E47
Comment: PBrown:
Repairs and upgrades to existing elevator. Service tech quote recvd by email 4/12/2011

Cell: D48
Comment: rmcaleer:
new dry sprinkeler system compressor and monitoring

Cell: E48
Comment: rmcaleer:
new dry sprinkeler system compressor and monitoring

Cell: F49
Comment: PBrown:
Accoustics study in main meeting room; design fees.

Cell: G49
Comment: PBrown:
Space study; design fees.

Cell: H49
Comment: PBrown:
Concret floor in basement of old building one side. 5 man crew for 20 days. Plus materials and extra for difficult work conditions. Allowance.

Cell: J49
Comment: PBrown:
Construct environmentally controlled storage room in basement for important records. $35,000 for M E P FP; $65,00 for construction

Cell: F50
Comment: PBrown:
Implementation of accoustical improvements. Allowance. Scope of work unknown pending study.

Cell: E52
Comment: PBrown:
estimated value of specific energy-savings related work, vs. maintenance work.

Cell: F52
Comment: PBrown:
Boiler

Cell: G52
Comment: PBrown:
lighting

J. Curtis Free Library - Program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	22,000.00	19,500.00	1,250.00	10,000.00	5,000.00	2,000.00	250.00	0.00	0.00	6,250.00	0.00	7,500.00	2,000.00	25,000.00	100,750.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	40,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00	80,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	17,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17,000.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	0.00	0.00	37,500.00
15	Roofing and Flashing	ROOF	0.00	4,000.00	25,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29,000.00
16	Historical Roofing and Flashing	HR	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,500.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00	0.00	16,000.00
18	Historical Painting	HP	0.00	8,000.00	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	20,000.00	68,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	4,000.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54,000.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40,000.00	40,000.00
26	Carpet	CARPT	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	10,000.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,000.00
29	Plumbing - Other	PLMB	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
38	Electrical - Lighting	LIGHT	0.00	7,500.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,500.00
39	Electrical - Other	ELEC	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,000.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	TOTAL (All Trade Categories)	TOTL	0.00	110,000.00	97,500.00	6,250.00	50,000.00	25,000.00	10,000.00	1,250.00	0.00	0.00	31,250.00	0.00	37,500.00	10,000.00	125,000.00	503,750.00
45	Energy Efficiency (Sub-Total)	ENER	0.00	13,000.00														13,000.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST	0.00					20,000.00					20,000.00		30,000.00			70,000.00

Cell: H10
Comment: PBrown:
Seal and re-stripe parking every 10 years.

Cell: R10
Comment: PBrown:
Seal and re-strip parking every 10 years.

Cell: D18
Comment: PBrown:
Skilled carpenter time at $75 per hour for misc. carpentry repairs on exterior of historic building, as noted in report. Allow 20 days worth of work. 20 x 8 x 75. plus 5K materials.

Cell: E18
Comment: PBrown:
Skilled carpenter time at $75 per hour for misc. carpentry repairs on exterior of historic building, as noted in report. Allow 20 days worth of work. 20 x 8 x 75. plus 5K materials.

Cell: D20
Comment: PBrown:
Clean organic growth from foundation walls. Minor brick repointing. Crew of 3 for 5 days.

Cell: E20
Comment: PBrown:
Clean organic growth from foundation walls. Minor brick repointing. Crew of 3 for 5 days.

Cell: P20
Comment: PBrown:
Anticipated pointing work at historic building

Cell: D21
Comment: PBrown:
Water test leaks at skylight. Specify repairs. Professional fees. Includes repair to copper downspout.

Cell: E21
Comment: PBrown:
Water test leaks at skylight. Specify repairs. Professional fees. Includes repair to copper downspout.

Cell: F21
Comment: PBrown:
Implement repairs as a result of study. Placeholder value. Scope unknown at this time.

Cell: D22
Comment: PBrown:
Replace missing roof slates on old roof. 3 men 3 days. Higher value for skilled historic technicians.

Cell: E22
Comment: PBrown:
Replace missing roof slates on old roof. 3 men 3 days. Higher value for skilled historic technicians.

Cell: J23
Comment: PBrown:
Allowance for partial interior painting; selected areas

Cell: Q23
Comment: PBrown:
Allowance for partial interior painting; selected areas

Cell: D24
Comment: PBrown:
Exterior Painting.
4 person crew 4 days for spot work.

Cell: E24
Comment: PBrown:
Exterior Painting.
4 person crew 4 days for spot work.

Cell: I24
Comment: PBrown:
Comprehensive exterior painting every 5 years to protect historic building. 5 person crew for 15 days. Plus materials..

Cell: N24
Comment: PBrown:

Comprehensive exterior painting every 5 years to protect historic building. 5 person crew for 15 days. Plus materials..

Cell: R24
Comment: PBrown:
Comprehensive exterior painting every 5 years to protect historic building. 5 person crew for 15 days. Plus materials..

Cell: D25
Comment: PBrown:
Pull test on sealant at aluminum panel wall. Water test. Professional fees for repair specification. Includes sealing joint at old to new foundation.

Cell: E25
Comment: PBrown:
Pull test on sealant at aluminum panel wall. Water test. Professional fees for repair specification. Includes sealing joint at old to new foundation.

Cell: F25
Comment: PBrown:
Implement repairs as a result of study. Placeholder value. Scope unknown at this time. General Waterproofing work may involve re-caulking all metal panel joints on the building.

Cell: R31
Comment: PBrown:
10,000 S.F. of res. Flooring replacement at $4 per S.F. plus Gen Req.s.

Cell: G32
Comment: PBrown:
allowance for 178 s. yrds of carpet replacement at $28 per S.Y.

Cell: N32
Comment: PBrown:
allowance for 178 s. yrds of carpet replacement at $28 per S.Y.

Cell: K35
Comment: rmcaleer:
new electric water heater

Cell: E36
Comment: rmcaleer:
auto flush on sinks toilets and urinals

Cell: D44
Comment: PBrown:
Security system with cameras and card-reader access. Placeholder value pending CES review.

Cell: E44
Comment: PBrown:
Security system with cameras and card-reader access. Placeholder value pending CES review.

Cell: E45
Comment: rmcaleer:
replace incandescent track lighting

Cell: F45
Comment: rmcaleer:
add lighting in front rooms

Cell: D46
Comment: rmcaleer:
install auto lighting controls in offices

Cell: E46
Comment: rmcaleer:
install auto lighting controls in offices

Stetson House - Program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	13,750.00	42,625.25	52,125.00	3,000.25	0.00	1,500.00	3,750.25	7,750.00	1,500.00	1,250.00	0.00	6,750.25	6,250.00	0.00	15,000.00	155,251.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11a	Insulation and Similar	INS	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
12	Exterior Siding	EXT	0.00	2,500.00	0.00	6,000.00	0.00	0.00	0.00	6,000.00	0.00	0.00	0.00	6,000.00	0.00	0.00	0.00	20,500.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,000.00
15	Roofing and Flashing	ROOF	0.00	0.00	6,000.00	0.00	0.00	6,000.00	0.00	0.00	6,000.00	0.00	0.00	6,000.00	0.00	0.00	60,000.00	84,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	10,000.00	25,000.00	0.00	0.00	0.00	10,000.00	25,000.00	0.00	0.00	0.00	10,000.00	25,000.00	0.00	0.00	105,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	3.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	5,000.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	15,000.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	5,000.00	75,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,000.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	35,000.00	3,500.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41,000.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	5,000.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	120,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120,000.00
42	Other: 1	OTHR1	0.00	5,000.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,001.00
43	Other: 2	OTHR2	0.00	5,000.00	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55,000.00
44	TOTAL (All Trade Categories)	TOTL	68,750.00	213,126.25	260,625.00	15,001.25	0.00	7,500.00	18,751.25	38,750.00	7,500.00	6,250.00	0.00	33,751.25	31,250.00	0.00	75,000.00	776,255.00
45	Energy Efficiency (Sub-Total)	ENER																0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST	68,750.00	213,126.25	260,625.00	15,001.25	0.00	7,500.00	18,751.25	38,750.00	7,500.00	6,250.00	0.00	33,751.25	31,250.00	0.00	75,000.00	776,255.00

Cell: D17
Comment: PBrown:
insulate and seal holes in foundation sill. 2 men 2 days.

Cell: E17
Comment: PBrown:
insulate and seal holes in foundation sill. 2 men 2 days.

Cell: D18
Comment: PBrown:
Repairs to outside bulkhead. Preservation Carpentry work. 1 man 5 days.

Cell: E18
Comment: PBrown:
Repairs to outside bulkhead. Preservation Carpentry work. 1 man 5 days.

Cell: G18
Comment: PBrown:
Periodic Maintenance. Value is intended to also cover value of periodic work at outbuildings.

Cell: K18
Comment: PBrown:
Periodic Maintenance. Value is intended to also cover value of periodic work at outbuildings.

Cell: O18
Comment: PBrown:
Periodic Maintenance. Value is intended to also cover value of periodic work at outbuildings.

Cell: G20
Comment: PBrown:
Pointing and minor repairs to stone foundation, every 10 years. Crew of 3 for 4 days. 12 x 500.

Cell: F21
Comment: PBrown:
Periodic Maintenance. Value is intended to also cover value of periodic re-roofing of outbuildings.

Cell: I21
Comment: PBrown:
Periodic Maintenance. Value is intended to also cover value of periodic re-roofing of outbuildings.

Cell: L21
Comment: PBrown:
Periodic Maintenance. Value is intended to also cover value of periodic re-roofing of outbuildings.

Cell: O21
Comment: PBrown:
Periodic Maintenance. Value is intended to also cover value of periodic re-roofing of outbuildings.

Cell: R21
Comment: PBrown:
Reroof. Preservation quality wood roof. 4 men 20 days. Plus 20 K materials.

Cell: E24
Comment: PBrown:
Interior painting and wall finishes. Value intended to cover an every 5-year re-finishing program of selected rooms. 2 person crew working to preservation standards for 20 days = 10000

Cell: F24
Comment: PBrown:
Historic painting of exterior, every 5 years to protect fabric of building. Crew of 5. 10 days. This value is intended to be large enough to include periodic painting and sealing of outbuildings, as well as associated minor carpentry repairs.

Cell: J24
Comment: PBrown:
Interior painting and wall finishes. Value intended to cover an every 5-year re-finishing program of selected rooms. 2 person crew working to preservation standards for 20 days = 10000

Cell: K24
Comment: PBrown:
Historic painting of exterior, every 5 years to protect fabric of building. Crew of 5. 10 days. This value is intended to be large enough to include periodic painting and sealing of outbuildings, as well as associated minor carpentry repairs.

Cell: O24
Comment: PBrown:
Interior painting and wall finishes. Value intended to cover an every 5-year re-finishing program of selected rooms. 2 person crew working to preservation standards for 20 days = 10000

Cell: P24
Comment: PBrown:
Historic painting of exterior, every 5 years to protect fabric of building. Crew of 5. 10 days. This value is intended to be large enough to include periodic painting and sealing of outbuildings, as well as associated minor carpentry repairs.

Cell: E27
Comment: PBrown:
See historic painting. Plaster repairs covered in that value.

Cell: J27
Comment: PBrown:
See historic painting. Plaster repairs covered in that value.

Cell: O27
Comment: PBrown:
See historic painting. Plaster repairs covered in that value.

Cell: E29
Comment: PBrown:
Historic wood floor maintenance, repairs, protection, and re-finishing. 5 year budget cycle. Allowance.

Cell: J29
Comment: PBrown:
Historic wood floor maintenance, repairs, protection, and re-finishing. 5 year budget cycle. Allowance.

Cell: O29
Comment: PBrown:
Historic wood floor maintenance, repairs, protection, and re-finishing. 5 year budget cycle. Allowance.

Cell: D33
Comment: PBrown:
Professional fees for further study of access issues, and development of specifications for modifications.

Cell: E33
Comment: PBrown:
Professional fees for further study of access issues, and development of specifications for modifications.

Cell: F33
Comment: PBrown:
Implementation of study results. Based upon handrails on sidewalk, moveable ramp at door, and audio-visual technology to view tours of upper level from ground floor.

Cell: D37
Comment: PBrown:
Professional engineering design study of heat and humidity control issues. DRA input value, to be verified by CES.

Cell: E37
Comment: PBrown:
Professional engineering design study of heat and humidity control issues. DRA input value, to be verified by CES.

Cell: F38
Comment: PBrown:
allowance for implementation of heat and humidification system, per results of study. Value input by DRA, needs to be verified by CES.

Cell: D42
Comment: PBrown:
Remove 'bx' cable and replace, under house. DRA input this value, to be verified by CES.

Cell: D44
Comment: PBrown:
Special site perimeter alarm detection and illumination system. DRA input value for budget; to be verified by CES.

Cell: E44
Comment: rmcaleer:
install fire alarm system

Cell: F44
Comment: rmcaleer:
replace existing security system

Cell: M45
Comment: PBrown:
Upgrade of general lighting systems per RM email 3/9/11.

Cell: D48
Comment: PBrown:
Installl FP sprinkler system. Value includes design fees. DRA input this value, to be verified by CES. Value is intended to be 'high', to cover extraordinary care of system design and installation in this historic structure.

Cell: E48
Comment: PBrown:
Installl FP sprinkler system. Value includes design fees. DRA input this value, to be verified by CES. Value is intended to be 'high', to cover extraordinary care of system design and installation in this historic structure.

Cell: D49
Comment: PBrown:
Repairs to basement stairs under el. Preservation carpentry work. 2 men 5 days.

Cell: E49
Comment: PBrown:
Repairs to basement stairs under el. Preservation carpentry work. 2 men 5 days.

Cell: G49
Comment: PBrown:
Remote storage for historic records. See DPW building .

Cell: E50
Comment: PBrown:
Preliminary Historic Structures survey ; professional design fees for preliminary research only.

Cell: F50
Comment: PBrown:
Comprehensive Historic Structure survey report. Professional fees. Estimate.

Cell: B54
Comment: PBrown:
All work in this building is 'historic' work, by definition.

Curtis School - Assumes stabilization, followed by renovation for a re-use similar in configuration to most recent use.

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	15,125.00	50,000.00	468,750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	533,875.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	50,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50,000.00
5	Site Work - Paving	PAVE	0.00	0.00	80,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	80,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80,000.00
7	Site Work - Utilities	UTIL	0.00	0.00	80,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80,000.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	60,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60,000.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	200,000.00	1,575,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,775,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	**TOTAL (All Trade Categories)**	TOTL	75,625.00	250,000.00	2,343,750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,669,375.00
45	Energy Efficiency (Sub-Total)	ENER																0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: D9
Comment: PBrown:
Stabilization work. Remove all carpet. Demo existing suspended ceilings. Remove interior electrical wiring back to panels. Repair alarm systems. Allowance.

Cell: D16
Comment: PBrown:
Immediate repairs to stabilize structure. Allowance.

Cell: D21
Comment: PBrown:
Immediate repairs to stabilize structure. Allowance.

Cell: D23
Comment: PBrown:
Immediate repairs to stabilize structure. Allowance.

Cell: D36
Comment: rmcaleer:
Complete replacement; $40000 value removed by DRA in favor of future reconstruction project.

Cell: D41
Comment: rmcaleer:
Complete replacement; $90,000 value removed by DRA in favor of future reconstruction project.

Cell: D44
Comment: rmcaleer:
Complete replacement; $18,000 value removed by DRA, in favor of future reconstruction project.

Cell: D46
Comment: rmcaleer:
Complete replacement; $60,000 value removed by DRA, in favor of future reconstruction project.

Cell: D48
Comment: rmcaleer:
Complete replacement; $25,000 value removed by DRA, in favor of future building reconstruction project.

Cell: E49
Comment: PBrown:
Design fees for new project at 10% of construction cost

Cell: F49
Comment: PBrown:
Renovation of existing building to new use, preserve shell and same general configuration of interior. Estimated budget cost at $300 per S.F. x 5250 S.F. Site costs are accounted for above, separately.

Curtis School - Assumes stabilization, followed by reconstruction and reuse as a district fire station.

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	21,375.00	100,000.00	1,000,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,121,375.00
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	75,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75,000.00
5	Site Work - Paving	PAVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,500.00
11a	Insulation and Similar	INS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Painting	PAINT	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,000.00
18	Historical Painting	HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	Electrical - Lighting	LIGHT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	400,000.00	4,000,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,400,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	**TOTAL (All Trade Categories)**	**TOTL**	106,875.00	500,000.00	5,000,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,606,875.00
45	Energy Efficiency (Sub-Total)	ENER																0.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST																0.00

Cell: D9
Comment: PBrown:
Stabilization work. Remove all carpet. Demo existing suspended ceilings. Remove interior electrical wiring back to panels. Repair alarm systems. Demo interior office partitions. Allowance.

Cell: D16
Comment: PBrown:
Immediate repairs to stabilize structure. Allowance.

Cell: D21
Comment: PBrown:
Immediate repairs to stabilize structure. Allowance.

Cell: D23
Comment: PBrown:
Immediate repairs to stabilize structure. Allowance.

Cell: D36
Comment: rmcaleer:
Complete replacement; $40000 value removed by DRA in favor of future reconstruction project.

Cell: D41
Comment: rmcaleer:
Complete replacement; $90,000 value removed by DRA in favor of future reconstruction project.

Cell: D44
Comment: rmcaleer:
Complete replacement; $18,000 value removed by DRA, in favor of future reconstruction project.

Cell: D46
Comment: rmcaleer:
Complete replacement; $60,000 value removed by DRA, in favor of future reconstruction project.

Cell: D48
Comment: rmcaleer:
Complete replacement; $25,000 value removed by DRA, in favor of future building reconstruction project.

Cell: E49
Comment: PBrown:
Design fees for new project at 10% of construction cost

Cell: F49
Comment: PBrown:
Conversion of existing building to new use, preserve shell, expand building to 8000 SF. Extimated budget cost at $500 per S.F. for total reconstruction and re-purposing. Could possibly be a satellite fire station.

Parks and Recreation (Grange Hall) - Program of normal repairs

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		Acronym	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	TOTAL (15 Years)
1	General Building Construction (General Requiren	GEN	0.00	72,875.25	46,375.00	1,750.00	0.00	0.00	6,000.00	1,250.00	1,750.00	1,800.00	0.00	1,250.00	5,000.00	1,750.00	1,250.00	141,050.25
2	Haz Mat - Asbestos Removal	ASB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Haz Mat - Deleading	LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Demolition	DEMO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Site Work - Paving	PAVE	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,000.00	0.00	0.00	40,000.00
6	Site Work - Landscaping	LAND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Site Work - Utilities	UTIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Site Work - Play Areas/ Recreational Fields	PLAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Site Work - Other	SITE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Doors, Frames and Door Hardware	DOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Windows	WIN	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00
11a	Insulation and Similar	INS	0.00	31,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31,000.00
12	Exterior Siding	EXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Masonry	MAS	0.00	30,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00
14	Historical Masonry	HM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Roofing and Flashing	ROOF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Historical Roofing and Flashing	HR	0.00	0.00	0.00	0.00	0.00	0.00	24,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24,000.00
17	Painting	PAINT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Historical Painting	HP	0.00	5,000.00	0.00	7,000.00	0.00	0.00	0.00	5,000.00	7,000.00	0.00	0.00	0.00	0.00	7,000.00	5,000.00	36,000.00
19	Waterproofing, Damping & Caulking	WDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Metals/ Ornamental Irons	MMOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Lathing & Plastering	PLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Acoustical Tile Ceilings	ACOU	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00
23	Resilient Flooring	RESF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	7,200.00
24	Glass & Glazing	GLAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Tile (ceramic wall or floor tile)	TILE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Carpet	CARPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26a	Accessibility Upgrades	ACCESS	0.00	200,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	200,000.00
27	Plumbing - Waste Sytems	WAST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	Plumbing - Supply Systems	WATR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Plumbing - Other	PLMB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	HVAC - Control Systems	CNTRL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	HVAC - Air Systems and Equipment	AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	HVAC - Boilers	BOIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	HVAC - Steam Traps	STEAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	HVAC - Other	HVAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Electrical - Power	POWR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	Electrical - Data / Tele	D/T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Electrical - Alarm Systems	ALARM	0.00	1.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,501.00
38	Electrical - Lighting	LIGHT	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	12,500.00
39	Electrical - Other	ELEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	Elevators	ELEV	0.00	0.00	150,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150,000.00
41	Fire Protection / Sprinkler Systems	FIRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	Other: 1	OTHR1	0.00	5,000.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,000.00
43	Other: 2	OTHR2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	**TOTAL (All Trade Categories)**	TOTL	0.00	364,376.25	231,875.00	8,750.00	0.00	0.00	30,000.00	6,250.00	8,750.00	9,000.00	0.00	6,250.00	25,000.00	8,750.00	6,250.00	705,251.25
45	Energy Efficiency (Sub-Total)	ENER	0.00	31,000.00	7,500.00													38,500.00
46																		0.00
47	Historical Building Restoration (Sub-Total)	HIST	0.00			7,000.00			24,000.00	5,000.00	7,000.00							43,000.00

Cell: F10
Comment: PBrown:
Repair paving, seal and re-stripe following after elevator project work. Allowance.

Cell: P10
Comment: PBrown:
Reseal and restripe.

Cell: D15
Comment: PBrown:
See access line.

Cell: D16
Comment: PBrown:
Replace basement windows. 8 windows x 1000.

Cell: E16
Comment: PBrown:
Replace basement windows. 8 windows x 1000.

Cell: D17
Comment: PBrown:
Basement re-insulation project. Includes carpentry work. 4 men 14 days. 52 x 500. plus 5k Materials.

Cell: E17
Comment: PBrown:
Basement re-insulation project. Includes carpentry work. 4 men 14 days. 52 x 500. plus 5k Materials.

Cell: D19
Comment: PBrown:
Containment at basement oil tank. 4 man crew 2 weeks. Plus materials.

Cell: E19
Comment: PBrown:
Containment at basement oil tank. 4 man crew 2 weeks. Plus materials.

Cell: J22
Comment: PBrown:
Replace roofing. 2400 sf. X 10$

Cell: D24
Comment: PBrown:
2 person crew for 5 days for painting maintenance work.

Cell: E24
Comment: PBrown:
2 person crew for 5 days for painting maintenance work.

Cell: G24
Comment: PBrown:
Interior painting and wall finishes on 5-year cycle. Allowance.

Cell: K24
Comment: PBrown:
Repaint

Cell: L24
Comment: PBrown:
Interior painting and wall finishes on 5-year cycle. Allowance.

Cell: Q24
Comment: PBrown:
Interior painting and wall finishes on 5-year cycle. Allowance.

Cell: R24
Comment: PBrown:
Repaint

Cell: D26
Comment: PBrown:
Handrails. See access work.

Cell: E28
Comment: PBrown:

Replace suspended ceilings. 1000 s.f. at $5

Cell: M29
Comment: PBrown:
Replace resilient flooring. 2400 s.f. at $3

Cell: D33
Comment: PBrown:
Replace ramp handrails; reconfigure entrance door. Reconfigure toilet rooms. Allowance value intended to also provide for complete design services after study. Placeholder pending completion of design study.

Cell: E33
Comment: PBrown:
Replace ramp handrails; reconfigure entrance door. Reconfigure toilet rooms. Allowance value intended to also provide for complete design services after study. Placeholder pending completion of design study.

Cell: E44
Comment: rmcaleer:
install fire alarm system; DRA: Fire alarm system completed last summer; value of $7500 removed.

Cell: F44
Comment: rmcaleer:
install security system

Cell: E45
Comment: rmcaleer:
install auto lighting controls

Cell: O45
Comment: PBrown:
upgrade lighting per RM email 3/09/2011

Cell: F47
Comment: PBrown:
Provide elevator for access to lower level.

Cell: D49
Comment: PBrown:
Preliminary design study to provide for accessibility and convert to Parks use in basement.

Cell: E49
Comment: PBrown:
Preliminary design study to provide for accessibility and convert to Parks use in basement.

Cell: F49
Comment: PBrown:
Bid documents for elevator project. Design fees.