



FACILITY MASTER PLAN REPORT

for the TOWN OF WILMINGTON



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EXECUTIVE SUMMARY

INTRODUCTION

This *Facility Master Plan* provides a strategy for the coordinated, efficient investment and maintenance of key Town buildings and sites that support municipal services and community needs in Wilmington. The *Master Plan* focuses on the future needs and allocation of uses for nearly thirty buildings and sites that were chosen for evaluation. It contains specific recommendations for future actions that the Town can take to provide cost-effective facilities and services. The recommendations describe a series of short-term, mid-term, and long-term investments that the Town can take to maintain and improve its stock of buildings and sites. This approach will help ensure that the Town's facilities are aligned with the uses they contain and can be operated efficiently.

The recommendations have been built upon professional analysis of the existing conditions of these facilities. They reflect the careful consideration of deficiencies and future needs for each of the facilities and services within the scope of the *Master Plan*. The planning process included extensive evaluation of alternative approaches to locations, improvements, and disposition of the buildings, sites and uses. The process engaged residents, elected officials, various Town Boards, and Town staff who contributed information, insights, and advice.

As a facility improvement strategy, this *Master Plan* can be used as a tool to advance individual projects in a logical sequence for detailed study and confirmation within an overall framework of budgeting and funding. Projects that move forward will progress through advanced design, approvals, funding, and implementation.

Each of the projects described in this document must be undertaken using established procedures that include required public reviews and participation in all the related municipal processes. These will include the Boards, Committees, and Town Meetings that all play various roles associated with capital improvement and facility decisions.

Purposes

The Wilmington Facility Master Plan was prepared to accomplish multiple purposes:

- Provide for long-term, coordinated budgeting and funding – This plan provides cost estimates and descriptions for a broad array of projects that will assist the Town in managing its capital improvement budgets, operating and maintenance budgets, grant applications, funding, and financing. By projecting future needs over an extended time period, the Town can more effectively anticipate and organize its decisions.
- Establish a strategy to support cost-effective operations and maintenance – The Town will benefit from cost-effective capital investments with a positive return by reducing energy costs, consolidating uses to reduce the number of facilities, and providing buildings and sites that efficiently match the space and operating needs of its various departments.
- Coordinate capital planning for schools and other municipal facilities – This Master Plan includes planning for school and other municipal facilities within a single, coordinated document so that future project funding, financing, phasing, and timing can be coordinated.

- Resolve facility locations – This *Master Plan* provides a thorough evaluation of the relative costs and benefits of potential relocation of several key facilities and use of existing municipal sites. This includes the School Administration, Memorial Library, Senior Center, and Town Hall, among other uses. The *Master Plan* includes specific recommendations for the long-term disposition of these facilities and key parcels.
- Identify critical issues and deficiencies through a comprehensive review – By reviewing many facilities simultaneously, this process identified key issues and deficiencies so that the Town can set priorities for resolving them in an orderly manner.
- Plan for future community needs and trends – Wilmington is subject to demographic changes and shifting demands for some of its services over time. By anticipating changing conditions, the Town can adapt its facilities in a timely, cost effective changes.
- Organize agenda for advancing projects – With this *Master Plan*, the Town’s leadership can better set annual agendas for assigning staff and aligning resources to advance projects.
- Assemble a facility information resource – The evaluations and documentation prepared for this *Master Plan* will provide an important reference resource regarding building and site conditions as future improvements and changes are undertaken.

Contents

The Facility Master Plan includes:

- Executive Summary – This section provides an overview of the scope, process, and recommendations within the Facility Master Plan. This section also includes the criteria that was used to shape the recommendations contained in this report.
- Facility Needs and Improvements – This section provides the specific description of future facility needs and recommendations on a facility-by-facility, site-by site basis. It also includes findings and observations on several related topics, including consideration of a potential future substation for the Fire Department/Public Safety use, and planning for future Senior Housing in Wilmington as it may relate to Town-owned land.
- Implementation – The final section provides information and recommendations regarding the implementation of this Facility Master Plan. It includes a compiled summary of estimated capital improvement costs, and describes overall strategies and approaches to phasing, funding, and other municipal actions.
- Appendices – The appendices contain documentation regarding alternative scenarios that were evaluated for the location of certain facilities relative to different sites, and the implications associated with adapting existing buildings or building new facilities. The appendices also include compilations of existing conditions analyses that were prepared in the initial phases of the planning process.

FACILITY MASTER PLAN SCOPE

The *Master Plan* has a time horizon of twenty years. It envisions improvements and corrections of existing deficiencies that extends the life of existing facilities to at least that horizon. It also identifies facilities within that period that will no longer be cost effective to operate or renovate relative to the long-term benefits associated with building new facilities.

The scope of this plan included evaluation and recommendations with the following specific facilities and their sites. For the purpose of categorization, “Municipal Facilities” consists of buildings that are not educational facilities, and includes the School Administration building and functions. “School Facilities” are the educational facilities that comprise the lower grade schools in Wilmington.

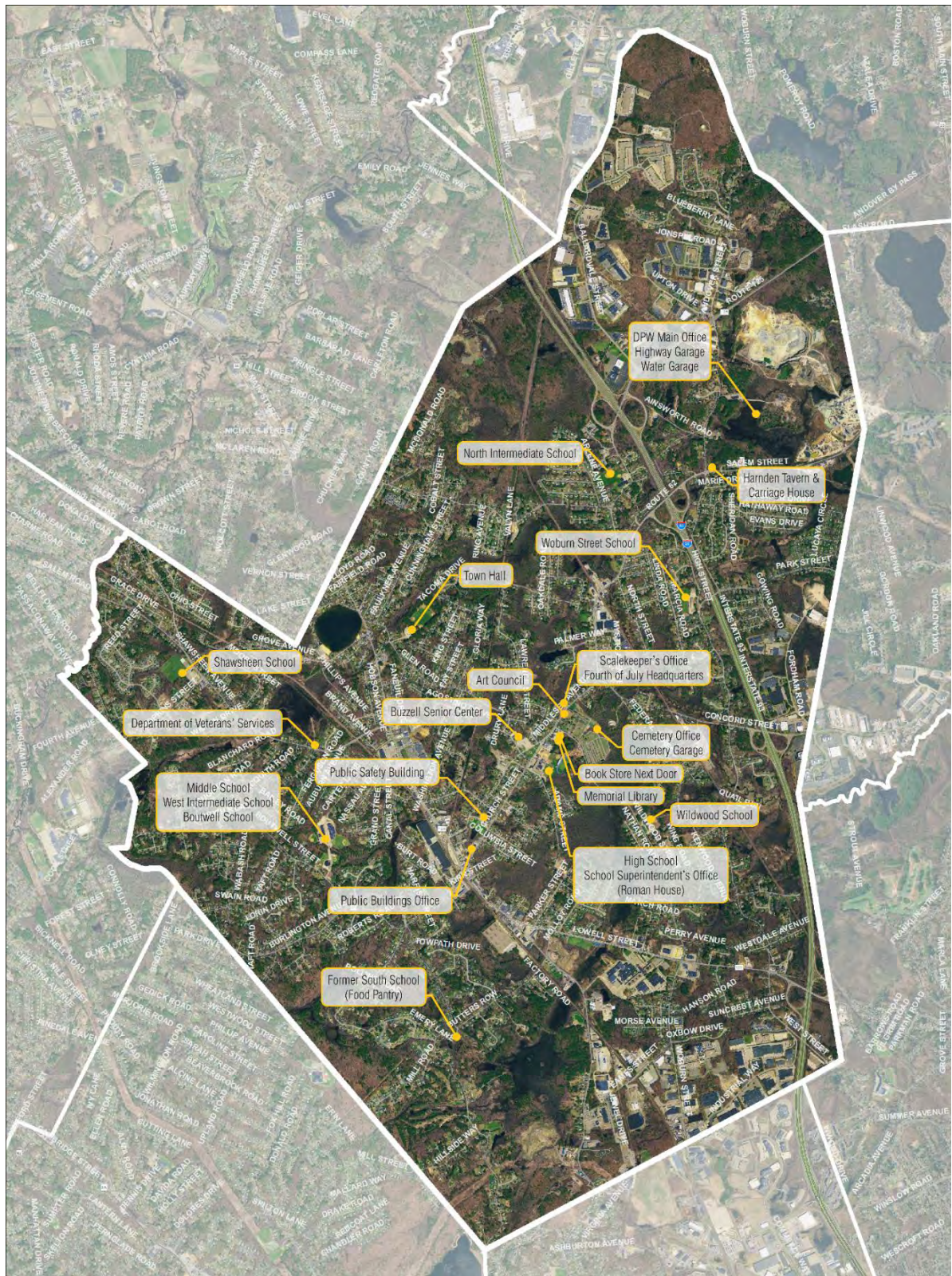
Municipal Facilities

1	Arts Council	219 Middlesex Avenue
2	Bath House	1 Grove Avenue
3	Book Store Next Door	183 Middlesex Avenue
4	Buzzell Senior Center	15 School Street
5	Cemetery Garage	60 Wildwood Street
6	Cemetery Office	233 Middlesex Avenue
7	Department of Public Works/ Highway Garage	135 Andover Street
8	Department of Public Works/ Water Division Garage	115 Andover Street
9	Department of Public Works/ Water Division Office	115 Andover Street
10	Department of Veteran’s Services (West School)	141 Shawsheen Avenue
11	Fourth of July Headquarters	150 Middlesex Avenue
12	Harnden Tavern Carriage House	430 Salem Street
13	Harnden Tavern Minuteman Headquarters	430 Salem Street
14	Harnden Tavern	430 Salem Street
15	Memorial Library	175 Middlesex Avenue
16	Moth House/Morse Barn	240 Middlesex Avenue
17	Public Buildings Office	30 Church Street
18	Public Safety Building	1 Adelaide Street
19	Scalekeeper’s Office	240 Middlesex Avenue
20	School Administration Building (Roman House)	161 Church Street
21	South School (Food Pantry)	142 Chestnut Street
22	Town Hall	121 Glen Road

School Facilities

23	Boutwell School	17 Boutwell Street
24	North Intermediate School	320 Salem Street
25	Shawsheen School	298 Shawsheen Avenue
26	West Intermediate School	22 Carter Lane
27	Wildwood School	182 Wildwood Street
28	Woburn Street School	227 Woburn Street

The following map indicates the location of the facilities that were the focus of this *Master Plan*.



Sites

Two municipally-owned sites were considered as potential sites for future Town facilities.

- Swain School Site – This site was formerly the Swain School and adjacent areas comprise a large parcel of land owned by the Town. Located at the intersection of School Street and Middlesex Avenue, this site currently contains a large lot used for High School related parking, the Buzzell Senior Center, and undeveloped, unimproved areas. The site is adequately large to be considered for a new facility without compromising the ability to maintain the High School’s parking or its use as part of the annual Fourth of July celebration.
- St. Dorothy’s Site – The Town acquired this site that consists of undeveloped land which was formerly part of a larger holding associated with the existing St. Dorothy’s Church. The site has an “L”-shaped configuration and has frontage on both Main Street and Glen Road. The site is adequately large to be a candidate for one or more of the facilities that are the subject of this *Master Plan*.

Senior Housing

As part of the Town Meeting authorization for this study, Town staff were directed to consider the potential for the use of Town-owned sites for senior housing that would fulfill an unmet need in the community.

The planning process considered the potential for the Town to convey land through long-term lease or sale to a private entity for the development and operation of senior housing. This was interpreted to include age-restricted housing, independent living facilities, or assisted living facilities. The planning process did not contemplate the Town developing, owning, or operating senior living facilities as a public service.

Facilities Outside of the Planning Scope

The Town owns other land and facilities that were not included within the scope of this *Master Plan*. These sites and facilities will be subject to other planning, operational, and maintenance considerations.

In general, the land and facilities associated with municipal parks and recreation uses were not included in the scope, because they are separately addressed within the scope of a separate planning document and process, the Wilmington Open Space, and Recreation Plan. The Bath House facilities at Silver Lake were included to provide an evaluation of potential deficiencies and capital improvements associated with that building.

This project also did not include facilities that provide or support Town utilities, other than the Water Division equipment that is housed in the former Water Division office building, which is now occupied by portions of the Department of Public Works.

The Town has other land holdings which were not considered in the process, because they were not considered to be reasonable candidates as sites for any of the Municipal or School Facilities that were the focus of the *Master Plan*.

PLANNING PROCESS

Participants

The *Master Plan* was guided by a special committee assembled for this purpose. It was prepared with the assistance of a multi-disciplinary planning team including planners, architects, engineers, and landscape architects. The process included a variety of opportunities for public input. It engaged directors of relevant Town departments and agencies. The process also included briefings and workshops with key boards and committees, including the Board of Selectmen and School Committee.

The Facility Master Plan Committee included a combination of Town staff and citizens, and consisted of the following members:

- George W. Hooper II, Chairman & Public Buildings Superintendent
- Diane M. Allan, Permanent Building Committee Member
- Valerie Gingrich, Director of Planning and Conservation
- John C. Holloway, Permanent Building Committee Member
- Jeffrey M. Hull, Town Manager
- Theresa M. Manganelli, Finance Committee Chairperson
- Paul J. Melaragni, Permanent Building Committee Member
- Joseph J. Parrella, Jr., Permanent Building Committee Member
- Paul Ruggiero, Interim School Superintendent

Town staff consisting of the Assistant Town Manager and the Town Planner coordinated the communications and interface with the consultant team for the preparation of this *Master Plan* which consisted of Harriman and DeSousa Consulting Engineers.

Harriman provided planning, architecture, landscape architecture and site civil engineering services. Harriman's services were managed and directed by its Planning Studio, which encompasses the practice of The Cecil Group, a subsidiary of Harriman. Cost estimating was accomplished by Harriman with assistance from Preferred Construction Management Company, Inc.

DeSousa Consulting Engineers provided assessments and recommendations for building systems (mechanical, electrical, plumbing and fire protection).

Planning Sequence

The planning was accomplished with sequential, progressive steps.

- Evaluation of Existing Conditions – The consultant team reviewed documents provided by the Town regarding existing facilities, and undertook facility visits to establish an overall understanding of the existing conditions. This included site and building visits by architects and engineers. The overall conditions of the facilities were noted and documented in a Facility Conditions Report, which noted prominent deficiencies or issues for consideration in the feasibility and cost of improvements. Relevant portions of the existing conditions evaluations have been included as an appendix to this report as a reference resource.

- Programming – This step created a list of functional space and facility needs for the uses that are the subject of this *Master Plan*. This was accomplished by evaluating the building space and site requirements for all existing functions, and projecting future space and site needs. This step included systematic interviews and surveys of participating departments and staff responsible for various functions, which contributed to the understanding of existing facility deficiencies and potential future changes. The methodology for projecting future needs varied by facility type, and included consideration of demographic data and comparisons with comparable communities. For the school component, the evaluation of future needs also included detailed space use calculations, school enrollment projections provided by the School Department, and benchmark comparisons to applicable Town and Commonwealth of Massachusetts standards.
- Planning Criteria – During this step, the Facility Master Plan Committee assembled a list of prioritized criteria to guide evaluation of alternative scenarios and provide the basis for assembling the recommendations in this report.
- Alternative Scenarios and Comparative Evaluations – At this stage in the process, the consultant team assembled a series of alternative scenarios for the potential locations and type of improvements that would fulfill the programmatic needs of the Town within the planning horizon. At the same time, the team prepared preliminary recommendations and initial cost evaluations for improvements that may be needed for those uses which are expected to remain at their current sites. A set of alternatives was prepared for Municipal Facilities, focusing on key functions that should be considered for relocation or reconstruction on their existing sites. Alternative School Scenarios focused on whether to retain the current number of lower grade schools, or how they might be consolidated into fewer schools.

The alternative evaluations for both the Municipal and School Facilities included “baseline scenarios.” The baseline scenarios projected the relative costs and benefits if the Town retains most of the existing uses in their existing buildings and sites. These scenarios considered the implications of repairs, renovations and in some cases substantial additions to accommodate projected needs. The other scenarios tested the implications of relocating and/or rebuilding some of the Town’s uses and facilities in cases where there are significant issues associated with their current site, capacity, and facility conditions. During this step, coordination meetings and public discussions were undertaken to gain input about the relative costs and benefits of the different alternatives. The evaluations included a comparative matrix of each alternative relative to weighted, prioritized decision criteria to assist in the discussions and deliberations.

A summary of the alternative scenarios is contained in the Appendices, including presentation material used as part of the public outreach process.

- Preferred Scenario – Based on the input and comparative evaluations, a preferred scenario of improvements and investments was established for documentation.
- Draft Facility Master Plan – The draft Facility Master Plan assembled all the relevant recommendations and rationale, and descriptions of future improvements and actions for all the facilities and sites. It includes an implementation strategy.
- Final Facility Master Plan – The final Facility Master Plan constitutes the findings and recommendations of the Facility Master Plan Committee for consideration by the Town and the Boards, Committees and Commissions that will be engaged in future facility decisions and capital improvements.

Outreach and Community Engagement

The planning process included a pro-active outreach and public information program, providing multiple opportunities for input. Components of the outreach and information program included:

- Website Information – The Town’s website was employed to post information about the process, provide notice of meetings and post progress reports and other documents during the planning process. Information posted on the website included: Draft Municipal Facilities Report, Facility Condition Report Executive Summary, Municipal Facility Evaluation, Scenario Display Boards, School Alternatives, School Facility Evaluations, and the agendas and minutes for all the Facility Master Plan Committee meetings.
- Facility Master Plan Committee Meetings – The Master Plan Committee meetings were posted and open to the public, and were used to solicit questions and comments from those attending. The meeting notes were posted on-line as part of the Town’s website.
- Community Survey – A survey was distributed to the citizens of the Town to understand their perspectives on Town services and the facilities that support them. The survey was conducted on-line and through written comments. A total of 461 responses were collected and the results were presented to the Facility Master Planning Committee and in a report made available to the public through the website. The Community Survey Report is included as an Appendix of this *Master Plan*.
- Workshop/Joint Board Meeting – The planning process involved a community workshop on the Facility Master Plan was held which included joint participation by the Board of Selectman and the School Committee at a mid-point in the process. This session included a briefing, followed by questions, discussion, and comments by the attendees. This session was broadcast through the local cable television outlet.
- School Committee Briefings – The Facility Master Plan and the topics related to the lower school facilities were included as agenda items at three meetings of the School Committee, which provided guidance regarding the alternatives to be considered, the evaluation of the alternative school scenarios, and preferences for the location and consolidation of the lower schools among the available sites and buildings.
- Facility Alternatives Displays – During the consideration of alternative scenarios for the location of key Municipal and school facilities, presentation boards were posted at the Library and Town Hall to provide information and solicit input. In addition, Town staff engaged several constituencies and interest groups in informal meetings to present the alternatives and solicit input. The input was assembled by Town staff and communicated to the Facility Master Plan Committee.
- Facility Alternatives Workshop/Joint Board Meeting – A workshop and joint meeting was held to review the alternatives and seek consensus and direction among the alternative scenarios for the location of key Municipal and school facilities. This meeting included public comment and input.

Planning Criteria

The evaluations of alternative choices and the subsequent recommendations within this report are based on planning criteria that articulate community goals and Municipal interests. The Facility Master Plan Committee utilized a weighting system to reflect the relative importance of each factor.

MUNICIPAL CRITERIA	WEIGHT	NOTES
Low Priority 1 High Priority 5		
COSTS AND BENEFITS		
Capital Cost	5	This is the relative value of the total project cost as currently estimated in categories as noted below
Operating Cost	5	These are relative operating costs that would be associated with the facility after completing improvements or new construction
Life Cycle Costs	2	This is the relative cost of the replacement or substantial upgrades over time. A facility with a short-expected life before replacement or upgrading will be relatively costlier than the same facility if its expected life cycle were longer.
Reuse Opportunity and Benefit	1	This factor refers to the prospective ability to convert the facility to different municipal or other uses.
FACILITY QUALITY		
Match between Use and Design	4	This factor considers whether the facility was effectively designed for the uses to which it is put.
Current Safety and Code Compliance	3	This factor considers whether the facility would meet current code and safety standards without additional upgrades.
Visitor/User Quality	5	This is a ranking of the match between a facility and the functions it provides for visitors or non-staff users.
Workplace Quality	1	This factor ranks a facility's characteristics as an appropriate and efficient workplace for municipal employees.
CIVIC CRITERIA		
Benefits Town Identity and Character	4	This factor provides a ranking of how a facility may be perceived as a visible part of the community quality and identity.
Location Convenience for Citizens	4	This is a location ranking relative to demographic concentrations and the Town roadway network.
ADAPTABILITY AND COMPATIBILITY		
Compatibility with Other Uses	3	This factor considers whether the facility as described in an alternative is likely to be perceived as an appropriate neighbor to existing uses.
Adaptable to Changing Use	3	This factor considers whether the facility would be adaptable to changes in the way its functions are fulfilled in the future to accommodate changing methods, technologies, or services.
Adaptable to Expansion	2	This factor considers whether future changes could be reasonably accommodated on-site through building or site changes.
Multiple Use in Facility	4	This factor favors facilities that accommodate multiple municipal uses because they are likely to be more efficient and more adaptable than single use facilities.
OTHER CRITERIA		
Proximity to Other Related Facilities	3	These criteria provide a ranking that favors facilities that are located close to related municipal facilities and functions, and would be more efficient than facilities where more travel time would be required.

EDUCATIONAL CRITERIA	WEIGHT	NOTES
Low Priority 1 High Priority 5		
COSTS AND BENEFITS		
Lowers Operations Costs	4	Improvements reduce operating costs relative to current conditions.
Reasonable Cost of Construction	4	Probable cost of construction would be considered reasonable relative to the size and quality of facilities provided because construction could be efficiently accomplished.
Improves Educational Space	5	The final space would be considered an improvement better meeting contemporary educational needs and practices.
Investment has Good Cost/Benefit	4	This factor ranks the probable cost effectiveness of improvements because of the amount and quality of improved educational facilities that would be created.
FACILITY QUALITY		
Existing Schools in Good Condition	5	Schools in good condition that do not require significant expenditures rank more highly than those in poor condition that need to be upgraded.
Reduces Student Transitions	3	Fewer transitions rank higher than alternatives with more transitions.
Brings Buildings Fully Up to Code	4	Alternatives where full code upgrades would be required because of the extent and character of the changes or new construction rank higher than scenarios with more limited upgrades.
Brings Mechanical and Electrical Systems Fully Up to Current Efficiency Codes	5	Alternatives where full building system efficiency upgrades would be required because of the extent and character of the changes or new construction rank higher than scenarios with more limited upgrades.
Aligns Student Capacity with Actual Student Population	5	Alternatives where there is a close match between the facilities provided and the projected distribution and number of students rank higher than options with surplus or deficits in projected space.
Reduces Busing Costs	2	Alternatives which match demographic distribution and efficient travel are highly rated.
Provides Good Geographic Distribution of Facilities	5	Alternatives that are more evenly distributed are ranked higher than those with less balance relative to the subareas of Town.
CIVIC CRITERIA		
Contribution to Community	0	This factor was not ranked but is provided for future consideration.
ADAPTABILITY AND COMPATIBILITY		
Potential for Future Expansion	3	Facilities that could be easily expanded rank higher than those where capacity changes cannot be easily accommodated in the future.
Potential for Reuse if School is Closed	2	Facilities that are more easily adapted to alternative uses rank higher.
Site Size is Adequate	5	Sites that can accommodate all parking and recreation needs are ranked more highly than constrained sites.
Site has Good Parking, Playfields, and Playgrounds	5	This factor ranks the potential quality of the site's uses.
Building and Site are Good Community Resources	4	This factor considers the potential of the facility to serve other community programs and activities.
OTHER CRITERIA		
Best Use of Building Limitations and Opportunities	4	This factor ranks the overall match between the proposed facility use and the underlying character of the building to serve educational uses and grade levels as listed in the alternative.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Findings

The recommendations in this *Facility Master Plan* have been based on analysis of many factors regarding the Town's facilities and future needs. The resulting findings have been documented as part of progress reports during the planning process, and which are either included directly or by reference in this report.

The following observations summarize key findings that have guided the overall approach to future facility improvements and investments.

DEMOGRAPHIC TRENDS

- Modest community growth –Town population growth is expected to be modest over the course of the next two decades, based on multiple demographic studies and projections. As a result, the overall demand for typical Town services can be expected to grow at a similar, modest pace. This will require some expansion need for some of the services and facilities over time.
- Disproportionate growth of the senior population – The senior population segment in Wilmington is expected to grow significantly and disproportionately relative to other segments of the population. It is reasonable to expect related growth in the demand programs and services associated with senior citizens and potentially veteran's services.
- No significant change in the school age population – For future enrollment levels for Town schools is not expected to significantly expand or contract in the future for any of the school levels, including the lower schools that are within the scope of this *Master Plan*. This is based on the projections employed by the Wilmington Public Schools which are generally consistent with other demographic projections.
- Development potential – There is some potential for redevelopment of low density parcels within Wilmington. The planning process noted the potential for redevelopment of large parcels in the northern segment of the community. If significant redevelopment occurs that shifts the projected population growth, the Town may experience associated impacts on Town services and facilities.

MUNICIPAL FACILITY CONDITIONS

- Reuse of buildings for other purposes – Many of Wilmington's municipal buildings were originally designed for purposes very different from their current use. As a result, the building layouts and their uses are subject to inefficiencies and deficiencies. Examples include the Town Hall (formerly an elementary school), the School Administration Building (formerly a Victorian-era residence), the Department of Veterans Affairs (formerly a school), and the Buzzell Senior Center. The Book Store Next Door is within a former residence which is unsuited to book stacks, storage, or its retail function. The Morse Barn serves as a storage shed, but was not designed for the purposes to which it is put.
- Varied building and site conditions – The overall condition of the buildings and the sites varies considerably. As would be expected, more recently constructed buildings, like the Public Safety Building, are in good condition. Aging buildings are more subject to deterioration, energy inefficiencies, and inconsistencies with current building code standards.
- Active Town maintenance and facility upgrades – The Town actively maintains and provides upgrades as an internal service that is funded, in part, through operations and maintenance

allocations. This internal service has been an effective method to adapt the existing building stock and sites to their current uses and enhance the cost effectiveness of operating the Town's many buildings and sites, reducing the need for capital expenditures.

- Aging building stock – In general, the Town's building stock is significantly aged relative to the typical useful life of similar municipal buildings. In many cases, the Town has acquired and is maintaining historic structures that are part of the community heritage and image. However, some buildings such as the Town Hall and Buzzell Senior Center are housed in buildings that are of limited historic value, but are significantly outdated.
- Adaptive reuse of historic structures – The adaptive reuse of historic structures for civic and municipal uses is a distinctive hallmark of Wilmington as a community, and provides a source of identity and character, but has resulted in deferred maintenance and deterioration is due to the limited maintenance and improvement allocations in some cases.
- Regulatory conditions and facility siting – Some of the Town's facilities and sites are significantly impacted by regulatory conditions including wetlands, flood plains, and wellhead protection zones. The buildings used by the Department of Public Works at the former Water Division offices and garage and main garage and office facilities are subject to significant regulatory and practical constraints due to the occasional flooding. The site of the DPW Garage also includes areas within the 100-year flood zone, and adjacent to wetlands. Portions of the Swain School site also appear to be low-lying and are likely to be regulated wetlands.
- Accessibility and Life Safety Systems – Many of the Town's facilities have not been fully upgraded to provide handicapped access and contemporary life safety systems.

MUNICIPAL FACILITY NEEDS

- Facilities requiring limited improvements – For several of the municipal functions evaluated in this process, the current sites and facilities reasonably match current uses and projected future needs. In these cases, minor modifications will allow adaptation to changing requirements that may arise. This is the case for the Public Buildings Office, the Public Safety Building, and the Bath House at Silver Lake.
- Town Hall functional requirements and future needs – The space requirements for the functions that are within the Town Hall exceed the available area within the existing building. The current facility has a shortage of meeting rooms, storage space, and an adequate facility for larger public meetings and civic events. A modest increase in building area can also be expected as the Town population grows over time, as well. Although the current functions have been fitted into a former school, the efficiency of the spaces and circulation is reduced because of the round geometry of the building. It would be desirable to add two other uses to the Town Hall program in the interest of efficiency. These include the School Administration functions (non-educational space) and the Department of Veterans Affairs, which are both currently housed in buildings that are inadequate for those purposes, as noted below.
- School administration space and facility needs – The current administrative functions are scattered among several locations, including the Roman House and school buildings. A consolidation of these functions is highly desirable, and the Roman House can accommodate approximately one-third of the administrative functions that would benefit from efficient office space.

- Department of Veterans Affairs– The Department of Veterans Affairs is housed in a small building that does not have the private office space and small meeting area that would be appropriate for this use.
- Library facility deficiencies and changing use patterns – The current facility does not provide adequate space for the library functions that are associated with contemporary community libraries, and is significantly less than libraries provided in comparable communities in the region. Additional space is needed for seating and reading areas, meeting spaces, staff, and for the variety of media and computer facilities associated with contemporary facilities and community life. The retail function of the Book Store Next Door is a distinctive dimension of the library use in Wilmington, and would benefit from being part of the library facility.
- Senior Center expansion needs – The floor area of the existing facility is below that provided for senior-oriented programs in comparable communities. The need to provide additional space and functionality will expand in pace with the significant increase in the senior population in Wilmington, as well.
- Department of Public Works deficiencies and issues – The DPW has unmet needs for additional vehicle service bays, staff and office space that cannot be accommodated within the existing buildings. The DPW also has a need for covered vehicle parking and storage areas.
- Buildings used for civic purposes – The buildings used for civic purposes are generally aligned with the amount of programmed space requirements associated with the current activities. This could change if there are substantial shifts in the type of activity offered by the non-profit and volunteer entities which manage and use them. No significant changes are currently contemplated. However, the extent of these building uses and future needs are not controlled by the Town.
- Facilities and locations for fire and emergency medical response – Concerns have been raised about the adequacy of the existing Town facilities to provide timely responses to fire and emergency medical calls within Wilmington. The fire and emergency medical response services operate from a single, central location (the Public Services Building). Relatively remote sections of the community require longer driving distances, and concerns were raised that the northern portions of Wilmington may be underserved. If this is the case, then a substation in that area of Town could improve service response times. The consultant team reviewed the available data on response times relative to recommended standards and the target response times used by other communities. Conclusive findings cannot be drawn from the currently available data, but the review did not reveal a clear pattern of excessive response times. However, there is potential need to maintain appropriate response times in the future through a substation or other measures. These conditions should be evaluated through improved data and analysis, and consider projected traffic patterns and new development that may occur in the northern areas of Wilmington.

SCHOOL FACILITY CONDITIONS

- Current school facilities at or near enrollment capacity – Based on class size and enrollment levels within the lower schools (grades Pre-K to grade 5), all six of the schools are effectively at their capacity. As a result, there is no excess space to allow consolidation of the existing school population into fewer buildings. This circumstance also limits flexibility in the allocation of students when schools are renovated or expanded in the future.
- Aging lower school facilities and contemporary space standards - The Town's lower school facilities are aging and do not meet contemporary educational standards for the amount and types of spaces. The age of the building stock varies, but all of the buildings were constructed to meet past practices

and standards rather than meeting current goals and standards. The gap between the existing facilities and desirable space and facilities varies from school to school.

- Functional maintenance and improvements to date - The Town has maintained the buildings and made improvements to support their current functions and provide a good educational environment. However, as the buildings age, they require costly upgrades and repairs and are relatively expensive to operate relative to buildings that are new or are renovated and have current energy and building systems.
- Varying building conditions – Of the stock of lower school buildings, the Wildwood and Boutwell would be most costly to bring up to current standards and operate efficiently because of their size, design, age, and condition.
- Costs of operating and maintaining six small schools – The Town currently operates six different schools. They accommodate different segments of the lower school enrollment. This includes two schools for the Pre-K and Kindergarten levels (Boutwell and Wildwood Early Childhood Centers), two schools for grades 1-3 (Shawsheen and Woburn Elementary Schools), and two schools for grades 4-5 (North and West Intermediate Schools). Operating so many relatively small schools is not as cost effective as operating larger schools. Larger schools would also be advantageous from both educational and space efficiency perspectives.

SCHOOL FACILITY NEEDS

- Enrollment projections – The current enrollment within the lower schools in Wilmington is not projected to significantly change within the planning horizon. Some fluctuation in the distribution among grade levels is likely to occur. Because the schools are at capacity and because of the distribution of grades among relatively small schools, the system cannot easily adapt to short-term shifts in grade level enrolment. The School Department needs increased flexibility in shifting classrooms and other facilities among grade levels.
- Reduced transitions associated with multiple, small schools – Because of the segmentation of the lower grade students among many small schools, children in the Wilmington system attend three different schools as they progress from pre-K through grade 5. There are educational benefits associated with fewer transitions.
- The size of elementary-level schools considered to be efficient and optimal – For elementary education, schools with student populations of between 400 and 600 are typically considered optimal in terms of effective use of space, allocation of common facilities, faculty size, operating costs, administration, and other factors. Four of the schools have populations below 300 students, and the Pre-K and K schools each have less than 200 students.
- Facilities and contemporary educational space standards – Contemporary space standards are used as a requirement for state funding of school improvements. To meet the related educational goals, the lower schools have a need for more and larger classrooms, expanded library and recreational spaces, lunchroom and other facilities.
- Geographic distribution – The geographic distribution should limit the amount of busing that is required and to provide convenience for both parents and students. Busing is required when threshold distances are exceeded between residences and schools, resulting in significant costs to the Town.

COMMUNITY CHARACTER

- Use of historic buildings for special programs and civic organizations – The Town provides facilities that house programs and organizations that are important and beneficial dimension of the character and identity of the entire community. The civic organizations use a variety of municipal buildings and employ their sites for activities, access and parking. These organizations and programs include the Fourth of July committee and the Fourth of July celebration, the historic museum, the Town's Minuteman organization, the non-profit book store, the Arts Council, and the Food Pantry. The future space needs associated with these uses is directly dependent upon the organizational goals and stewardship of the sponsoring groups.
- Geographic distribution of municipal and civic facilities – Relative to other communities, the Town's municipal facilities are widely distributed within the Town. There are potential benefits to grouping some of the facilities in closer proximity to other complementary uses.

Overall Recommendations

MUNICIPAL FACILITIES

The Town will benefit from the consolidation of several key functions in new and renovated structures that will solve existing deficiencies and provide many long-term benefits. This should include combining the Town Hall and School Administration functions within one building, which should also contain the Office of Veterans Affairs. The consolidation process should also assemble all of the Department of Public Works offices, storage facilities, and operations on one site. This will entail moving those offices and storage functions currently housed in the former Water Division buildings. They should be moved and combined with existing and expanded facilities on the existing DPW garage site. Key aspects of this consolidation include:

- New Town Hall and School Administration Building at the Swain School Site – The Town should invest in a composite Town Hall and School Administration Building that will consolidate compatible and related uses within a single structure. The Swain site location has a distinctive advantage of its proximity to the High School for the School Administration staff and functions. This consolidation will have space and operational efficiencies associated with shared use of meeting space, common space, and circulation, and building systems. As a new energy-efficient structure, operational costs will also be reduced. The Swain School site is adequately large to accommodate the new facility and its parking, while retaining the existing high school parking. There are several options for locating the new building within this large site.
- Consolidated and Improved DPW facilities – The Town should solve the problem associated with occasional significant flooding of the buildings and site of the former Water Division by moving the DPW functions over to the DPW garage site. The office functions would be housed in a replacement for the existing office and staff space in the DPW Garage, which is outdated and insufficient. The site improvements should include a new, larger storage shed that replaces the small existing shed. Additional service bays should be added to the DPW garage, and site improvements undertaken to improve outdoor storage and operating conditions. Because the existing site is constrained by regulated wetlands, flood plain conditions, and steep slopes, there will be a limit to the capacity of the site over the long term, and the Town should identify opportunities to provide adequate site areas for storage and operations that may exceed the site capacity.
- New Senior Center at the existing Town Hall site – A new, expanded senior center can best be provided at the site of the existing Town Hall. This site has several benefits, including the proximity to outdoor spaces and adjacency to the recreational facilities that will activate the area. The Town Hall site is adequately large to accommodate the Senior Center either prior to its relocation to the Swain School site, or after its relocation and demolition of the former school/Town Hall building.
- Memorial Library expansion – The Memorial Library should be renovated and expanded through a phased construction process. The expansion should extend into the site currently occupied by the Book Store Next Door. The expansion would absorb the book selling functions, and provide contemporary, accessible facilities. The site should be improved in concert with the addition to provide more parking than exists today.

Many of the buildings can be improved overtime to overcome deficiencies and provide for future needs. The Public Safety Building and its site will need incremental changes and modification to adapt to changing requirements associated with the services it supports. The Public Buildings Office and its site should be modified to provide appropriate space utilization. The Bath House at Silver Lake should be upgraded for handicapped access and be kept in good condition. The Cemetery Office and Garage should be maintained

in good operating conditions through relatively minor repairs and upgrades. The Moth House/Morse Barn should be restored where deterioration is occurring, so that it can continue in its use and remain as an historic asset. The Fourth of July Headquarters building should have accessibility upgrades and other minor enhancements to keep it in good operating condition.

The Town should continue to provide repairs and maintenance-level improvements to those facilities used by non-profit civic functions with the participation and contribution of resources in partnership with the entities that are using them.

SCHOOL FACILITIES

The Town should consolidate its lower schools into four schools. The schools should be organized as a pair of schools for the Pre-K through grade 2 levels, and a pair of schools serving grades 3 through 5.

This should be accomplished through a program of additions and upgrades to four schools that maintain a geographic balance and utilize buildings that are most adaptable to expanded enrollments and cost-effective construction. The improvements and reallocation of uses would be distributed as follows:

- Shawsheen and Woburn Elementary Schools – These schools would be expanded and upgraded to house Pre-Kindergarten through grade 2. The expansions and upgrades would entail building additions, the upgrade of all spaces to meet contemporary Massachusetts educational standards and building codes, and site improvements.
- North and West Intermediate Schools – These schools would be expanded to absorb grade 3, and continue to provide the facilities for grade 4 and 5. The expansions and upgrades would each entail building additions, the upgrade of all spaces to meet contemporary Massachusetts educational standards and building codes, and site improvements.
- Boutwell and Wildwood Early Childhood Centers - The result of this consolidation strategy will be the closing of the two existing Early Childhood Centers. The buildings and sites will be available for alternate use or disposition as may best meet community needs and interests.

EMERGENCY RESPONSE/PUBLIC SAFETY SUBSTATION

It is likely that a threshold will be reached in the future where additional measures will be needed to maintain acceptable response times for fire and emergency medical apparatus. Conditions for access to remote portions of Town, including its northern areas, are likely to worsen in conjunction with growth in the community and increase traffic. In particular, there is a potential for substantial new development on properties in the northern portions of Wilmington which would trigger a need for mitigating services, such as a fire/emergency vehicle substation. The Town can also consider the potential for increased community cooperation or joint facilities with neighboring communities to enhance available services.

SENIOR HOUSING

The St. Dorothy's site is a reasonable candidate for the location of senior housing facilities and has adequate frontage and potential access from both Main Street and Glen Road. This site does not appear to be a relatively advantageous location for any of the Municipal facilities evaluated within the scope of this *Master Plan*. The site is adequately large to absorb moderately scaled senior housing or assisted living facilities.

Summary of Recommendations by Facility

1. ARTS COUNCIL

- Description – The Arts Council building is a former Baptist Meeting House and Old Town Hall. It is an historic structure dating from 1860. The facility is used as a gallery, arts program space, offices, and houses Town storage in the basement.
- Programmatic Requirements – The current building and site are appropriately sized for its functions, unless there are substantial future changes in the programs offered here that are not currently anticipated.
- Actions – Improvement recommendations include updating the electrical system and electrical life safety systems and conforming with accessibility guidelines standards. The building will require ongoing maintenance and normal repairs.

2. BATH HOUSE

- Description – The Bath House is a swimming beach support facility located at the edge of the Silver Lake parking lot. It provides seasonal changing facilities, showers, restrooms, and space for the First Aid program.
- Programmatic Requirements – Currently there is no need to expand or change the uses and the overall facility organization unless services offered were to change in the future.
- Actions – To address deficiencies, plumbing and electrical fixtures will need upgrades or replacement and the exterior access path should be made accessible.

3. BOOK STORE NEXT DOOR

- Description – The facility is a repurposed residential building that was converted into a bookstore which supports and provides funding to the Wilmington Memorial Library.
- Programmatic Requirements – The current facility provides a desirable civic function, and no programmatic changes are anticipated.
- Actions – The Bookstore Next Door building should be demolished, and the site repurposed for the Wilmington Memorial Library expansion. The program functions should be absorbed into the future expansion.

4. BUZZELL SENIOR CENTER

- Description – The Buzzell Senior Center is located within a former school building of about 8,300 gross square feet. The senior center offers daily classes and provides a variety of activities to citizens of Wilmington with a focus on residents that are 60 years of age or older.
- Programmatic Requirements – Currently the facility use is limited in terms of the space, the facility offers many programs that it is especially difficult to accommodate large events or gatherings. Parking is also limited during special functions. Projected needs consist of a 14,000-gross square foot facility and approximately 84 parking spaces.

- Actions– To keep up with the increasing senior population of Wilmington, a new senior center and associated parking should be located at the existing Town Hall site to meet the projected future needs. Because of the scale and character of the Town Hall site, the landscape should be improved to provide exterior program functions, such as garden spaces or outdoor activity areas.

5. CEMETERY GARAGE

- Description – This is a facility that provides garage space for cemetery operations. The facility houses cemetery vehicles, maintenance areas and storage for the Wildwood Cemetery.
- Programmatic Requirements – The facilities program is fully utilized for maintenance operations; no significant reconfiguration appears to be needed for either the building or site in the future.
- Actions– Ongoing maintenance and minor enhancements will be required over time. It is recommended that enhanced vegetative screening be placed around the building where practical.

6. CEMETERY OFFICE

- Description – The Department of Public Works uses the cemetery office building for administrative functions and storage.
- Programmatic Requirements – It is assumed that the building will remain in its current use, and that no significant changes or expansion are required.
- Actions– The capital improvements should be focused on repairing deferred maintenance and extending the life of the building.

7. DEPARTMENT OF PUBLIC WORKS/ HIGHWAY GARAGE

- Description – The Department of Public Works Highway Garage facility provides space for vehicle storage and maintenance, a fueling station, and storage of materials and supporting equipment. The building provides offices and staff space, storage, and a sign production shop.
- Programmatic Requirements – The current facilities are fully utilized. Programmatic improvements are needed to properly serve existing functions, accommodate staff growth and the absorption of the adjacent Department of Public Works Water Division office and garage. The additional needs include replacement of the current office wing and new vehicle bays (approximately 6,800 gross square feet), covered parking and vehicle storage, and a new storage shed (approximately 2,500 gross square feet).
- Actions– The facility will require significant upgrades to address issues associated with its site, infrastructure, finishes, and accessibility to create improved facilities within a constrained site.

8. DEPARTMENT OF PUBLIC WORKS/ WATER DIVISION GARAGE

- Description – This structure consists of garage spaces for the water division of Department of Public Works, and includes space for storage and administrative functions.
- Programmatic Requirements – No significant changes or expansion of activities has been projected for this facility.

- Actions– Under the chosen scenario, the facility would be demolished, and the program functions would be absorbed into the expanded Department of Public Works Highway Garage.

9. DEPARTMENT OF PUBLIC WORKS/ WATER DIVISION OFFICE

- Description – This building is used for the Department of Public Works offices and shares a site with the Water Department Garage.
- Programmatic Requirements – Currently the facility does not have enough space to accommodate its staff or the needed administrative functions.
- Actions– Staff and program functions will be relocated into the renovated Department of Public Works Highway Garage office space. The building would be retained, flood-proofed to the extent practical, and continue to house water pump equipment.

10. DEPARTMENT OF VETERAN’S SERVICES (WEST SCHOOL)

- Description – The West Street School dates to 1790 and is a listed structure on the National Register of Historic Places. The building has been repurposed to serve as the office of the Town’s Veteran’s Affairs Services.
- Programmatic Requirements – The Department of Veteran Services (DVA) offers counseling, administrative and crisis assistance. The facility lacks essential private areas for counseling and administrative space. The Town is expected to have a growing senior population, and this may include an increasing number of veterans seeking support services.
- Actions– The building is deficient in the condition of its foundations, insulation, roofing and handicapped access. After relocation of the existing use to the future Town Hall/School Administration building, the building can be retained and offered for alternative use.

11. FOURTH OF JULY HEADQUARTERS

- Description – The facility is used as Town storage and is also actively used for meetings, preparations, and operations associated with the Town’s 4th of July celebration.
- Programmatic Requirements – No significant changes or expansion of activities has been projected for this facility.
- Actions– Current building deficiencies would require some capital improvements. However, If the Town were to expand the use of the building for more frequent or full-time occupancy, then alterations in the building layout and mechanical systems might be required.

12. HARNDEN TAVERN CARRIAGE HOUSE

- Description – This historic building is used as a display gallery and archive by the Wilmington Historic Commission as the Town Museum.
- Programmatic Requirements – The programmatic requirements for the building are not expected to change, based on the reviews and discussions undertaken as part of this study.

- Actions– This building requires repairs to replace rotting and deteriorating wood trim and exterior conditions. Additional improvements could be undertaken if grants or other resources are identified.

13. HARNDEN TAVERN MINUTEMAN HEADQUARTERS

- Description – This small structure is part of the cluster of buildings associated with the Harnden Tavern. It is used as the meeting place for the Wilmington Minutemen.
- Programmatic Requirements – The building is used by the Wilmington Minuteman organization. There are no planned changes in its use.
- Actions – Minor improvements can be achieved through the Town’s maintenance and operating budget administered by the Public Building Department, or by other means.

14. HARNDEN TAVERN

- Description – The Harnden Tavern was built in about 1770, it is on the National Register of Historic Places. This colonial-era tavern serves as the Town Museum. A number of visitors come to tour, attend lectures and events at the Tavern.
- Programmatic Requirements – The floor plans and interior spaces have been adapted to existing uses, but is not adequately serving existing or potential programmatic functions. A space study will be required to better allocate and equip the interior spaces to better match their current use.
- Actions – Improvements are needed to better meet life safety requirements, some building systems should be upgraded, and repairs should be undertaken on the interior and exterior. Enhanced parking with paving surfaces consistent with the historic character of the site should be provided to limit deterioration of lawn and plantings.

15. MEMORIAL LIBRARY

- Description – This building houses the Town’s library within a two-story building
- Programmatic Requirements – Wilmington Memorial Library needs to be significantly expanded and reorganized to support its current programmatic needs and the parking for the library is currently insufficient.
- Actions– The Library will receive an expansion to meet current and projected needs. Because the addition would likely require the use of the site occupied by the Bookstore Next Door, it has been assumed that this function would be absorbed within the library. Reconfiguration of the parking within the adjacent Town-owned parking lot would provide some overflow supply.

16. MOTH HOUSE/MORSE BARN

- Description – This is an historic outbuilding that has been converted into general storage use.
- Programmatic Requirements – The facility is unoccupied and used only for storage. If the facility were to be for used another purpose in the future other than storage, code compliance may come into play.

- Actions– To extend the life of this structure and preserve its historic character, exterior damage and deferred maintenance should be corrected with repairs to the exterior siding, trim, and structural components subject to deterioration.

17. PUBLIC BUILDINGS OFFICE

- Description – The Public Buildings Office is a repurposed fire station. This building houses Information Technology and the associated garage bays serve the Town’s Public Building Department and provides office space, maintenance support facilities, and storage.
- Programmatic Requirements – The functions that occur within this structure and site appear to be generally consistent with the overall size of the buildings, parking and site circulation. However, there are needs for additional site storage of vehicles and equipment, and some re-organization of the building interior.
- Actions– The building has some deferred maintenance that should be corrected. In addition, some interior improvements such as re-organized partitioning would provide a more effective working environment.

18. PUBLIC SAFETY BUILDING

- Description – The Public Safety Building currently houses the police, fire, animal control, as well as first response communication.
- Programmatic Requirements – The overall building and site sizes appear to be adequate to provide for police and fire functions but will require the re-organization of interior spaces and provision of additional technology to better accommodate existing and future needs.
- Actions– Vegetative screening and street access should be addressed with site improvements. Building systems should be improved and repairs should be undertaken on the exterior. Interior improvements will be needed to adapt to contemporary public safety practices and standards.

19. SCALEKEEPER’S OFFICE

- Description – This building is a small historic structure that is part of Wilmington’s visible heritage.
- Programmatic Requirements –The building is being used for storage. The program use is not expected to change. However, if it were to be for another purpose in the future other than storage, its code compliance might come into play.
- Actions– The electric power connection from the Moth House/Horse Barn to the Scalekeepers office should be replaced to meet current code standards, and the building maintained in its current condition.

20. SCHOOL ADMINISTRATION BUILDING (ROMAN HOUSE)

- Description – This former residence is an historic structure that has been adaptively reused as offices for portions of the School Department Administration.

- Programmatic Requirements – The existing space is not large enough to accommodate the full extent of the School Administration staff and functions, which require a building area approximately three times the size of this structure.
- Actions– The School Administration staff and functions should be relocated into the new Town Hall/School Administration facility to provide adequate and efficient space. The Roman House will become available for alternative use or disposition.

21. SOUTH SCHOOL (FOOD PANTRY)

- Description – This is a small, historic former school building that has been retained by the Town and is adaptively reused by a non-profit food pantry operation providing public services.
- Programmatic Requirements – The facility appears to be generally suited to its current functions, and there are no current anticipated significant changes in the type or extent of the programs offered here.
- Actions– The Town should provide accessibility and system upgrades to extend the life of the building and to reasonably accommodate the existing uses into the future.

22. TOWN HALL

- Description – The Town Hall is located on a former school site, in a circular shaped building originally designed as an elementary school.
- Programmatic Requirements – The Town Hall is not sufficient in size to accommodate current needs of the 11 departments it houses, based on an evaluation of space use for the constituent departments and anticipated needs.
- Actions– To address programmatic deficiencies the Town has chosen to have the Town Hall departments be combined with the School Administration functions and Veteran Services to create a composite municipal building sited in the same approximate location as the former Swain School, facing the Town Common.

23. BOUTWELL SCHOOL

- Description – The Boutwell School is a round building of the same design and vintage of the current Town Hall building. It shares a campus with the Middle School and the West Intermediate School.
- Programmatic Requirements – This facility has a student enrollment of about 160 pre-K and Kindergarten students, which is not expected to change significantly in the future.
- Actions– The enrollment capacity would be added to an expanded elementary school level facility, and the school and site would be repurposed.

24. NORTH INTERMEDIATE SCHOOL

- Description – This school is in fair to good condition, and has a capacity of about 290 students for grades 4 through 5 that it accommodates.

- Programmatic Requirements – This building would be expanded and re-organized to support the addition of grade 3 students as part of the school consolidation process.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

25. SHAWSHEEN SCHOOL

- Description – This school is in the best condition of the six schools, and has a capacity of approximately 390 students for grades 1 through 3 that it accommodates.
- Programmatic Requirements – The facility would require expansion adequate to absorb Pre-K and Kindergarten levels; the 3rd grade students would be relocated to an intermediate school.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

26. WEST INTERMEDIATE SCHOOL

- Description – This school is in fair to good condition, and has a capacity of about 210 students for grades 4 through 5 that it accommodates.
- Programmatic Requirements – This building would be expanded and re-organized to support the addition of grade 3 students as part of the school consolidation process.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

27. WILDWOOD SCHOOL

- Description – The Wildwood School is the oldest of the six lower school facilities, and is in relatively poor condition.
- Programmatic Requirements – This facility has a student enrollment of about 190 pre-K and Kindergarten students, which is not expected to change significantly in the future.
- Actions – The enrollment capacity would be added to an expanded elementary school level facility, and the school and site would be repurposed.

28. WOBURN STREET SCHOOL

- Description – This school is in fair condition, and has a capacity of approximately 470 students for grades 1 through 3 that it accommodates.
- Programmatic Requirements – The facility would require expansion adequate to absorb Pre-K and Kindergarten levels; the 3rd grade students would be relocated to an intermediate school.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

IMPLEMENTATION SUMMARY

Estimated Capital Improvement Costs

For the purposes of capital budgeting, preliminary costs were prepared for the facilities and improvements or changes described in the recommendations. These costs do not include upgrades, correction of deferred maintenance, repairs and ongoing maintenance for these facilities that can be accomplished with the annual appropriations and provided through the Town's own resources and services.

The costs for recommended demolition of existing facilities has also been included in this overall estimate.

Overall Cost Estimates	
Municipal Facility Name	Estimated Project Cost
Art Council	\$290,000
Bath House	\$104,000
Book Store Next Door	\$19,000
Buzzell Senior Center	\$6,707,000
Cemetery Garage	\$88,000
Cemetery Office	\$0
Department of Public Works Highway Garage	\$7,170,000
Department of Public Works Water Division Garage	\$46,000
Department of Public Works Water Division Office	\$0
Department of Veteran Services	\$20,000
Fourth of July Headquarters	\$64,000
Harnden Tavern Carriage House	\$110,000
Harnden Tavern Minuteman Headquarters	\$0
Harnden Tavern	\$747,000
Memorial Library	\$7,841,000
Moth House/Morse Barn	\$103,000
Public Buildings Offices	\$644,000
Public Safety Buildings	\$2,048,000
Scalekeeper' s Office	\$0
School Administration	\$0
Former South School (Food Pantry)	\$297,000
Town Hall	\$19,316,000
Subtotal Municipal Facilities Costs	\$45,614,000

Note: Estimates are 2017 costs. Costs based on prevailing wage rates.

Educational Facility Name	Estimated 2017 Costs*
North Intermediate	\$22,870,000
West Intermediate	\$27,585,000
Shawsheen	\$24,964,000
Woburn	\$22,540,000
Subtotal Educational Facilities Costs	\$97,959,000
Estimated Total Facilities Costs	\$143,573,000

**Additional costs for temporary facilities or other phasing requirements will vary according to the sequence of projects and have not been included in these estimates.*

Actions

Implementation of the recommendations in this report will require a coordinated set of actions over many years. Aspects of the implementation approach include:

- Financial strategy – The financial strategy includes the distribution of projects in a phased sequence of expenditures and investments over a 20-year period. A limited portion of the capital expenses can be accomplished through capital outlays through the annual operating budgets. Most of the costs will be financed through long-term borrowing, accompanied by grants, and contributing funding from State sources for the school projects. This long-term borrowing will be timed with the intent of keeping the Town's debt ratio low relative to its operating costs.
- Improvements through annual operating and maintenance budgeting – The implementation strategy takes advantage of the Town's ability to accomplish small scale facility upgrades and deficiency corrections through its own staff and annual operating and maintenance budgets.
- Grants and other resources – The Town should monitor potential federal and state grants or special financing resources that may become available to support particular buildings or use types.
- Phasing of Municipal Facilities – The major municipal facility investments are expected to consist of the new Town and School Administration Building and new Senior Center to be advanced in 2022. The other projects can be phased according to changing needs and available resources.
- Phasing of School Facility additions and consolidations – The additions and improvements to the North and West Intermediate Schools would occur first, followed by the improvements and expansion of Woburn Schools and Shawsheen Schools. When those projects are completed, the Early Childhood Centers can be repurposed or demolished.
- Evaluation of emergency response conditions and planning for public safety substation - The Town should assemble a committee and resources to conduct a study that updates and evaluates the response time data, prepares projections of future conditions, and recommends Town policies. The Town should establish zoning conditions and other policies to help identify and require mitigation of negative impacts on emergency response times in the event of large scale development.
- Detailed study of DPW facility conditions and needs – The Town should commission a technical engineering and design study to assess the detailed site conditions, review the building conditions, refine the project needs, establish potential phasing, and assess the regulatory and permitting requirements.
- Use of municipal land for senior housing – The Town should finalize its strategy for provision of senior housing, beginning by conducting due diligence. Based on the results of the study, the Town can proceed to offer land for sale or long-term lease, solicit proposals, and advance a lease or disposition agreement for a Town Meeting vote.
- Repurposing or disposition of excess buildings or land – The Town should anticipate the abandonment or relocation of existing uses and prepare market and redevelopment use studies to establish the reuse potential to facilitate its decisions.



FACILITY NEEDS AND IMPROVEMENTS

FACILITY NEEDS AND IMPROVEMENTS

MUNICIPAL FACILITIES

Municipal Facility Recommendations

This section of the Facility Master Plan encompasses all of the buildings and sites associated with municipal functions, other than school facilities. The following descriptions provide a summary of relevant building conditions, programmatic assumptions, and recommendations regarding facility improvements or changes.

1 ARTS COUNCIL

LOCATION: 219 Middlesex Avenue

YEAR BUILT: 1860

BUILDING AREA: 2,755 GSF

The Arts Council building is a former Baptist Meeting House and Old Town Hall. The building is within the Wilmington Center Historic District. It is an historic structure dating from 1860.

SUMMARY:

The building adequately serves its current use and space requirements. Improvement recommendations include updating the electrical system and electrical life safety systems. Bathroom facilities and accessible routes will be required to conform with accessibility guidelines standards. Site improvements should include a code-compliant handicapped accessibility ramp. Recent improvements include a new roof, new flooring, and bathroom upgrades.



PROGRAMMATIC ASSUMPTIONS:

The facility is used as a gallery, arts program space, offices, and houses Town storage in the basement. The amount and general configuration of the spaces seems to be appropriate for the scale of current programs and activities. Although the types of programs and level of activity could change in the future, this would be dependent on shifts in the availability of grant or outside funding, which are not predictable. As a result, no programmatic improvements are recommended, but could be required if the Arts Council programs expand in the future.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Improvement recommendations include the replacement of the exterior lights which are in poor condition. There are also areas at the building perimeter where there is not adequate separation between the exterior siding and finish grade. Grading the site at the building perimeter to increase the separation as well as increasing the separation of the planted areas from the building façade with positively draining stone edge strips and new three-foot wide drip strip is recommended in order to improve the lifespan of the exterior and foundation. A new accessible ramp should be constructed to provide access to the facility as the existing one is beyond its expected service life and is not to current accessible standards.

Architectural and Structural Improvements

Building Exterior - The exterior walls should be insulated reduce operating costs and increase occupant comfort. The exterior siding, trim and windows require repairs. As previously noted, portions of the exterior perimeter wall are in contact with the ground at its base and have advanced siding and possibly sheathing as well as structural damage which will require replacement and repair as the perimeter grade is addressed. There are several apparent abandoned service connections remaining on the exterior façade which should be removed and capped. Replacing the sun-bleached plexiglass panels with new energy efficient storm windows with glass window panes will improve building appearance and window performance. Basement windows and window sills could also be replaced.

Basement - The storage use of the building's basement areas may exceed the ten percent limit for incidental accessory occupancies and will require a fire separation partition from the remaining assembly space. The Commonwealth of Massachusetts Municipal Records Retention Manual, outlines requirements for records handling practices and maintenance of dedicated records storage areas. The Town could also consider optional locations for records storage. More information on storage standards is available at https://www.sec.state.ma.us/arc/arcpdf/MA_Municipal_Records_Retention_Manual.pdf

Building Interior - Restrooms are currently not handicapped-compliant and should be modified to satisfy accessibility and ADA Guidelines. Door hardware will be required to be replaced with lever action hardware for accessibility. New flooring was recently installed.

Building System Improvements

Mechanical (HVAC) - Exhaust fans should be installed in the toilet rooms and the basement should be properly ventilated. A centralized mini-split air conditioning system would improve building appearance, allow the reclamation of window area and improve building envelope performance when insulated.

Plumbing - Plumbing fixtures in the building are not accessible and should be modified as toilet rooms are renovated. Water conserving fixtures should replace the current plumbing fixtures. Insulation needs to be added to the domestic water lines.

Fire Protection - A sprinkler system should be installed in the building.

Electrical - The existing 200-amperes electrical service and the electrical circuit breaker panel is in poor condition and should be updated. Emergency lighting and exit signs should be updated. Toilet room outlets are not GFI protected. Fire alarm systems need updating and currently lack strobes and horns. Cloth covered wiring needs to be removed and replaced. The building has abandoned electrical systems attached to the façade that could be removed to improve the historic appearance.

Additional Observations and Notes

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are projected for the purposes of baseline facility planning.

COST ANALYSIS:

ARTS COUNCIL	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$44,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior (New Windows)	1	-	LS	\$35,000
BUILDING SYSTEMS				
Mechanical (HVAC)	2,755	\$14.82	SF	\$44,000
Plumbing	2,755	\$15.24	SF	\$45,000
Fire Protection	2,755	\$6.30	SF	\$20,000
Electrical	2,755	\$11.70	SF	\$35,000
(3) TOTAL CONSTRUCTION COSTS				\$223,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$67,000
(4) TOTAL PROJECT COSTS				\$290,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

2 BATH HOUSE

LOCATION: 5 Burnap Street

YEAR BUILT: 1964

BUILDING AREA: 1,800 GSF

This is a restroom and swimming beach support facility located at the edge of the Silver Lake parking lot.

SUMMARY:

To address accessibility deficiencies, plumbing fixtures will need upgrades or replacement and accessible changing facilities should be added. A paved access apron to and from the parking lot should be added for accessibility. The facility would benefit from exterior aesthetic improvements such as signage and changes in the exterior painting scheme. The interior finishes would benefit from replacement and upgrades, of the ceiling tiles and ceiling light fixtures and louvers, and a new floor coating.



PROGRAMMATIC ASSUMPTIONS:

The facility provides seasonal changing, facilities shower, toilet, and programming space for the first aid program. The facility supports its current programmatic needs. Currently there is no need to expand or change the uses and the overall facility organization unless services offered were to change in the future.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - A paved access apron to and from the parking lot should be added for accessibility.

Architectural and Structural Improvements

Building Exterior - Exterior painted surfaces require refinishing including steel doors and CMU walls where significant peeling of paint was observed. Improved color scheme and signage would enhance the building's appearance. There are a few broken asphalt roof shingles that need repair.

Building Interior - Floors require new epoxy paint coating. Acoustical tile ceilings should be replaced, and new lighting installed. Interior doors are in fair condition but require refinishing. The changing stalls and areas are not accessible, the existing facilities should be renovated and have handicap fixtures installed.

Building System Improvements

Mechanical (HVAC) - There is no HVAC serving the building. A dedicated exhaust system is recommended to serve the toilet rooms, locker rooms and storage areas.

Plumbing - Drinking fountains should be provided, and the facility would also benefit from a janitor's closet with a mop sink. Generally, the plumbing fixtures do not meet accessible standards and are not water conserving and should be replaced. Visible domestic water piping is not insulated.

Electrical - The electric panel is in poor condition and no grounding could be identified. The electric panel should be replaced and grounded per code requirements. Interior lighting is dated. There is no emergency lighting and the exit signs are not lit. There is no fire alarm system. Interior and exterior emergency lighting and a fire alarm system will be required.

Additional Observations and Notes

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are needed.

COST ANALYSIS:

BATH HOUSE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$15,000
BUILDING SYSTEMS				
Plumbing	1,800	\$33.60	SF	\$65,000
(3) TOTAL CONSTRUCTION COSTS				\$80,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$24,000
(4) TOTAL PROJECT COSTS				\$104,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs

3 BOOKSTORE NEXT DOOR

LOCATION: 183 Middlesex Avenue

YEAR BUILT: 1900

BUILDING AREA: 1,248 GSF

The facility is a repurposed residential building that was converted into a bookstore that supports and provides funding to the Wilmington Memorial Library next door. The books that are sold come primarily from donations; about 25% of those donations are kept to sell. The library uses the second floor of the facility for lightweight seasonal item storage. The bookstore facility and the library sit on the same site and share the existing 47 parking spaces.



SUMMARY:

This building would be demolished as an expansion site for the Library and its functions would be incorporated into the expanded facility.

In the event that the Library improvement program contained in this Facility Master Plan is deferred or not pursued, then the Town should consider basic improvements that could be made to make the building more compatible with its current use. This would include provision of an accessible entrance, accessible restrooms and fixtures. In addition, the existing structure is likely to be inconsistent with the floor loadings associated with book storage. The structural conditions would need to be checked, and enhancements provided if needed. Energy-related improvements could include proper venting of the furnace and insulation, if it is currently insufficient.



PROGRAMMATIC ASSUMPTIONS:

The current facility provides a desirable civic function, and no programmatic changes are anticipated. It is assumed that separate, additional facility parking is not required, but that the bookstore function can rely on parking provided for the Library. The need for parking associated with the Library is separately addressed in the projected needs for that facility. No changes in the operating space or storage requirements would be required unless there are changes in its operations, which have not been anticipated.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

(Note: the following improvements are contemplated in the event that the Town does not proceed with a project to significantly expand or relocate the existing Library.)

Site Improvements

Site and Landscape - The building is not accessible and a new ramp should be installed to accommodate handicap access.

Architectural and Structural Improvements

Building Exterior - Improvements necessary to bring the building to current standards for commercial use would include remodeling the entrance with a ramp access. The clapboard siding is damaged and will require repairs in some locations.

Roof - The roof sheathing and asphalt shingles on the ell should be replaced. Cornice and eave moldings have some repairs and when the building is reroofed they should be repaired fully. The chimney requires repointing.

Structure - The floor structure capacity should be increased to meet the current load requirements for book storage and should be designed by a licensed structural engineer.

Building Interior - The interior will require remodeling to provide accessible toilet rooms and general wheelchair access. Plaster repairs are likely to be required where ceilings have been covered with ACT.

Building System Improvements

Mechanical (HVAC) - The newer oil burner is not vented correctly.

Plumbing - The domestic water lines should be insulated for increased efficiency. Accessible plumbing fixtures need to be provided in new accessible toilet rooms.

Electrical - The electrical system is antiquated with a sub-standard 60-amp service and fused breakers. The electrical system will require an upgrade to contemporary standards and emergency lighting and a fire alarm system will also be required.

Additional Observations and Notes

The building dates from 1900 and is likely not insulated.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are projected.

COST ANALYSIS:

BOOK STORE NEXT DOOR	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
DEMOLITION				
Demolish Book Store Next Door	1,248	\$10.00	SF	\$14,000
(3) TOTAL CONSTRUCTION COSTS				\$14,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$5,000
(4) TOTAL PROJECT COSTS				\$19,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4 BUZZELL SENIOR CENTER

CURRENT LOCATION: 15 School Street

YEAR BUILT: 1935

BUILDING AREA: 8,308 GSF

RELOCATE TO: Town Hall Site



A new and enlarged Senior Center would be created at the site currently occupied by the Town Hall. In addition to the parking and site improvements associated with the Senior Center, access to existing recreational parking will be retained. Depending upon phasing, the facility could be constructed adjacent to the Town Hall or occupy its current site, if it is demolished prior to commencing construction.

SUMMARY:

The Buzzell Senior Center is located within a former school structure and activities are conducted in the available space. A need was identified for additional space and reorganization of the interior of the building during the evaluation of existing conditions. Because the senior population of Wilmington is expected to grow considerably in the future, the current facility would require a significant expansion to accommodate additional programs and greater participation. A new senior center should be located the Town Hall site. Access to existing recreational parking will be retained. The senior center might be best located where it would have to direct access to the open space and recreational fields. As depicted in the attached illustration, parking for the facility might be located near the end of the entrance road. The site is adequately large to allow the senior center to be constructed on one floor.

PROGRAMMATIC ASSUMPTIONS:

The Senior Center is housed within a building area of 8,308 gross square feet (GSF), and has 42 adjacent parking spaces. The baseline projection would require an expansion to about 14,000 GSF and an additional 42 spaces to accommodate future programs and activities. It should be noted that this estimate is based on the level of review appropriate for initial facility planning. The final size of the facility will be dependent upon choices that the community will make about the types of programs that should be supported and its priorities relative to the character of the facility that it provides. Detailed programming and facility needs assessment will need to be prepared as part of the planning process to expand the current facility.

The evaluation considered several information sources, including population models from Metropolitan Area Planning Council (MAPC) and UMass Donahue Center. The MAPC population model for Wilmington projects a population growth of 2,940 senior citizens by 2030 above 2010 levels, a 202% increase. MAPC also considered population trends that may occur if the greater Boston economy and demographic trends are more expansive. In their “stronger region” version model, the Wilmington senior population would reach a level of about 3,020 over the same time period (a 205% increase). The UMass Donahue Center model projects an increase of 3,177 senior citizens from a base year of 2010 (a 210% increase).

Because the UMass Donahue projections include a 2015 population estimate and is otherwise similar to the MAPC projections, it has been used as the basis for considering the future senior population facility needs for

Wilmington. The UMass Donahue Center projection reports a base population (65 years or older) of 2,881 in the 2010 census and estimates the senior population at 3,584 for 2015. It then projects the senior population at 6,058 in year 2030. This would be an increase of 169% from 2015 to 2030.

Based on the indication that the current center has some insufficiencies relative to potential demand but is generally serving the current population well, it is reasonable to conclude that an increase in population and associated growing programs and space needs could result in a desirable facility size approximately 169% larger than the current facility, which would also provide for current unmet needs. There would be some efficiency gained in the reconfiguration of office space, utility space, and some of the rooms and support uses, so the facility size would not need to follow a straight proportional increase relative to the population.

Other communities can serve as a benchmark to determine appropriate facility size for Wilmington's senior center. Dedham is planning an 18,000 GSF senior center to serve a population of approximately 25,000 citizens. Needham prepared a feasibility study for an 18,650 GSF facility to serve a population of approximately 29,000 citizens. Wakefield has a 26,000 GSF senior center to serve a population of approximately 25,000 citizens. Newburyport has a 16,000 GSF senior center to serve a population of approximately 18,000 citizens. For Wilmington's projected 2030 population of approximately 24,500 citizens, a facility size of about 14,000 GSF is a reasonable and perhaps somewhat conservative assumption, relative to benchmark communities.

The current facility is limited in terms of the space available to accommodate large events or gatherings. Based on a review of similar facilities, space for a large meeting of about 250 attendees would be desirable, which could be accommodated within a room about 2,500 to 3,000 square feet in area. Such a meeting space could result in parking demand of about 165 parking spaces. However, nearby spaces would be available for weekend and evening events because of the nearby high school parking lot. As a result, the provision of approximately 42 additional spaces are recommended, doubling the current parking lot capacity.

SITE PLAN:



COST ANALYSIS:

NEW BUZZELL SENIOR CENTER	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
DEMOLITION				
Demolish Town Hall	20,000	\$10.00	SF	\$212,000
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$1,158,000
NEW CONSTRUCTION				
Architecture	14,000	\$120.00	SF	\$1,781,000
Structure	14,000	\$45.60	SF	\$678,000
Mechanical (HVAC)	14,000	\$36.00	SF	\$535,000
Plumbing	14,000	\$14.40	SF	\$215,000
Fire Protection	14,000	\$9.00	SF	\$134,000
Electrical	14,000	\$30.00	SF	\$446,000
(3) TOTAL CONSTRUCTION COSTS				\$5,159,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$1,548,000
(4) TOTAL PROJECT COSTS				\$6,707,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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5 CEMETERY GARAGE

LOCATION: 60 Wildwood Street

YEAR BUILT: 1970

BUILDING AREA: 1,800 GSF

This is a facility that provides garage space for cemetery operations. The facility houses cemetery vehicles, maintenance areas and storage for the Wildwood Cemetery. The area around the building is paved, providing vehicle circulation and access to yard storage bins located against the rear of the building.



SUMMARY:

Enhanced vegetative screening around the building is recommended. Water infiltration behind exterior paint finishes suggest special consideration should be given to the selection of future CMU coatings and as most of the infiltration was observed below masonry openings, new windows with integral pitched sills may better protect the wall finishes. Recent improvements include a new roof, exterior paint and electrical upgrades.

PROGRAMMATIC ASSUMPTIONS:

The facilities program is fully utilized for maintenance operations, but there does not appear to be a need to expand or reconfigure the current building or site in the future.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - There is a lack of vegetative screening and landscaping around the building.

Architectural and Structural Improvements

Building Exterior – Facility has been recently painted. Windows and doors are in poor condition with apparent rust especially at door and door frame bases. Some windows are composed of plexi-glass sheets secured over existing steel window screens. The foundation is chipped in some areas and requires patching. Wood gable siding requires patching and paint in some locations including where it appears a former chimney was removed. Rake and eave trim require patching and new paint.

Roof - A new roof was recently installed.

Structure - The concrete floor should be patched. The roof requires repairs or replacement. Attic decking should be secured and assessed for safety. The attic stair requires a railing.

Building Interior - The stair to the attic has no railing and does not have clearances to meet current code. Attic decking is not secured and poses a risk to occupants.

Building System Improvements

Mechanical (HVAC) - It is recommended that an exhaust system be installed. The furnace should be replaced within five years. The oil storage tanks should be inspected. The oil supply line should be replaced and buried under the slab.

Plumbing - Cast iron drain piping should be replaced. Trench drains should be covered and a gas/oil separator installed.

Electrical – New electrical lateral has been put in. New lighting should be installed over garage bays. New exterior and interior emergency lighting, fire alarm system and exit signage will be required to bring the building to contemporary standards. Overhead doors should be equipped with safety switches.

Additional Observations and Notes

A new sand/soil storage bunker should be built away from the building exterior to protect the building from the abuse of soil storage contact and backhoe pressure. Similarly, an interior wall is used for this purpose where loam is stored inside.

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are projected.

COST ANALYSIS:

CEMETERY GARAGE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
BUILDING SYSTEMS				
Mechanical (HVAC)	1,800	\$16.80	SF	\$33,000
Plumbing	1,800	\$17.50	SF	\$34,000
(3) TOTAL CONSTRUCTION COSTS				\$67,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$21,000
(4) TOTAL PROJECT COSTS				\$88,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

6 CEMETERY OFFICE

LOCATION: 233 Middlesex Avenue

YEAR BUILT: 1938

BUILDING AREA: 960 GSF

This building is used by the Department of Public Works for administration and storage.

SUMMARY:

Deferred maintenance improvements should be undertaken for this facility. The window screens require updating. A new bathroom fan should be installed. Replacement of the original cast iron drainage piping will be required. Recent improvements have been made to the exterior façade and roof.

PROGRAMMATIC ASSUMPTIONS:

It is assumed that the building will remain in its current use, and that no significant changes or expansion are required. As a result, the improvements should be focused on repairing deferred maintenance and extending the life of the building.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Architectural and Structural Improvements

Building Exterior - First floor window and dormer window screens require replacement. Dormers require new shingle siding and cheek wall flashing. Wood finish trim over concrete lintel supports at garage doors require replacement. Although some recent work has been accomplished, the overall improvement budget retains an amount to reflect potential additional repair and replacement.

Roof - Exterior fascia and soffit trim require repairs and restoration of eave moldings where they were removed for now abandoned gutter blocking. The asphalt shingled roof was beyond its expected service life when initially observed. However, because recent work has been accomplished on the roof, additional improvements may not be required and have not been assumed. However, this assumption should be verified when specific capital improvement budgeting is advanced for this building.



Building System Improvements

Mechanical (HVAC) - Fuel oil lines are not encased in concrete. The bathroom fan is out of date and requires replacement. Thermostats are not programmable.

Plumbing - Domestic water piping is not insulated. Cast iron drainage piping is in poor condition.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are needed, unless the facility offers different services in the future.

COST ANALYSIS:

Note: Additional improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means. As a result, no allocation has been assumed for capital budgeting purposes.

7 DEPARTMENT OF PUBLIC WORKS HIGHWAY GARAGE

LOCATION: 135 Andover Street

YEAR BUILT: 1960

BUILDING AREA: 13,629 GSF

The Department of Public Works Garage facility provides space for vehicle storage and maintenance, fueling stations, a sign production shop and equipment storage.

It should be noted that the DPW facilities include a separate salt shed on Federal Street which has not been included in the scope of evaluations and recommendations for this study. As a result, potential facility deficiencies or future needs have not been including in this assessment or as part of the cost evaluations.



SUMMARY:

The facility requires several improvements and building alterations that likely can be accommodated within its current site, although some alterations in the site layout can be anticipated. Additional space and facilities will be needed to accommodate current and projected needs, and to absorb the relocation of the DPW facilities from the office building and garage at the former Water District site. The facility will require significant upgrades to address issues associated with its infrastructure, finishes, and accessibility to create a contemporary work environment.



PROGRAMMATIC ASSUMPTIONS:

The current facilities are fully utilized. Programmatic improvements are needed to properly serve existing functions and to accommodate growth.

For the purposes of this master plan, certain assumptions have been made about the extent and type of improvements that might be undertaken. However, the DPW garage has many different needs that must be evaluated in detail before finalizing a specific improvement program and budget, and could vary significantly depending upon decisions about the disposition of DPW functions among multiple sites and the cost/benefit of various specific improvements that have been requested by the DPW as part of this and other planning processes.

Site Program

The existing site uses are expected to remain, although they may be reorganized in concert with other changes and additional site requirements as noted below. The existing site uses include parking, vehicle storage, truck wash station, salt truck unit storage and staging, a truck scale, miscellaneous equipment storage, vehicle fuel stations including underground storage tanks.

Additional site requirements could include an increase in the number of stored vehicles and other equipment on the site, consolidating storage from other facilities used by the DPW. This consolidation has been noted as an important benefit if additional vehicles can be accommodated. In view of the significant site constraints, there are limited areas to expand paved storage areas. However, the number of parking spaces and areas for vehicle and equipment storage should be expanded to the extent practical through site reorganization and marginal enlargement of paved areas.

The DPW has noted that the existing underground storage tanks are approximately 30 years old and are likely to require replacement within the time horizon of this master plan. A technical evaluation would need to be accomplished to confirm the condition and replacement schedule. However, it is reasonable to plan for their replacement, which could be above ground storage tanks and would require associated land area, enclosures, and other regulatory measures.

For the purposes of this master plan, it is assumed that additional vehicle storage would not be accommodated within an expanded building envelope, but would be more cost effectively accommodated with an unheated, partially enclosed shed to afford additional weather protection. This will require some site reorganization and shed construction.

There is a small, deteriorate storage shed on the site that should be replaced with a larger, unheated facility. For purposes of planning, a replacement shed of approximately 2,500 square feet has been assumed. This would also accommodate storage that is currently contained in the garage at the former Water District facility.

The existing improved site is bordered by a 100-year flood plain, based on available FEMA mapping and survey information. However, the site topography provides limited elevation gain above those levels. As a result, site improvements should be designed to increase the finished grade where practical. Low protection walls or berms may be considered to reduce the flood risk and be resilient to climate change or extreme storm events.

The site is adjacent to environmentally sensitive areas and is within a Zone II protection area. The design and construction of any improvements may need special provisions, which can influence costs.

Building Program

The existing uses within the building and small garage structure are expected to remain, but some additional space and reorganization will be needed to accommodate current and future needs, including approximately 6,800 net square feet of new space. This would include demolition of the existing office/entrance area and its replacement with new construction containing additional functions.

- Additional shop area for Parks & Recreation functions
- Expansion of vehicle maintenance bays (2 bays, approximately 1,300 square feet)
- Additional multi-use space for meetings and training
- Additional staff space included expanded and improved restroom and shower facilities
- Additional circulation and miscellaneous space
- Alterations for separation of a small reception or waiting area for visitors
- Space to accommodate the DPW office functions that would be relocated from the former Water District building.

The DPW has noted the desirability of providing expanded service areas within the garage to accommodate the largest fire vehicle in the Town's inventory. Further study will be required to confirm the cost/benefit and dimensional requirements, and consider various approaches to providing such space. This evaluation should be part of the subsequent detailed programming and facility budgeting process, but the provision of such a facility is not contemplated within this *Facility Master Plan*.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - The current parking lot has undefined stalls and should be striped. Commercial truck wash runoff must be within a contained system, to comply with stormwater management guidelines. Improvements should be made to conform to current standards for the Zone II aquifer protection and other applicable water quality protection standards. The sander rack and salt sheds will need to be repaired and/or replaced.

Architectural and Structural Improvements

Building Interior - Toilet rooms need to be modified to be ADA compliant. The upper level staff changing and toilet rooms should be converted to storage space and provided with a code and OSHA compliant stair.

Structural - A bridge crane structural support should be analyzed, and either reinforced or replaced if required to meet current standards.

Building System Improvements

Mechanical (HVAC) – The garage exhaust system needs to be repaired or replaced. The system needs to be evaluated and altered as required to prevent migration of particulates from the garage and workshop areas into office areas, and to generally meet all current code air quality standards.

Plumbing – New ADA compliant plumbing fixtures should be installed.

Electrical - Electric fin tube is installed under electric outlets. Electric fin tube in toilet rooms is in poor condition.

Additional Observations and Notes

The site is largely paved providing large vehicle circulation, vehicle storage, and equipment storage. The sites yard program has substantial space to support its function. Due to the current high demand of Town vehicle service, improved and expanded vehicle washing facilities would benefit the facility's efficiency.

PROGRAMMATIC IMPROVEMENTS:

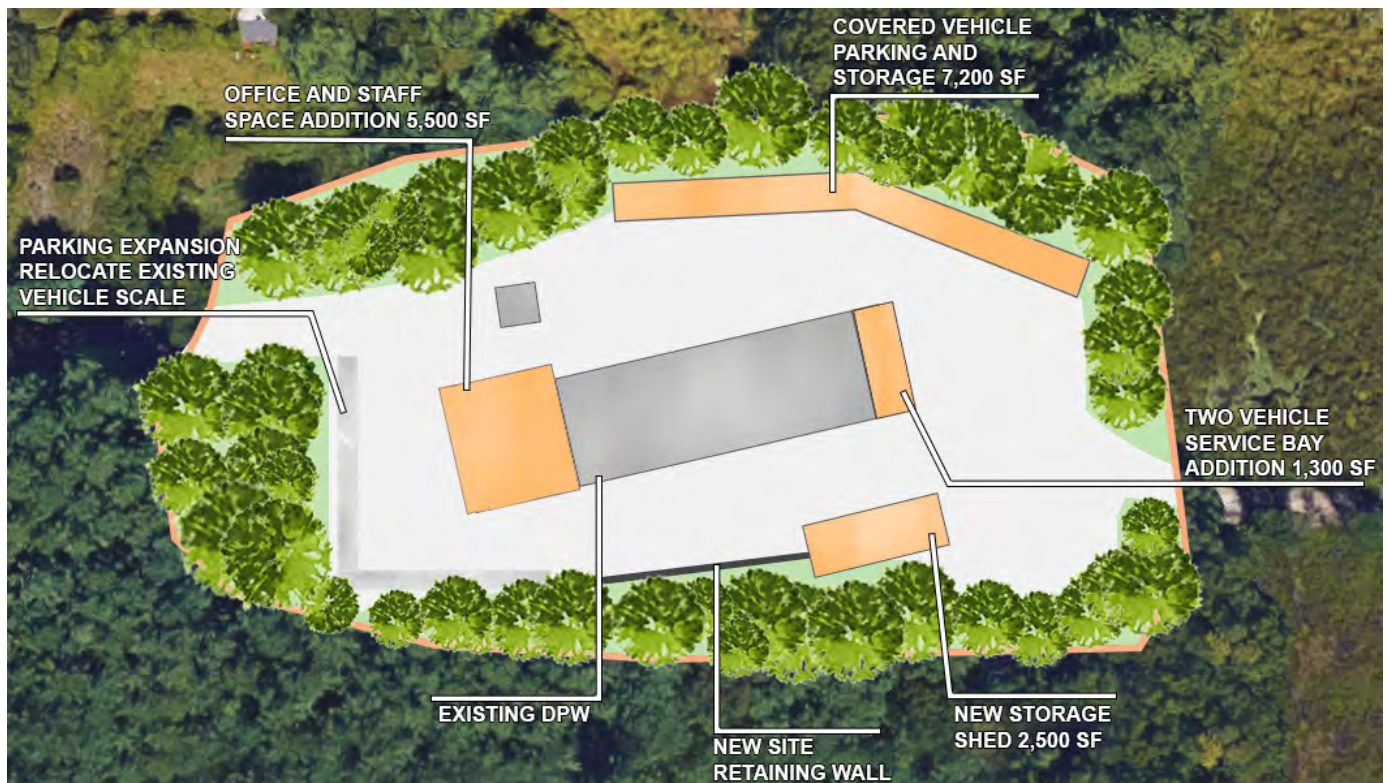
The programmatic improvements would include both site and building improvements based on the assumptions noted above.

The site would be reorganized with changes in the overall circulation and paved areas to optimize the available area for parking, staging, and storage within regulatory constraints. Provisions would be made for above ground storage and fuel operations if future replacement and utilization of underground tanks is found to be

less favorable for cost or environmental reasons. Parking and vehicle storage space would be properly laid out and striped, and provisions would be made for storage of approximately 10 vehicles in covered, unheated sheds.

Building improvements would consist of upgraded and reorganized spaces to accommodate additional staff space, shop space for Parks & Recreation purposes, and expanded service bays. It is assumed that the office and staff space would be created by demolishing the current office space, and providing an efficient addition in its place. The additional vehicle bays would be added to the existing bays.

SITE PLAN:



COST ANALYSIS:

DPW HIGHWAY GARAGE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Paving and Drainage	81,918	\$10.00	SF	\$812,000
Site Preparation / Unsuitable Soils	1	\$500,000.00	LS	\$500,000
Demolition - Shed	600	\$10.00	SF	\$6,000
WD Garage	3,475	\$10.00	SF	\$35,000
DPW Office	2,380	\$15.00	SF	\$36,000
Vehicle Shed	7,200	\$75.00	SF	\$540,000
Miscellaneous Site Improvements	1	\$250,000.00	LS	\$250,000
BUILDING IMPROVEMENTS				
New Storage Shed	2,500	\$100.00	SF	\$250,000
Service Bay Addition	1,300	\$300.00	SF	\$390,000
New Office Area	5,500	\$325.00	SF	\$1,788,000
Other Building Upgrades*	12,000	\$75.00	SF	\$900,000
(3) TOTAL CONSTRUCTION COSTS				\$5,515,000
CONTINGENCIES AND SOFT COSTS 30%				\$1,655,000
(4) TOTAL PROJECT COSTS				\$7,170,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

Note: *Other building upgrades, represents an allowance assuming that the building will not require any major building systems replacements or upgrades due to current code requirements.

*** The cost estimate for this facility is based on preliminary assumptions. It does not include special construction such as fuel tank construction, provisions due to environmental constraints, or systems associated with repair, replacement, materials storage and disposal typically associated with garage facilities of this type. Because of the complexity of this facility and its site constraints, additional evaluation will be undertaken prior to finalizing an estimate for the purposes of this Facility Master Plan.

8 DEPARTMENT OF PUBLIC WORKS WATER DIVISION GARAGE

LOCATION: 115 Andover Street

YEAR BUILT: 1968

BUILDING AREA: 3,475 GSF

This structure consists of garage spaces for the water division of DPW, and includes some storage and office space functions.



SUMMARY:

The facility will be demolished and its functions transferred to the DPW Garage site. There are significant constraints on continuing to use and operate this building because of its location on a Zone 1 Aquifer Protection district, and because it is within the 100-year flood plain of Martin's Brook. This has resulted in occasional flooding of the building and site. As reported by DPW, flooding has disrupted operations in the building 3 times in the last 20 years, with disruptions lasting approximately 2 weeks. There are limited options for creating a more flood resistant site and building.

PROGRAMMATIC ASSUMPTIONS:

The Water Department Garage shares a site with the Department of Public Works and Water Department Main Office building. The facility provides storage for various water tools, vehicles, maintenance and construction materials. No significant changes or expansion of activities has been projected for this facility.



Changes:

Site Improvements

The site should be restored with lawn or planting after demolition

Building Demolition

The building should be demolished.

PROGRAMMATIC IMPROVEMENTS:

No programmatic changes are anticipated, although relocating these uses to a new facility may provide some space and operational efficiencies.

COST ANALYSIS:

WATER DIVISION GARAGE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Demolition	3,475	\$10.00	SF	\$35,000
TOTAL CONSTRUCTION COSTS (3)				\$35,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$ 1,000
TOTAL PROJECT COSTS (4)				\$ 46,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

9 DEPARTMENT OF PUBLIC WORKS WATER DIVISION OFFICE

LOCATION: 115 Andover Street

YEAR BUILT: 1927

BUILDING AREA: 2,380 GSF

This building is used for the Department of Public Works offices and shares a site with the Water Division garage which is separately addressed, and a small storage shed. The administration building is located at an active drinking water wellfield and houses pumping equipment and associated piping. The garage building is used for miscellaneous storage and as a vehicle garage.



SUMMARY:

This building is in generally good condition. It is within the 100-year flood plain of Martin's Brook. This has resulted in occasional flooding of the building and site. As reported by DPW, flooding has disrupted operations in the building 3 times in the last 20 years, with disruptions lasting approximately 2 weeks. It is not practical to floodproof the building for the extended periods of time that would be required.

Development of a replacement building on this site is impractical because of its location on a Zone 1 Aquifer Protection district. As a result, this facility should be replaced and relocated, most likely as part of improvements and enhancements at the nearby DPW garage. The existing building would be retained because it houses pumping equipment. The entrance and ground floor could be provided with temporary barriers to reduce damage due to flooding, and the interior spaces and partitions cleared to facilitate cleaning and limit damage during flood events.

PROGRAMMATIC ASSUMPTIONS:

When the uses are relocated to the DPW Garage site, there will be opportunities to provide some efficiencies and improved facilities, including a meeting space for staff and reception counter.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Provisions should be made to partial demolition of the interiors and installation of flooding mitigation elements to reduce the intrusion and damage associated with flood conditions.

Cost Analysis

Changes made to building including flood mitigation are assumed to be accomplished within maintenance and operating budgets, and have not been assumed to be represent a capital funding requirement.

10 DEPARTMENT OF VETERAN SERVICES

LOCATION: 219 Middlesex Avenue

YEAR BUILT: 1790

BUILDING AREA: 1,250 GSF

The West Street School dates to 1790 and is a listed structure on the National Register of Historic Places. The building currently serves as the office of the Town's Veteran's Affairs Services.

SUMMARY:

The uses within this building are assumed to be relocated into a new Town Hall/School Administration building. After relocation, the Town should maintain the historic structure and seek alternative uses.

PROGRAMMATIC ASSUMPTIONS:

The Department of Veteran Services (DVA) offers counseling, administrative and crisis assistance. It fully occupies the existing building, and appears to be of an appropriate size for its function. The interior is largely composed of a single, large space. The facility lacks a separated office for private counseling and administrative space. The site has 10 - 12 parking spaces which presently supports the facility needs. The Town is expected to have a growing senior population, and this may include an increasing number of veterans seeking support services. If this is the case, then the existing facility may prove to be inadequate. The amount and type of services can be monitored to confirm the future alignment of space requirements, the programs offered, and the population that the DVA serves.

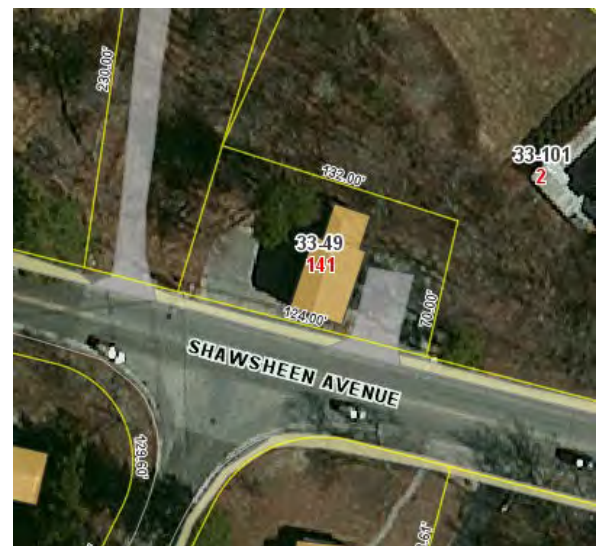
IMPROVEMENTS:

Basic safety and accessibility improvements should be accomplished for the interim period, prior to relocation of the current use.

The following observations are provided as a resource if the building is to be re-occupied with an active use.

DEFICIENCIES REQUIRING IMPROVEMENTS:

Architectural and Structural Improvements



Building Exterior - The structure is generally sound but will require significant upgrades to preserve it for use in the future. The brick chimney in the rear of the building requires pointing. The exterior siding finish is in fair condition, but requires small repairs. Cornices and fascia shadow boards require fastening and sealing, where fuel oil service pipes formerly entered the building, the holes should be sealed and the siding patched. The building is accessible with a ramp servicing a rear entrance. The ramp's railing is subject to movement and requires additional bracing. The ramp leads to a door with a threshold and door hardware that does not meet ADA standards. The hardware should be replaced with lever handles.

Crawl Space - There is a crawl space with a dirt floor below the main floor. An attempt to insulate the floor was made and unsecured insulation is falling away from between the floor joists. Best practice for heating the building and mitigating the effect of ground sourced moisture will include perimeter insulation at the foundation wall and a continuous vapor barrier across the entire space wrapping up the foundation wall and sealed continuously at the base of the sills. The abandoned fuel oil tank in the crawl space should be drained and removed and the gas meter penetration of the masonry foundation wall should be sealed.

Roof - The roof shingles on the rear addition appear to be at the end of their serviceable life. Damaged shingles at the eve line expose a rotting cedar shingle starter course and as there is no metal drip edge water has the potential to find its way behind the eve molding, siding and potentially into the wall cavity at the roof edge causing further damage. The main roofs drip edge is not properly shingled on the lower portion of the right front gable.

Structure - The original building has a stone foundation with a brick stem wall that requires repointing and some replacement brick. An addition on the rear of the building has a concrete masonry unit foundation that has been repointed in the past and requires repointing again. The CMU foundation wall appears to have been built over a combination of portions of concrete and stone foundations or footings. The footing of undetermined depth is likely subject to frost heaving as demonstrated in the working of the masonry joints.

Building Interior - The grab bars at the toilet do not meet ADA standard. ADA compliant grab bars will be required. It is likely that additional in wall blocking will be required. The ceiling grille in the main room should be examined to confirm heat is not escaping into the attic space. A wall patched with foil faced insulation at the entry to the kitchen should be replaced with plaster or drywall to match existing finishes and the wainscoting cap rail replaced.

Building System Improvements

Mechanical (HVAC) - The bathroom fan discharges into the attic and should be directed to a roof or wall cap equipped with a backdraft damper. The condensing unit serving the AC system is mounted flush with the ground. It should be raised on a curb to protect it from the elements.

Plumbing - The under-sink water heater should be replaced and domestic water piping requires insulation. Drain piping is a mix of PVC and Cast Iron. Only cast iron is permitted in commercial buildings. The condensate line from the condensing boiler is directed to the basement and should be run to a drain line.

Electrical - Emergency lighting inside and out and exit signage will be required. Temporary light strings in the basement should be removed.

PROGRAMMATIC IMPROVEMENTS:

It is assumed that approximately 1,000 net square feet of space can serve this use, if it is located within a new, multiple-use building as recommended.

COST ANALYSIS:

DEPARTMENT OF VETERAN SERVICES	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Safety and Accessibility Improvements	1	-	LS	\$15,000
(3) TOTAL CONSTRUCTION COSTS				\$15,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$5,000
(4) TOTAL PROJECT COSTS				\$20,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

Note: Additional improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means.

11 FOURTH OF JULY HEADQUARTERS

LOCATION: 150 Middlesex Avenue

YEAR BUILT: 1840

BUILDING AREA: 1,488 GSF

The facility is used as Town storage and is also actively used for meetings, preparations, and operations associated with the Town's 4th of July celebration.

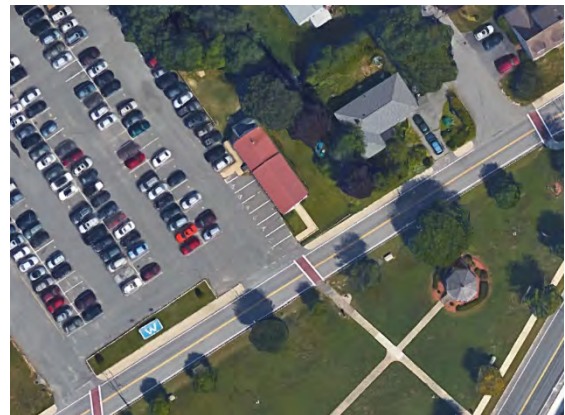


SUMMARY:

The building will benefit from repair of exterior siding and trim. Other building deficiencies would only require capital improvements if the building was used on a more regular basis and would include accessibility upgrades, life safety lighting and exit signage, a fire alarm, electrical service, wiring and lighting improvements.

PROGRAMMATIC ASSUMPTIONS:

The facility provides a convenient location for activities supporting the Town's 4th of July celebrations. The use of available space for storage may be a matter of convenience rather than necessity, but there were no suggestions that the storage function needs to be changed. If the Town were to expand the use of the building for more frequent or full time occupancy, then alterations in the building layout and mechanical systems might be required. However, no such changes have been requested or indicated in the discussions of this facility to date.



Parking is available within the adjacent high school lot, and is considered sufficient for the times and type of usage.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Architectural and Structural Improvements

Building Exterior - Exterior siding and trim requires repair and refinishing where it is decayed. To preserve the historic look of the building in the historic zone, the decorative shutters should be removed, the attic window should be restored and the exterior finishes should be restored to the earliest period. The existing decorative three board shutters are not appropriate to the historic period of the building and detract from its appearance. Earlier photos of the building do not suggest that it was equipped with shutters.

Additional Observations and Notes

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

Currently the building is only occasionally used. However, if the Town decides to use the building on a regular basis the building should undergo a full renovation. Renovations would include updated life safety, mechanical, electrical and plumbing systems to meet current codes as well as toilet room upgrades for accessibility.

PROGRAMATIC IMPROVEMENTS:

No programmatic improvements are needed.

COST ANALYSIS:

FOURTH OF JULY HEADQUARTERS	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1,488	\$30.72	SF	\$49,000
(3) TOTAL CONSTRUCTION COSTS				\$49,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$15,000
(4) TOTAL PROJECT COSTS				\$64,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

12 HARNDEN TAVERN CARRIAGE HOUSE

LOCATION: 430 Salem Street

YEAR BUILT: 1800

BUILDING AREA:

This historic building is used as a display gallery and archive by the Wilmington Historic Commission as the Town Museum.

SUMMARY:

This building requires repairs to replace rotting and deteriorating wood trim and exterior conditions. Life safety systems such as emergency lighting, fire alarm, exit signage need to be installed. The roof will need to be replaced to extend the life of the facility. An improved parking area and enhanced landscaping would be appropriate, and the main entrance should be handicapped accessible. Recent improvements include the additions of LED lighting, code compliant outlets and new electrical service. Additional improvements could be undertaken to restore the building and expand its functionality if grants or other resources could be assembled for this purpose.

PROGRAMMATIC ASSUMPTIONS:

The building is currently part of a complex of historic structures and served as the Carriage House for the Harnden Tavern. It is used for meetings of the Historical Commission and for the storage and display of historic artifacts. The second floor is not accessible and should be used for storage purposes only. The programmatic requirements for the building are not expected to change, based on the reviews and discussions undertaken as part of this study. The frequency and type of use could change in the future if the Historical Commission expands or changes its mission, or if the Town chooses to use the building for other purposes.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Site improvements should be undertaken to create a more attractive presence. The parking area should be striped as it is currently unstriped asphalt that extends to the building front. An exterior ramp should be provided for handicap accessibility to the front door. Crushed stone drip strips will improve drainage along the south and west facades. Plantings should not be in contact with the building's exterior.



Architectural and Structural Improvements

Building Exterior - Significant rot was observed at exterior trim, fascia, and sliding door hardware shrouds should be repaired. The building should be repainted. Exterior siding and trim in direct contact with the ground should be modified to prevent decay.

Roof - Asphalt roofing shows signs of wear and a new asphalt roof will be required in the near future.

PROGRAMATIC IMPROVEMENTS:

No programmatic improvements are needed.

Additional Observations:

The cost estimates assume modest improvements to extend the life of the building and maintain its current level of use. Considerably higher costs could be incurred if restoration or expansion of code-compliant, useable space were contemplated.

COST ANALYSIS:

CARRIAGE HOUSE FACILITY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$17,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1	-	LS	\$47,000
Roof	1	-	LS	\$20,000
(3) TOTAL CONSTRUCTION COSTS				\$84,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$26,000
(4) TOTAL PROJECT COSTS				\$110,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

13 HARNDEN TAVERN MINUTEMAN HEADQUARTERS

LOCATION: 430 Salem Street

YEAR BUILT: 1770

BUILDING AREA: --

This small structure is part of the cluster of buildings associated with the Harnden Tavern. It is used as the meeting place for the Wilmington Minutemen.



SUMMARY:

This small building is reputed to have once served as a cow barn, and currently serves as the meeting place and headquarters for an organization that re-enacts and commemorates the Revolutionary War militia from Wilmington. Exterior maintenance and periodic improvements are recommended to extend the life of the structure. However, no major deficiencies on the exterior were observed. The interior includes non-code compliant conditions including an access stair and other elements. Site improvements could include expanded gravel parking areas. Ongoing maintenance and repair of the building and its interior are assumed to be the responsibility of the tenants

PROGRAMMATIC ASSUMPTIONS:

The Minuteman Headquarters shares a site with the Harnden Tavern and Carriage House, and is used by the Wilmington Minuteman organization. There are no planned changes in its use. Because the building is used for gatherings, it may be appropriate to expand the gravel parking area to accommodate additional vehicles for occasional use.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

No deficiencies were observed or noted. However, additional observation of the interior conditions should be performed to confirm whether there are interior deficiencies that should be corrected. The building will require periodic painting and may require a new roof, depending upon the age, type and manufacturer of the asphalt shingles currently in place. Fireplaces should be cleaned on a regular basis and installation meets code by confirmation with the Building Official. Responsibility for use and other improvements will fall onto the steward.

PROGRAMMATIC REQUIRING IMPROVEMENTS:

No programmatic improvements are needed, unless the facility is used for different purposes in the future.

COST ANALYSIS:

Minor improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means. Responsibility for use and other improvements and associated costs are assumed to be absorbed by the tenant organization. As a result, no allocation of capital funds has been assigned to this facility.

14 HARNDEN TAVERN

LOCATION: 430 Salem Street

YEAR BUILT: 1770

BUILDING AREA: 3,338 GSF

This colonial-era tavern serves as the Town Museum, in conjunction with the Carriage House that is on the same site.

SUMMARY:

The Harnden Tavern was built in about 1770, it is on the National Register of Historic Places. The preservation of the building's historic character and components is directly associated with the Town's use of the property and the civic value placed upon it by the community. Improvements are needed to better meet life safety requirements, some building systems should be upgraded, and repairs should be undertaken on the interior and exterior. Parking is currently accommodated in unpaved gravel areas. Enhanced parking with paving surfaces consistent with the historic character of the site should be provided to limit deterioration of lawn and plantings. Allocation of space for administrative and meeting uses should be accomplished, with appropriate interior improvements to accomplish these goals.



PROGRAMMATIC ASSUMPTIONS:

The Harnden Tavern serves as the Town's Museum and is operated by the Historical Commission. The floor plans and interior spaces have been adapted to existing uses but are not adequately serving existing or potential functions. There is a lack of administrative space to support storage, meeting and office program needs. For example, the kitchen of the building is used for clerical purposes. Archival space improvements are needed to support the preservation of historical artifacts. There is currently no existing meeting space that can hold up the number of visitors that could attend lectures and events. However, interior improvements should not degrade or remove historic elements or characteristics of the historic tavern. Site improvements are needed to create additional parking spaces and distinguish them from the lawn and planted areas.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - The parking area should be enhanced with paved surfaces.

Architectural and Structural Improvements

Building Exterior - The facilities gutter drains should be extended further from the foundation line than they currently are.

Building Interior - Some plaster ceilings need repair. In the ell, some plaster cracking on a wall and at adjacent ceiling areas may be due to some structural subsidence that should be investigated in greater detail and repaired. Basement plaster ceilings are in general disrepair and are unsecured in some areas taking surface mounted wiring with them therefore, those ceilings should be repaired or removed, and wiring secured to structure.

Building System Improvements

Mechanical (HVAC) - Oil fill and vent piping on the exterior should be extended to a serviceable elevation above anticipated snowfall. Programmable thermostats should replace the existing dial type thermostats. Locations where chimney clean-outs are missing should be sealed.

Plumbing - Domestic water lines should be insulated. Original cast iron drainage piping should be replaced.

Electrical - It is recommended that all remaining knob and tube wiring be replaced and or removed. Electrical service upgrade is recommended. Existing service is marginally adequate for current total load. Lighting should be extended to the attic.

Building Renovation

General Requirements - A space needs assessment should be undertaken, to determine the scope and magnitude of interior renovations required to accommodate, and enhance the function, and use of the building. For this study, we are budgeting \$100 per square foot for renovation costs which include mechanical, electrical, and plumbing improvements as well. However, the construction costs may be more or less, depending on the final solution.

PROGRAMATIC IMPROVEMENTS:

A space study will be required to better allocate and equip the interior spaces to better match their current use. Cost premiums can be expected to accomplish changes within the context of appropriate historic restoration. For the purposes of planning, the provision of a high-quality parking area along the street edge and within the site should be planned for approximately 20 vehicles. The estimated improvements would provide approximately 8,000 square feet of drive and parking area. This could be accomplished with a gravel-coated asphalt with an epoxy system to fix the gravel in place.

COST ANALYSIS:

HARNDEN TAVERN FACILITY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$26,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	3,388	\$1.80	SF	\$8,000
Building Interior	3,388	\$8.40	SF	\$31,000
BUILDING SYSTEMS				
Mechanical (HVAC)	3,388	\$3.12	SF	\$12,000
Plumbing	3,388	\$4.50	SF	\$17,000
Electrical	3,388	\$13.20	SF	\$48,000
BUILDING RENOVATION				
General Requirements	3,388	\$120.00	SF	\$432,000
(3) TOTAL CONSTRUCTION COSTS				\$574,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$173,000
(4) TOTAL PROJECT COSTS				\$747,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4. Project Costs include engineering and design fees, permitting fees, legal fees, and other soft costs.

15 WILMINGTON MEMORIAL LIBRARY

LOCATION: 175 Middlesex Avenue

YEAR BUILT: 1968

BUILDING AREA: 14,910 GSF

This building houses the Town's library within a two-story building. It is accompanied by a limited parking area that has been created on three adjacent land parcels owned by the Town.

SUMMARY:

To meet the contemporary needs and support the activities typically associated with municipal libraries, the Wilmington Memorial Library needs to be significantly expanded and reorganized. The current facility is composed of approximately 14,910 gross square feet (GSF) of building area on two levels. Based on the evaluations performed for this master plan, the library building area should be expanded to correct deficiencies and provide a facility more in keeping with the scale and capacity provided in Massachusetts communities of a similar size and circumstances. For the purposes of this Facility Master Plan, it is assumed that a facility of about 25,000 GSF should be planned.

Because the addition would likely require the use of the site occupied by the Bookstore Next Door, it has been assumed that this function would be absorbed within the library and require approximately 1,000 additional GSF.

As a result, an addition of approximately 10,090 GSF is projected as a baseline improvement.

Parking for the library is currently insufficient for the types of programs and use that would likely occur in the future. As a baseline standard, a parking area of approximately 72 spaces is recommended for library use. As currently configured, the current municipal parking areas adjacent to the library contain about 47 spaces. Reconfiguration of the parking within the Town-owned land could expand the supply to more than 80 spaces, which would provide some overflow supply.

PROGRAMMATIC ASSUMPTIONS:

The program evaluations for the Memorial Library included discussions with staff, reviews of survey forms they prepared, and review of the programming and concept design for a proposed expansion prepared in 2004. The overall conclusion was that the current staff is operating within a facility that is significantly undersized relative to the types of uses that are both desirable and consistent with contemporary municipal libraries, including those in peer communities.



Contemporary municipal libraries are providing a greater amount and proportion of informal reading and working areas with computer and internet access than is available within them. Libraries that have an assortment of meeting spaces also become a venue for various library and education-related events. The current library is not well suited for expanding programs of this sort.

In 2004, a professional evaluation of the library and its future needs was conducted in the context of a grant application and Town consideration of creating a new library in Wilmington. The resulting recommended program called for a library with an area of 34,930 GSF. That proposal did not achieve the approvals necessary to advance the project. For the purposes of current facility planning, it has been assumed that a reduced total program may be more appropriate for estimating future facility needs. Staff observations noted specific current deficiencies, which have been taken into account in recommending library expansion.

Benchmarking similar facilities in similar town settings has been used to set a programmatic goal for the future, while taking into account other considerations. This evaluation recognized that the size of libraries varies in size and is representative of many factors, including the heritage and civic culture of various communities, and public priorities. However, an estimated building area of approximately 24,000 GSF for the library appears to be a reasonable approximation for Wilmington's library. Final determination of the most appropriate library size and characteristics will need to be determined through a focused programming and budgeting process that should occur as the Town proceeds towards this investment.

Among 20 towns with a population of 15,000 to 25,000 people that have had library additions or reconstructions since 2000, the average facility area is 22,897 gross square feet (GSF). For the 10 towns of this size category with new libraries constructed since 1969, the average facility is 20,925 GSF. For all 53 communities of this size category, the average facility size is 20,656 GSF. With Wilmington's current population of about 23,500 people and limited projected growth, the estimate building area used for this study is appropriately somewhat higher than these averages.

Among the programmatic deficiencies, the following major problems with the facility include:

- The stack areas, restrooms, and elevator are not ADA accessible.
- The meeting rooms are not accessible after hours. Patrons attending a meeting or program must pass through public service areas.
- There is not enough meeting space to meet a variety of demands, such as meetings between two people or small collaborative meetings of 4 to 6 people.
- There is not enough quiet study and private space relative to existing demand and future needs.
- There is inadequate separation between high activity areas and quiet areas.
- There is not enough building area to expand the collection or add new kinds of collections and features such as telescopes, lawn games, board games, science kits or other activity centers.
- There is no separate exhibit space.
- No one uses main entrance off Middlesex Avenue in the current configuration. Because of the relationship to the parking lot, the "back" entrance is primary entrance to building.
- Hallway/lobby spaces are being used for storage, computers, coffee machine, and seating.
- Staff spaces have been retrofitted into areas previously employed for book stacks.
- Stack areas are butted against wall on first floor, which does not allow for easy browsing.

- The space in the Children's Room is inadequate to accommodate the needs of families: preschool computer and reference books are located in the hallway. Parents have to stand or sit on small chairs due to not enough seating space.
- The space for Teens is currently in the Children's Room. Teens need a larger space that is separated from young children.

The existing Bookstore Next Door is composed of about 1,250 GSF. If this use were provided within a re-designed library, the area allocated could reasonable be somewhat less. As a result, approximately 1,000 GSF of new and/or renovated space is assumed to be adequate to replace the existing facility.

The site has 47 parking spaces, which is shared with the Book Store Next Door staff and patrons. If there are more meeting rooms, events and overall patronage of the library, then parking demand will increase. For the purposes of overall planning, a ratio of approximately 3 spaces/1,000 GSF of parking area has been assumed for the library needs. This assumes that no additional parking would be required for the Bookstore Next Door. As a result, the parking demand is estimated at approximately 72 spaces. It should be noted that the front yard, curb, and sidewalk could be altered to provide for some parking spaces along the street to supplement the parking lots. However, this has not been assumed in the baseline scenario for the library.

The current library is located near a funeral home. During some time periods, visitors to the funeral home use public parking spaces. The degree and frequency of this conflict has not been measured, but is considered to be a significant inconvenience for library patrons during these time periods.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Because of the extent and value of the changes to the existing building, all aspects of the site and the building would need to be brought up to current building code standards.

Site Improvements

Site and Landscape - To accommodate an expanded library, additional parking will be required for a total capacity of 72 spaces. Site lighting, plantings and landscape elements should also be considered in the site development.

Architectural and Structural Improvements

Building Exterior - Exterior brick masonry requires repointing. Exterior wood trim requires refinishing.

Building Interior - Bathrooms are not ADA compliant. Stair railings are not to current standards. Building security is challenged by library planning and two entrances. The building does not have an intrusion system.

Building System Improvements

Mechanical (HVAC) - The original boiler is in place and should be replaced. The boiler breaching should be replaced when the boiler is replaced. Boiler combustion air supply is inadequate and needs to be enhanced. Building exhaust is limited and needs to be expanded throughout the facility.

Plumbing - A thermostatic mixing valve and expansion tank needs to be installed at the water heater. Water piping near the tank needs to be insulated. Cast iron drainage piping should be replaced.

Fire Protection - A sprinkler system will be required with an addition. The building area is 14,910 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings, in which renovations will exceed 7,500 square feet in area, or if in which major alterations are planned. Under these conditions an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A hydrant flow test, is required to determine adequate capacity for fire protection.

Electrical - Emergency lighting and exit signs need updating. Fire alarms, horn strobes, pull stations, and smoke detectors do not provide an appropriate amount of coverage for a non-sprinklered building, and will need to be re-evaluated with an addition, which will require that the building have a sprinkler system. The existing electrical equipment is beyond its useful life. The emergency standby generator, is due to be replaced. There is no separation of life safety equipment, and optional standby.

PROGRAMATIC IMPROVEMENTS:

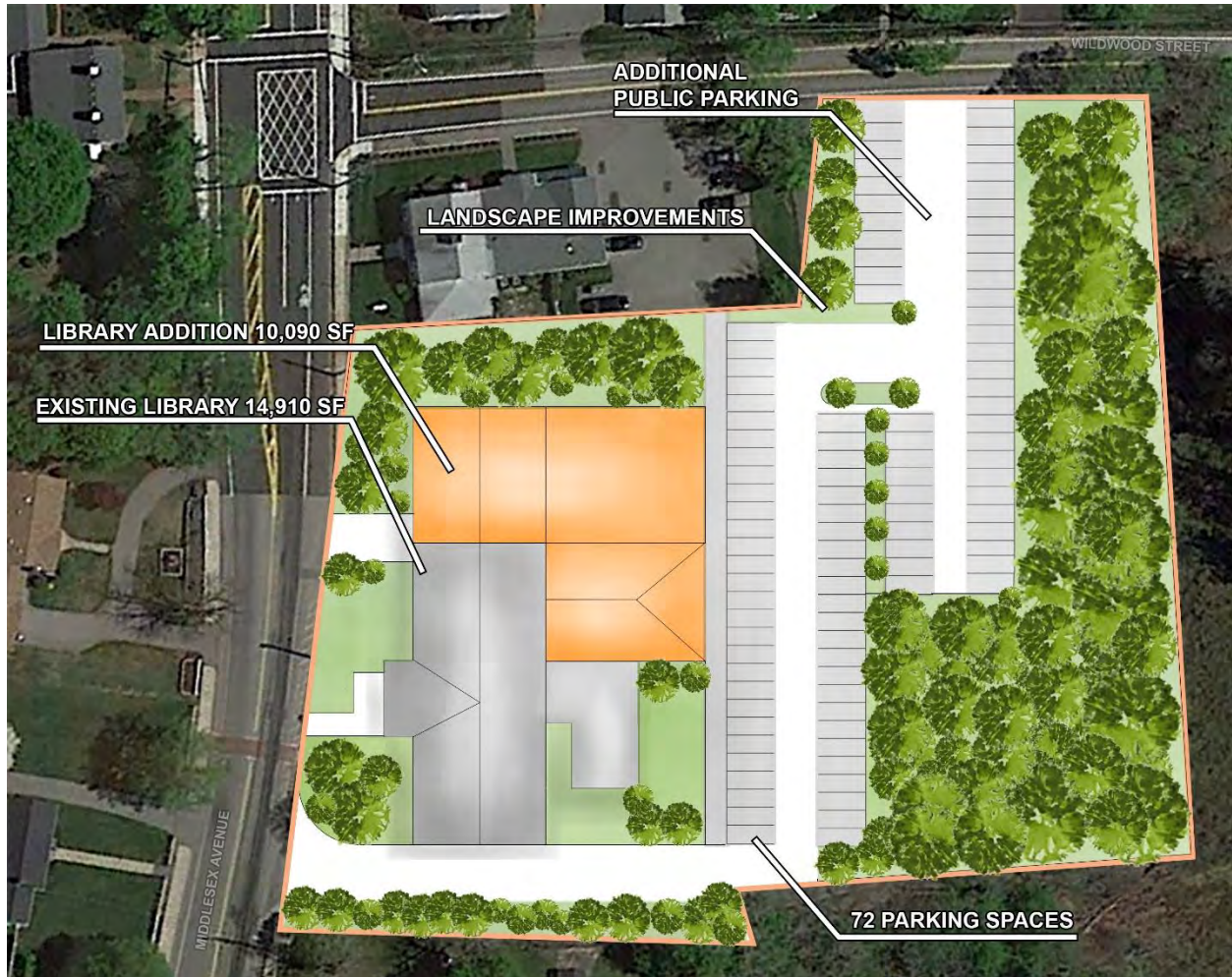
To accommodate the projected program of 25,000 GSF, a significant addition would be required to the existing library facility. To fit within the sites owned by the Town and provide adequate parking, the addition could be accomplished with a two-story addition to the north of the existing facility, using land currently occupied by the Bookstore Next Door. This building would be demolished, as a result.

The addition could include a re-organized circulation core to better accommodate those with handicaps, and would allow the re-organization of interior spaces in the existing building to better match the programmatic requirements of a contemporary municipal library. It is assumed that the existing interior would be substantially reconfigured and reconstructed with entirely new building systems, as part of the reconstruction.

The addition would be designed and constructed to allow phased improvements to allow ongoing operations to the extent practical. Phased construction will result in some cost premiums relative to new construction, as well as operational challenges.

The existing parking lots would be re-organized and expanded within the limits of the land owned by the Town while avoiding impacts on regulated wetlands which are behind the current library. A rationalized parking area should yield a total of over 80 parking spaces, somewhat in excess of the typical parking demand projected for the library, which would be about 72 parking spaces. The site would be improved with accessible pedestrian walkways and landscaping in keeping with its civic use and prominent location.

SITE PLAN:



COST ANALYSIS:

WILMINGTON MEMORIAL LIBRARY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$807,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	14,910	\$28.56	SF	\$452,000
Building Interior	14,910	\$5.70	SF	\$91,000
BUILDING SYSTEMS				
Mechanical (HVAC)	14,910	\$16.20	SF	\$257,000
Plumbing	14,910	\$4.02	SF	\$64,000
Fire Protection	14,910	\$9.00	SF	\$144,000
Electrical	14,910	\$23.04	SF	\$365,000
BUILDING ADDITION				
General Requirements	10,090	\$360.00	SF	\$3,851,000
(3) TOTAL CONSTRUCTION COSTS				\$6,031,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS				\$1,810,000
(4) TOTAL PROJECT COSTS				\$7,841,000

Abbreviation

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3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees, and other soft costs.

16 MOTH HOUSE/ MORSE BARN

LOCATION: 240 Middlesex Avenue

YEAR BUILT: 1920

BUILDING AREA: --

This is an historic outbuilding that has been converted into general storage use. The building is currently being used for general municipal storage.

SUMMARY:

To extend the life of this structure and preserve its historic character, exterior damage and deferred maintenance should be corrected with repairs to the exterior siding and trim. There is significant damage to the siding and trim due to rot and it is likely the wall sheathing is rotted as well. The associated structure in the corresponding areas of deterioration may also be in need of repair.

PROGRAMMATIC ASSUMPTIONS:

The facility is used only for storage. It is an unoccupied facility. The use is appropriate for the type of building as long as it is used for light weight storage. The facilities program is not expected to change. However, if it were to be for used another purpose in the future other than storage, code compliance may come into play.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

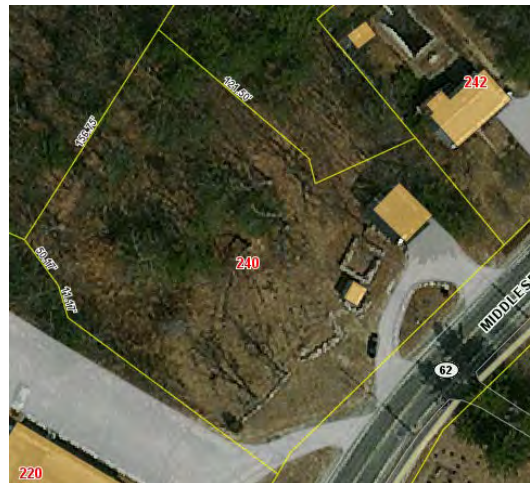
Site and Landscape - The grass area is in direct contact with the building siding, it should be regraded with a continuous crushed stone drip strip installed along the building perimeter.

Architectural and Structural Improvements

Building Exterior - Siding currently comes in direct contact with the ground at the bottom of the south west wall. The windows need repairs and re-glazing as well as the siding, trim and doors.

Roof - The south side of the roof appears to have been re-shingled which is apparent by newer metal drip edge flashing on that side of the gable and eve. The remaining portion of the roof should be anticipated to require re-roofing. The roof should be inspected and new roofing applied as required.

Structure - There is subsidence of the south west side wall evidenced by sloping clapboards flanking the southern-most garage door, this is suggestive of structural deterioration. The structure should be evaluated and any structural damage from rot or movement repaired.



Building System Improvements

Plumbing - Domestic water plumbing fixtures, wall hydrants, and hose bibs are non-compliant with current codes. Upgrades may be needed if these connections are to be used in the future.

Electrical - The 60-amp service and circuit breaker panel are beyond their expected useful life and should be replaced.

PROGRAMMATIC IMPROVEMENTS:

Currently there are no programmatic improvements needed.

Additional Observations:

Some of the suggested improvements are accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements to the amount indicated in this cost analysis.

COST ANALYSIS:

MOTH HOUSE/ MORSE BARN	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$4,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1	-	LS	\$45,000
Roof	1	-	LS	\$6,000
Structure	1	-	LS	\$7,000
BUILDING SYSTEMS				
Plumbing	1	-	LS	\$7,000
Electrical	1	-	LS	\$10,000
(3) TOTAL CONSTRUCTION COSTS				\$79,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$24,000
(4) TOTAL PROJECT COSTS				\$103,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

17 PUBLIC BUILDINGS OFFICE

LOCATION: 30 Church Street

YEAR BUILT: 1954

BUILDING AREA: 6,694 GSF

This building and associated garage bays serve the Town's Public Building Department and provides office space, maintenance support facilities and storage.

SUMMARY:

The Public Buildings Office is a repurposed fire station. The station house is used for administrative offices and work spaces. The vehicle bays are used for vehicles and miscellaneous equipment storage and operations. The building has some deferred maintenance that should be corrected. In addition, some interior improvements such as re-organized partitioning would provide a more effective working environment. Additional areas in the rear of the facility could be paved or otherwise improved to provide additional storage areas for equipment and provided with a pre-manufactured storage shed if needed for security purposes.

PROGRAMMATIC ASSUMPTIONS:

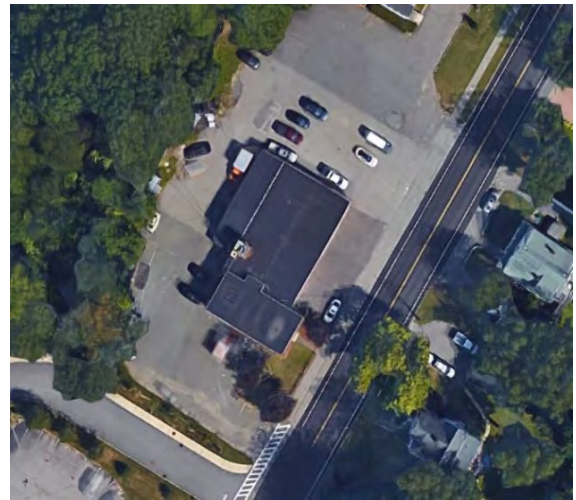
The functions that occur within this structure and site appear to be generally consistent with the overall size of the buildings, parking and site circulation. However, the functions have adapted to room and building layouts that were inherited from its previous use as a Fire Department facility. Additional partitioning and re-organization of the interior circulation would provide for better separation of different uses, such as the space currently shared by the Information Technologies administrative offices and department maps. Interior changes are also recommended to provide for improved, dedicated, well-organized storage spaces. The entrance area should be improved to provide space for visitors and to facilitate the interactions of the staff with visitors. The Department is in need of additional storage space for some equipment, such as snow blowers.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - A walkable route from the parking area to the main entrance in the front of the building needs to be provided. The parking area needs better defined parking spaces with handicapped parking identified. Signage that defines parking areas would improve site circulation and eliminate confusion.



Architectural and Structural Improvements

Building Exterior - The brick masonry façade requires repointing throughout with the greatest need at the back of the tower and at window openings. Garage windows are in poor condition and should be repaired or replaced. Wood window bucks around replacement window openings need to be painted. Wood trim at the main entrance is in need of repair. An abandoned flue penetration on the northeast façade needs to be covered or sealed on the exterior.

Building Interior - The interior finishes are generally in fair to poor condition and should be updated. The upper level kitchen flooring is in very poor condition and needs to be replaced. Interior level transitions are not compliant with current accessibility standards, and require upgrades. Toilet rooms should be upgraded to achieve current accessibility standards.

Building System Improvements

Plumbing - Domestic water pipes should be insulated and labeled. A thermostatic mixing valve should be installed at the outlet of the water heater. An expansion tank should be installed at the cold-water make-up for the water heater. Cast Iron drainage piping is in poor condition and should be replaced. Horizontal storm drainage piping should be insulated. The garage has floor drains that should be directed to an oil/gas separator.

Electrical - Electrical systems are generally in poor condition. Abandoned electrical wiring including a service entrance on the exterior of the building and it should be removed and penetrations in finish systems should be patched. Emergency lighting and exit signage is insufficient and needs updating. The fire alarm system should be updated to provide coverage for the building. The life safety equipment and the optional emergency standby power system should be separated.

PROGRAMMATIC IMPROVEMENTS:

A design evaluation will be required to establish the most appropriate interior improvements. For the purpose of this master plan, an approximate funding allocation has been estimated that would provide for typical re-organization and associated building systems and architectural improvements for the adaptive reuse of buildings of this age and type. The facility would benefit from a shed that would provide cover for vehicles, equipment and other materials.

The site can be adapted to provide more storage, if necessary, with a pre-manufactured shed and pavement improvements along the rear of the parcel. However, such improvements have not been specifically budgeted within the facility cost estimate.

Additional Observations:

Some of the suggested improvements are accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements to the amount indicated in this cost analysis.

COST ANALYSIS:

PUBLIC BUILDINGS OFFICE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$59,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	6,694	\$14.00	SF	\$100,000
Building Interior	6,694	\$21.00	SF	\$150,000
BUILDING SYSTEMS				
Plumbing	6,694	\$9.72	SF	\$70,000
Electrical	6,694	\$16.20	SF	\$116,000
(3) TOTAL CONSTRUCTION COSTS				\$495,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS				\$149,000
(4) TOTAL PROJECT COSTS				\$644,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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18 WILMINGTON MEMORIAL PUBLIC SAFETY BUILDING

LOCATION: 1 Adelaide Street

YEAR BUILT: 2001

BUILDING AREA: 36,000 GSF

This building serves both the Police and Fire Departments with administrative and operational space and facilities.

SUMMARY:

This is a newer facility that is generally in good condition meeting most of the current space needs of the public safety departments of the Town. There are several specific deficiencies associated with deteriorating conditions that need to be remedied. Interior improvements will be needed to adapt to contemporary public safety practices and standards. The existing parking supply is somewhat constrained, and the Town should take steps to provide for additional nearby parking, if required.

As a separate topic, this master plan is considering trends and practices associated with the emergency response times for Fire Department equipment. This topic is independent of the requirements for the existing headquarters and primary station facility.

PROGRAMMATIC ASSUMPTIONS:

The Public Safety Building currently houses the police, fire, animal control and the associated Information Technology functions, as well as first response communication. Each department housed in this facility has different programmatic needs.

The departments will need to adapt existing building areas and circulation to meet current and projected needs. For example, the police station sally port, which is undersized for its use, would benefit from re-organization. There is an insufficient secure evidence storage. A new evidence storage area with a dedicated ventilation system needs to be created. The briefing room is in a poor location on the second floor and would be better located adjacent to the patrol supervisor with easy access to both patrol locker rooms and vehicle fleet. The Fire Department decontamination room is too small to meet needs.

Future needs would be dependent upon the expansion of services or provisions for new equipment not within the current fleet. If this were to occur, additional covered storage areas or parking bays might be needed. However, there are no specific current plans for equipment or program expansion.



The on-site parking lot is sometimes used to capacity, and staff and visitors use off-site parking spaces. Parking needs to serve staff, visitors, department vehicles and vehicles seized as part of police activities. There is no specific estimate or analytical basis for establishing the number of additional spaces that may be needed. However, the Town should be prepared to designate nearby on-street, and off-street spaces on municipal land for additional parking in the future.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Street access from the site does not include a traffic light to aid emergency vehicles to enter the street; provision of a signal is advisable. There is a lack of physical buffers, and vegetative screening between the site and adjacent lots, which should be addressed with site improvements.

Architectural and Structural Improvements

Building Exterior - Drywall soffit at the public entrance is failing and needs to be replaced. Air/vapor barrier in the attic needs to be repaired, as it is not continuous or sealed.

Building Interior - Carpet finishes are worn to failure in several locations, including the fitness room. Interior paint on steel surfaces in the apparatus room requires maintenance. Cold floors in the second floor office are in the zone above the first story arcade, this should be addressed by improving insulation above the arcade soffit. Doors throughout the facility need to be evaluated as they do not close properly. The main electric room, which is required to maintain a fire rating, requires fire stopping at the holes in the ceiling and minor penetrations.

Building System Improvements

Mechanical (HVAC) - Laboratory ventilation is inadequate and needs to be improved.

Plumbing - Booking area floor drains flood. The police department drains are possibly connected with the fire department kitchen drains. This should be investigated in greater detail and addressed.

Additional Observations and Notes

Building security and access control are an important aspect of the public safety functions. Upgrades should be budgeted and provided, in keeping with contemporary standards. For example, keypad controls are reported to be unreliable. Video monitoring may not be sufficient and is not centrally controlled. There is no security intrusion system.

PROGRAMMATIC IMPROVEMENTS:

The overall building and site sizes appear to be adequate to provide for police and fire functions, but will require the re-organization of interior spaces and provision of additional technology, to better accommodate existing and future needs. This is likely to include additional portioning, relocation of various internal functions, and potential site improvements, if additional equipment or functions are located at the site.

COST ANALYSIS:

WILMINGTON PUBLIC SAFETY BUILDING	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$287,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	36,000	\$4.56	SF	\$175,000
Building Interior	36,000	\$27.60	SF	\$1,054,000
BUILDING SYSTEMS				
Mechanical (HVAC)	36,000	\$0.90	SF	\$35,000
Plumbing	36,000	\$0.60	SF	\$24,000
(3) TOTAL CONSTRUCTION COSTS				\$1,575,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$473,000
(4) TOTAL PROJECT COSTS				\$2,048,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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19 SCALEKEEPER'S OFFICE

LOCATION: 240 Middlesex Avenue

YEAR BUILT: 1840

BUILDING AREA: 120 GSF

This building is a small historic structure that is part of Wilmington's visible heritage.

SUMMARY:

The building is in generally good condition. Other than periodic maintenance level improvements, there are limited additional requirements. It has been noted that the electric power line that extends from the adjacent Moth House/Horse Barn is in poor condition and would be advisable to be replaced.



PROGRAMMATIC ASSUMPTIONS:

The facility is an unoccupied building of historical significance. The building is also being used for a limited amount of municipal storage and serves as an antique showpiece. The use is appropriate as long as it is used for light-weight storage. The program use is not expected to change. However, if it were to be for another purpose in the future other than storage, its code compliance might come into play.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

All existing electrical power items should be replaced to meet current code standards. It is assumed that the expenditure could be covered through maintenance budgets rather than becoming a capital expenditure.

PROGRAMMATIC IMPROVEMENTS:

Currently there no programmatic improvements needed.



COST ANALYSIS:

Note: Improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means. As a result, this building is not expected to require capital improvement funds.

20 ROMAN HOUSE SCHOOL ADMINISTRATION

LOCATION: 161 Church Street

YEAR BUILT: 1900

BUILDING AREA: 4,498 GSF

This former residence is an historic structure that has been adaptively reused as offices for portions of the School Department Administration that can reasonably fit within it.



SUMMARY:

The school administration requirements are not well served by this building. It is not large enough to absorb the full extent of the School Administration staff and functions, which require a building area approximately three times the size of this structure. In order to consolidate all of the related functions within one structure, The uses within this building should be relocated within a new Town Hall/School Administration building or complex. As a result, the future use and disposition of this building and this site can be considered for non-municipal purposes.

PROGRAMMATIC ASSUMPTIONS:

Currently the Roman house has about 10 staff members. Each employee either has a work station or private office. They currently have a residential kitchen that would be better as a staff break room. They have a large conference room that accommodates 10-12, they need a room that seats 16. They do not have a small conference room. The copy work production area meets the need. The reception area accommodates 2 patrons, but would like to accommodate 4. They need a total of 22 parking spaces. There are 8 principles alone that must meet the school administration for meetings. Overall the facility lacks adequate storage space.



There are additional staff and space needs that are currently accommodated in locations within the School system because of a lack of available space in the Roman House. The program requirements for consolidated School Administration functions are described within the recommendations for a combined Town Hall/School Administration facility.

IMPROVEMENTS:

Not applicable

COST ANALYSIS:

Costs may be incurred upon determination of the future use of this structure, but have not been included in capital budget estimates.

21 SOUTH SCHOOL FOOD PANTRY

LOCATION: 142 Chestnut Street

YEAR BUILT: 1800

BUILDING AREA: 1,250 GSF

This is a small, historic former school building that has been retained by the Town and is adaptively reused by a non-profit food pantry operation providing public services.

SUMMARY:

This former school house was built around 1800. It is a wood framed structure in generally good condition on full fieldstone foundation. The current building does not meet current codes and is not adequately adapted to its existing use. Renovations to provide adequate food storage, handicapped accessibility, energy efficiency and other improvements to extend the life of the building and better serve its purpose are recommended, if the food pantry use continues. The Town should consider whether it wishes to maintain the use in a deficient and aging building, or whether the building should be upgraded to contemporary standards and its life significantly extended as a result. This scenario assumes that this longer-term approach is taken.

PROGRAMMATIC ASSUMPTIONS:

The building is used for distribution of food, including food storage, handling, and the operations and public interaction associated with this function. The facility appears to be generally suited to its current functions, and there are no current anticipated significant changes in the type or extent of the programs offered here. The area dedicated to parking appears to be adequate. However, the area dedicated to food storage is inadequate and includes an exterior freight container on the site. Basement access could be improved and an appropriate storage area created.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Existing perimeter concrete slabs should be removed, hardscape paving or landscaping should be separated from the building by a crushed stone perimeter strips 3' wide to allow proper drainage.

Architectural and Structural Improvements

Building Exterior - The entire exterior siding and trim should be refinished including the water table board and cap which have significant deterioration. Attic window openings have been covered with painted plywood, which should be removed and windows installed that are in keeping with the architectural aesthetic of the building. Wood framed window screens have been affixed over three windows on the north-east façade and need repair.



Concrete slab at front façade is heaved and should be repaired. Siding and trim repairs are required on the exterior, especially where it contacts stone foundation. Insulating the exterior walls and attic should be considered during the course of renovation as well as new insulated windows.

Structure - Also recommended is a new, full-depth insulated foundation with perimeter and basement and under-slab drainage system.

Roof - Gable vents should be installed above the insulated attic joists.

Basement - A bulkhead protected basement access stair and door should be provided. The basement storage area may be subject to freezing. Rubble infill at wood beam sills suggests that some sill rot may have been excavated and infilled.

Building Interior - Interior finishes are serviceable, but outdated. Wood floors require refinishing; tile floors are out of date and should be refreshed. The marble threshold to the bathroom is broken from subsidence and needs to be repaired. Deadbolt hardware on rear exit is non-conforming for an exit door and needs to be replaced with appropriate exit hardware. The original ceiling heights should be restored and attic insulation installed. The existing wood burning fireplace and chimney should be removed with the existing foundations and the floor infilled with compliant structure and finishes to match existing. All new plumbing and accessible bathrooms will be required. New interior fit-out tailored to the anticipated program occupancy (Food Pantry), will include appropriate wall and ceiling finishes, refinished floors, new window trim. Storage facilities and access routes should be appropriate to the configuration.

Building System Improvements

Mechanical (HVAC) - HVAC systems should be replaced with a new condensing boiler and insulated duct work with programmable thermostatic controls. The kitchen hood serves no equipment; it is recirculating air and is not protected; it could be removed. Bathroom fan discharges into the attic space and should extend to the roof.

Plumbing - Majority of plumbing systems are reaching their life expectancy and will need replacement. Plumbing fixtures do not meet ADA standards, and are not water-conserving, and will need to be replaced in the event of a renovation. Domestic water lines should be insulated and labeled. The water heater will need to be replaced as it has exceeded its life expectancy. The cast iron drainage piping is in poor condition and should be replaced and the PVC waste piping is non-compliant for commercial buildings and will require replacement as well during a renovation.

Electrical - Interior emergency lighting will need to be updated, it is deficient and exterior emergency lighting should be installed. There is only one exit sign and it is not functional. The miscellaneous wires dangling on the exterior and abandoned electric power hardware need to be removed from the façade. Kitchen outlets will need to be GFI protected.

PROGRAMMATIC IMPROVEMENTS

Additional food storage area should be created within the basement with access through a bulkhead or ramp for access.

COST ANALYSIS:

SOUTH SCHOOL FOOD PANTRY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$9,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1,250	\$52.80	SF	\$70,000
Structure	1,250	\$7.20	SF	\$10,000
Roof	1,250	\$0.96	SF	\$3,000
Basement	1,250	\$7.20	SF	\$10,000
Building Interior	1,250	\$36.72	SF	\$49,000
BUILDING SYSTEMS				
Mechanical (HVAC)	1,250	\$26.40	SF	\$35,000
Plumbing	1,250	\$21.84	SF	\$30,000
Electrical	1,250	\$8.40	SF	\$12,000
(3) TOTAL CONSTRUCTION COSTS				\$228,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$69,000
(4) TOTAL PROJECT COSTS				\$297,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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22 TOWN HALL AND SCHOOL ADMINISTRATION

LOCATION: 121 Glen Road

BUILDING AREA: 20,000 GSF

RELOCATE TO: Swain Site and adjacent land

SUMMARY:

In the preferred scenario, the Town Hall departments would be combined with the School Administration and Veteran Services functions to create a composite municipal building sited in the same approximate location as the former Swain School, facing the Town Common.

The site circulation and parking would be combined with access to and from the High School parking area. The high school parking area would need to be expanded within the existing municipally-owned site to retain the same amount of parking as is currently dedicated to that purpose.

This new municipal building might best fit the site as a three-story structure with a footprint of about 14,000 square feet. The building would have a prominent entrance facing the Town Common, and would be set back from the adjacent streets to create generous landscaped areas. A secondary entrance would be located facing the parking that would serve the Town Hall.



PROGRAMMATIC ASSUMPTIONS:

The Town Hall would replace the existing structure and correct existing deficiencies in the amount and type of spaces. These have been quantified using typical space standards and comparisons with other facilities. In order to meet these needs, the Town Hall would require approximately 9,800 additional gross square feet (GSF) of additional area. Because the Town is expected to experience modest growth over the next two decades, it would be prudent to account for an additional 5% of floor area, resulting in a total projected program need for about 31,300 gross square feet. As separately documented, the School Administration functions, if relocated within an expanded or new Town Hall, would require approximately 10,900 gross square feet. Combined, the Town Hall, School Administration and the absorption of Veteran services will require approximately 1,000. This results in a projected facility size of approximately 42,200 gross square feet.

The allocation of parking assumes that there are no shared parking benefits associated with the adjacency of this new facility to the High School parking. Depending upon the outcome of decisions regarding the existing Buzzell Senior Center, additional parking or shared parking opportunities can be anticipated. If shared parking opportunities are identified, then the total amount of parking can be reduced from that indicated in this scenario.

SITE PLAN OPTION A:



SITE PLAN OPTION B:



COST ANALYSIS:

TOWN HALL/SCHOOL ADMINISTRATION	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
DEMOLITION				
Demolish Buzzell Center	8,308	\$10.00	SF	\$90,000
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$2,729,000
NEW CONSTRUCTION				
Architecture	42,900	\$120.00	SF	\$5,457,000
Structure	42,900	\$45.60	SF	\$2,075,000
Mechanical (HVAC)	42,900	\$42.00	SF	\$1,911,000
Plumbing	42,900	\$14.40	SF	\$656,000
Fire Protection	42,900	\$9.00	SF	\$411,000
Electrical	42,900	\$33.60	SF	\$1,529,000
(3) TOTAL CONSTRUCTION COSTS				\$14,858,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$4,458,000
(4) TOTAL PROJECT COSTS				\$19,316,000

Abbreviation

SF Square Foot

LF Linear Foot

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SCHOOL FACILITIES

Overview

The Wilmington Public School district currently operates six schools to serve the education needs of Pre-K – Grade 5. The six schools require students to make more facility transitions than is typically seen in elementary education. The number of facilities and required transitions in Wilmington creates a situation where expensive core program spaces like gymnasiums, libraries, cafeterias, and kitchens are duplicated. This duplication requires WPS to spend more money on support spaces rather than the learning spaces that directly support curriculum. Furthermore, the high number of transitions creates discontinuity, between students and teachers, as the student progresses from one facility to another.

The current school program structure requires a significant number of transitions for young students, as they advance through the lower school levels. In general, the transitions are found to be detrimental to the educational experience of students. School systems that offer fewer transitions provide an educational path that is less disruptive to students and teachers, and provides for greater continuity and familiarity between students, staff, and teachers. This helps the school system to better track students' academic and personal development. A more continuous program is more effective in providing benefits associated with programs that span several grades and the mentoring of younger students by older pupils.

Enrollment Projections

According to recent school population projections, enrollment within the WPS lower schools is not expected to change significantly over the next few years. Although longer term projections might be useful, the demographic projections for Wilmington generally indicate the probable gradual decline in school age children in the Town over the longer term.

From 2005-06 through 2015 –16, the Pre-K – 5 enrollments has slowly but steadily declined by 269 students or about 14.2%.

Student Enrollment 2005-2016 (Pre-K – Grade 5)										
2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
1,892	1,884	1,883	1,828	1,867	1,808	1,758	1,729	1,746	1,677	1,623
Source: Massachusetts School and District Profiles - Wilmington										

Looking forward, the Wilmington Public Schools are currently updating their 10-year student enrollment projections. The last projections end in 2020-2021 as follows:

Projected Student Enrollment 2016-2021 (Pre-K – Grade 5)				
2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
1,618	1,607	1,612	1,581	1,628

Source: Enrollment and Class Size, Wilmington Public Schools, FY' 17 Superintendent Recommended Budget

Student enrollments for the PreK to Grade 5 levels are projected to continue to decline by another 42 students through 2019-2020 and then increase. WPS should verify if the increase is the beginning of a trend or an anomaly in the new projections by creating new projections to 2026. Updated data and analysis will assist the Town's decisions regarding the recommended consolidation.

School Facility Recommendations

The following descriptions provide a summary of relevant building conditions, programmatic assumptions, and recommendations regarding facility improvements or changes.

23 BOUTWELL SCHOOL

LOCATION: 17 Boutwell Street, Built 1961

The Boutwell School is a round-shaped building of the same design and vintage of the current Town Hall building. It shares a campus with the Middle School and the West Intermediate School.

SUMMARY:

CURRENT GRADE LEVELS: Grades Pre-K and K

CURRENT NUMBER OF STUDENTS: 165 in 9 regular classrooms

STUDENT CAPACITY: 141

BUILDING AREA: 20,800 GSF, one story

BUILDING CONDITION: Fair Condition

SITE AREA: 41.3 acres shared with West Intermediate and the Middle School



PROGRAMMATIC ASSUMPTIONS:

The Boutwell School is very small and is less efficient to operate than larger schools. It is currently over capacity. Boutwell would be closed and the students redistributed to an enlarged school as part of the overall strategy for facilities recommended in this *Plan*.

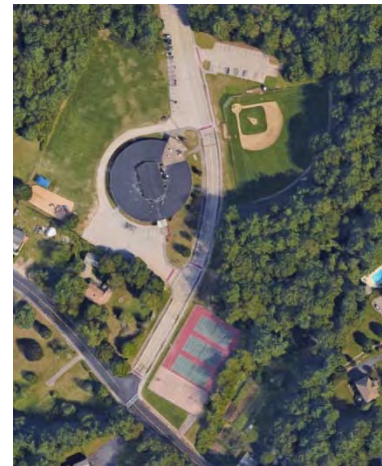
IMPROVEMENTS:

SITE AND BUILDING IMPROVEMENTS:

Depending upon the phasing and timing of construction of replacement facilities, the Town may need to provide interim improvements to maintain the operational quality and appropriate learning environment.

PROGRAMMATIC IMPROVEMENTS:

Using the Massachusetts School Building Authority (MSBA) standards, the area devoted to the relocation of Boutwell School should increase by about 8,900 square feet above the current 20,800 square feet within the facility.



COST ANALYSIS:

Based on the recommendation to close this facility, the program would be redistributed to an improved, consolidated elementary school. As a result, there would be no costs attributed to the Town's capital budget for this school, and the costs to expand other schools is separately estimated and allocated.

24 NORTH INTERMEDIATE SCHOOL

LOCATION: 320 Salem Street, Built 1962

SUMMARY:

CURRENT GRADE LEVELS: Grades 4 - 5

CURRENT NUMBER OF STUDENTS: 279 in 13 regular classrooms

STUDENT CAPACITY: 289

BUILDING AREA: 54,569 GSF, three stories including a partial daylight basement

BUILDING CONDITION: Fair to Good Condition. This facility was highly rated among the comparative evaluations of the schools included in this *Plan*.

SITE AREA: 13.98 acres



PROGRAMMATIC ASSUMPTIONS:

The North Intermediate School current enrollment matches its capacity. The school will need to expand to absorb third grade students, as part of the overall consolidation strategy.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The bus loop and the car parking systems are well separated for safety. The school has adequate parking at about 100 spaces, plus playfields and a playground. There does not appear to be a paved play area unless part of the parking lot is used, but the parking is inadequate for assemblies and events. There are four overlapping playfields, three public tennis courts, and a basketball court on campus.



Architectural and Structural Improvements

Building Exterior - The original architectural construction documents have not been found, but the structural drawings indicate solid masonry exterior walls with little to no wall insulation, which can be addressed with future improvements. The Wilmington School Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings. The window and exterior door systems were replaced in 2014. The roofs over the classroom wing are over 20 years old. Replacing the roofs

has been planned, with the Gym and Café scheduled for FY2017, and the classroom wing scheduled for FY2018. There is no thermal vestibule at the main entrance.

Partial Daylight Basement - The lowest floor level exits at grade to the rear because of the site configuration. It contains the old gym lockers, Instrumental Band, C.A.R.E.S Offices, mechanical and storage. Upgrades to this level should be accomplished as noted for the building interior, as described below.

Building Interior – Improvements should be accomplished to achieve accessibility standards within the building. Conditions that should be addressed include restrooms not fully accessible. Many doors have knob hardware instead of lever hardware to meet current standards. Several level changes are not accessible. Interior signage appears to be mounted too high relative to accessibility standards. There is no elevator linking the three floor levels. A wheelchair lift is used to move from floor to floor in this three-story building and is technically compliant. However, it will need to be in good operating condition to comply with applicable standards. The Town could consider providing an elevator if significant additions and renovations are planned. Handrails and guard rails at stairs are not all compliant and should be upgraded to full ADA compliance.

Other issues included vinyl asbestos tile remaining in several areas that should be removed, which is scheduled for FY2019. There is a need to upgrade the wall and floor finishes which are in fair to poor condition. Casework throughout the school is in need of repair, resurfacing, or replacement.

Building System Improvements

Mechanical (HVAC) – The boiler system was replaced in 2015. All associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. Ventilation improvements should be accomplished for interior rooms (those without windows) that have poor ventilation. There is no code-required ventilation at the corridors and administration offices, and this should be corrected. Future improvements should include replacement of toilet ventilation systems. Existing asbestos pipe insulation should be removed and replaced. As part of an addition and renovation project, the pneumatic mechanical system controls should be replaced with a DDC system. The kitchen hood over the cooking area has no make-up air and the dishwasher has no exhaust system, which should be provided in the future.

Plumbing - The school has municipal sewer service (as of 2015) and water service. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards, are not water conserving and should be replaced.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 54,569 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A sprinkler system should be provided in concert with major alterations. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems that effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the

assessed value of the building. Buildings for which sufficient water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection.

Electrical – The building has three phase power service. The main electrical switchboard and distribution panels should be upgraded and replaced. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Kitchen receptacles are not GFI protected and should be upgraded. The paging system should be updated. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as a security vestibule at the main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the North Intermediate School is to provide 36 square feet per student and a maximum of 25 students per classroom. When this review was undertaken, 25 students per classroom was noted in some cases, particularly clustered in the fifth grade. Special education students were included in the total allocation of students.

Using the MSBA standard, the school is slightly larger than the minimum sought by the state. The existing building area is 54,569 square feet. Using the enrollment of 279 students and 180 square feet of school area/student, the school area requirement would be 50,220 square feet. Existing regular classroom sizes are reasonably close to meeting the MSBA standards of PreK-K classrooms (1,100-1,300 square feet), and Grades 1-8 classrooms (900-1,000 square feet).

However, the allocation of space within the building does not conform with MSBA standards. For example, the North Intermediate library is 48% and the gym is 73% of the recommended MSBA standard size. There should be also be additional spaces for conference rooms, offices, small group meetings and special education programs.

Additional space will be need accommodate the consolidation changes associated with absorbing 3rd grade students. This will contribute to approximately 13,790 square feet of new construction.

COST ANALYSIS:

NORTH INTERMEDIATE	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	33,765	-	SF	-
Existing Site Area less building footprint	450,927	\$0.73	SF	\$330,000
Minor repairs and upgrade	55,281	\$2.00	SF	\$111,000
New parking	23,800	\$12.30	SF	\$293,000
New landscape improvements	395,646	\$1.00	SF	\$395,000
Utility improvements	-	Allowance	-	\$125,000
Sitework associated with Additions	13,790	\$8.45	SF	\$117,000
Total Site Area	474,727	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	54,569	-	SF	-
Renovated Area	54,569	\$105.74	SF	\$5,770,000
Additions/New Construction	13,790	\$239.40	SF	\$3,302,000
Total Building Area	68,359	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	68,359	\$47.88	SF	\$3,274,000
Plumbing	68,359	\$5.99	SF	\$410,000
Fire Protection	68,359	\$9.98	SF	\$682,000
Electrical	68,359	\$40.70	SF	\$2,783,000
TOTAL CONSTRUCTION COSTS (3)				\$17,592,000
PLUS 30% FOR FEES AND ADMINISTRATION				\$5,278,000
TOTAL PROJECT COSTS (4)				\$22,870,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

25 SHAWSHEEN SCHOOL

LOCATION: 298 Shawsheen Avenue, Built 1970

SUMMARY:

CURRENT GRADE LEVELS: Grades 1 - 3

CURRENT NUMBER OF STUDENTS: 350 in 17 regular classrooms

STUDENT CAPACITY: 389

BUILDING AREA: 56,253 GSF, three stories including a partial daylight basement.

BUILDING CONDITION: Good Condition. Shawsheen scored the highest in the preliminary facilities assessments.

SITE AREA: 20.51 acres



PROGRAMMATIC ASSUMPTIONS:

The Shawsheen School is within 39 students of its capacity. To meet MSBA standards for its current population, Shawsheen should be expanded. In addition, it would absorb a net increase in student population due to the school consolidation process recommended in this *Plan*. This would include absorption of Pre-K and Kindergarten students, and the reassignment of 3rd graders to an intermediate school.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The building is very close to Shawsheen Avenue which is a busy thoroughfare. The formal Main Entrance is on Shawsheen Avenue and does not face the parking and bus drop-off area which creates a potential supervision and security issue. The bus loop and the car parking systems are not separated for safety. The school has adequate parking with about 90 spaces, plus playfields and a playground. There is a large paved play area directly adjacent to the school. There are five overlapping playfields, three public tennis courts and a basketball court on campus. The fields are worn and drainage is poor. They should be reseeded with improved drainage.



Architectural and Structural Improvements

Building Exterior - The original construction documents indicate solid masonry exterior walls with little or no wall insulation. The window and exterior door systems were replaced in 2010. The roof over the Gym wing is 2 years old but all others are about 10 years old. There is no thermal vestibule at the main entrance. The Wilmington School Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings.

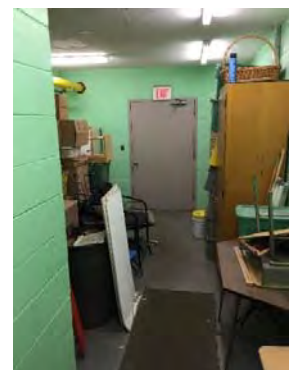
Partial Daylight Basement – The lowest floor level exits at grade to the rear because of the site topography. This level is only about half of the floor area of the two floors above it. Issues associated with egress from this part of the building are noted below.

Building Interior – Improvements should be accomplished to achieve accessibility standards within the building. Conditions that should be addressed include restrooms not fully accessible. Many doors have knob hardware instead of lever hardware to meet current standards. Interior signage may be mounted too high to meet current accessibility standards. There is no elevator linking the three floor levels. A wheelchair lift is used to move from floor to floor in this three-story building and is technically compliant. There are plans to replace the 1991 wheelchair lift (scheduled for FY 18). The front entrance on Shawsheen does not have a ramp. The only ramp to the main floor is on the Hopkins Street side. The back entrance facing the parking lot and bus drop-off where most people will enter requires a wheelchair lift to get to the main floor. The Wilmington School Department should consider providing an elevator if significant additions and renovations are planned, as well as upgrading the facility to meet full ADA and other accessibility standard compliance.

Changes could include removing the gym divider wall and installing a gym divider curtain. Several classrooms have poorly functioning moveable walls between them. It may be appropriate to remove these walls and provide new permanent walls with better acoustic separation. As part of these improvements, the need to have doors between classrooms should be confirmed. Other improvements include removing the vinyl asbestos tile remaining in several areas, and upgrading the floor finishes, which are in fair to poor condition. The casework throughout the school is in need of repair, resurfacing, or replacement. The walls were repainted in 2013 but will need periodic upkeep and repainting.

The Shawsheen School has a significant egress issue at the lower (A) level. An exit sign within a corridor leads into a storage room which has a marked exit door at the other end. This second door swings inwards, not in the direction of egress, and does not have panic hardware, both of which are standard requirements for egress routes from buildings. As a storage room, the exit path could be blocked by stored materials.

The exiting requirements for this portion of the building should be reviewed to provide either an alternate path or upgrade this path to meet appropriate current building code standards. It appears likely that the exit path can conform to code requirements, for example, by removing the door shown in the photograph and converting the room to serve as a corridor by removing the stored items.



Building System Improvements

Mechanical (HVAC) – The boiler system was replaced in 2016 and burns natural gas. This building has received significant mechanical upgrades in recent years. However, all associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. Most fully interior rooms have no windows and have poor ventilation. The kitchen hood is not code compliant and has no dedicated make-up air system. Classroom unit ventilators should be replaced. There is no code-required ventilation at the corridors and administration offices. Improvements should include replacing the toilet ventilation system. The asbestos pipe insulation should be removed and replaced. If an addition is contemplated, replacement of the pneumatic controls with a DDC system is recommended.

Plumbing - The school has on-site septic field and municipal water. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards and are not water conserving and should be replaced. Domestic hot water piping in the boiler room needs insulation.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 56,253 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection. A sprinkler system should be provided as part of building additions and renovations.

Electrical - The building has three phase power service. The main electrical switchboard and distribution panels should be upgraded and replaced. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Kitchen receptacles are not GFI protected and should be upgraded. The paging system should be updated. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as security vestibule at main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the Shawsheen School is to provide 45 square feet per student and a maximum of 20 students per classroom. When this review was undertaken, the 20-student maximum was exceeded some cases, particularly clustered in the third grade. Special education students were included in the total allocation of students.

Using the MSBA standard, the school is smaller than the minimum sought by the state. The existing building area is 56,253 square feet. Using the enrollment of 350 students and 174 square feet of school area/student, the school area requirement would be 60,900 square feet. Existing regular classroom sizes are reasonably close to meeting the MSBA standards of PreK-K classrooms (1,100-1,300 square feet), and Grades 1-8 classrooms (900-1,000 square feet). However, the allocation of space within the building does not conform with MSBA standards. For example, the ratios of existing areas to the recommended MSBA standard size at the Shawsheen School for the library is 71%, the music room is 74%, the art room is 88%, and for the gym is 60%. There should be also be additional spaces for conference rooms, offices, nurse, small group meetings, administration and special education programs.

Additional space will be need accommodate the consolidation changes associated with absorbing Pre-K and K level students, after taking into account the third-grade students that would be relocated. This will contribute to approximately 15,470 square feet of new construction.

COST ANALYSIS:

SHAWSHEEN	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	28,945	-	SF	-
Existing Site Area less building footprint	552,506	\$0.80	SF	\$441,000
Minor repairs and upgrade	400,000	\$2.46	SF	\$985,000
New parking	6,300	\$9.98	SF	\$63,000
New landscape improvements	434,798	\$1.00	SF	\$434,000
Utility improvements	-	Allowance	-	\$150,000
Sitework associated with Additions	15,470	\$8.58	SF	\$133,000
Total Site Area	841,098	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	56,253	-	SF	-
Renovated Area	56,253	\$102.41	SF	\$5,761,000
Additions/New Construction	15,470	\$226.10	SF	\$3,498,000
Total Building Area	71,723	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	71,723	\$48.01	SF	\$3,444,000
Plumbing	71,723	\$7.65	SF	\$549,000
Fire Protection	71,723	\$9.98	SF	\$716,000
Electrical	71,723	\$42.23	SF	\$3,029,000
TOTAL CONSTRUCTION COSTS (3)				\$19,203,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION				\$5,761,000
TOTAL PROJECT COSTS (4)				\$24,964,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

26 WEST INTERMEDIATE SCHOOL

LOCATION : 22 Carter Lane, Built 1964

SUMMARY:

CURRENT GRADE LEVELS: Grades 4 - 5

CURRENT NUMBER OF STUDENTS: 255 in 10 regular classrooms

STUDENT CAPACITY: 213

BUILDING AREA: 62,058 GSF, including two stories and a basement

BUILDING CONDITION: Fair to Good Condition.

SITE AREA: 41.3 acres shared with Boutwell and the Middle School



PROGRAMMATIC ASSUMPTIONS:

The West Intermediate School current capacity is greater than what would be required relative to applicable standards. The school would need to expand to absorb third grade students to accomplish the recommended consolidation strategy described in this Plan.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The West Intermediate School is located directly adjacent to and facing the Middle School (WMS). An access road separates the bus drop-off lanes for each school. The West Intermediate School bus drop-off is well separated from the parking areas for safety. Parking is shared between West Intermediate and the Middle School with a total combined count of about 205 spaces. The parking is not adequate if there are simultaneous events at the schools. There is a large paved play area directly behind the school. There is a softball field behind West and a baseball and soccer field next to WMS across the access road. There is no playground equipment area.



Architectural and Structural Improvements

Building Exterior – This facility will benefit from energy-saving improvements to insulation. The original construction documents indicate solid masonry exterior walls with little to no wall insulation. The window systems appear to be original with single glazed, non-insulated glass, in frames that are not thermally broken. Exterior doors are well worn and should be tested for air infiltration at the head and jambs. Sections of roofs have been replaced recently and the classroom section is over 25 years old and scheduled for replacement. The Wilmington Public Buildings Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings.

Basement – The Basement is under the Gym wing and is set a half level below grade, allowing for minimal natural light into some rooms. It does not appear that the Basement is accessible under current standards. It houses band/instrumental music, District O.I.T. offices and storage in the former locker rooms. The basement has a groundwater leak problem which needs correcting.

Building Interior – Improvements should be accomplished to achieve accessibility standards within the building. Conditions that should be addressed include restrooms not fully accessible. Many doors have knob hardware instead of lever hardware to meet current standards. Interior signage may be mounted too high to meet current accessibility standards. There is no elevator linking the three floor levels. Expansion and renovation plans should consider providing an elevator. There is a need to remove the vinyl asbestos tile remaining in several areas. Upgrades the wall and floor finishes are needed where they are in fair to poor condition. Casework throughout is very worn out and should be repaired or replaced.

Building System Improvements

Mechanical (HVAC) – One of two boilers was replaced in 2014. The other boiler needs replacement. All associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. There is no code-required ventilation at the corridors and administration offices. This should be provided, along with replacement of the toilet ventilation system. Remove and replace asbestos pipe insulation. The asbestos pipe insulation should be removed and replaced. As part of future additional and renovations, the replacement of the pneumatic controls with a DDC system is recommended. The kitchen hood over the cooking area has no make-up air and there is no dishwasher exhaust system, which should be corrected.

Plumbing - The school has municipal sewer and water. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards and are not water conserving and should be replaced.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 62,058 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient

water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection. A sprinkler system should be provided as part of building additions and renovations.

Electrical – The building has three phase power service. Most electrical equipment is original to the building and is well beyond its useful life and should be replaced, and the system upgraded. Most fully interior rooms without windows have poor ventilation. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Kitchen receptacles are not GFI protected and should be upgraded. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as security vestibule at main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the West Intermediate School is to provide 36 square feet per student and a maximum of 25 students per classroom.

Using the MSBA standard, the school is larger than the minimum sought by the state. The existing building area is 62,058 square feet. Using the enrollment of 255 students and 180 square feet of school area/student, the school area requirement would be 45,900 square feet. Existing regular classroom sizes are somewhat smaller on average than the MSBA standards of PreK-K classrooms 1,100-1,300 square feet, and Grades 1-8 classrooms 900-1,000 square feet.

However, certain school components do not meet applicable standards. The Library is 52% and the Gym is 86% of the recommended MSBA standard size. It appears likely that additional small meeting/office/conference rooms are needed to support the current operations.

Additional space will be need accommodate the consolidation changes associated with absorbing third grade students. In addition to more full utilization of the existing building area, this larger enrollment will contribute to approximately 15,330 square feet of new construction.

COST ANALYSIS:

WEST INTERMEDIATE	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	38,260	-	SF	-
Existing Site Area less building footprint	185,964	\$1.20	SF	\$223,000
Minor repairs and upgrade	111,011	\$2.53	SF	\$281,000
New parking	26,250	\$10.51	SF	\$276,000
New landscape improvements	74,953	\$1.53	SF	\$115,000
Utility improvements	-	Allowance	-	\$100,000
Sitework associated with Additions	15,330	\$8.58	SF	\$132,000
Total Site Area	212,214	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	62,058	-	SF	-
Renovated Area	62,058	\$137.66	SF	\$8,543,000
Additions/New Construction	15,330	\$219.45	SF	\$3,365,000
Total Building Area	77,388	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	77,388	\$47.88	SF	\$3,706,000
Plumbing	77,388	\$6.98	SF	\$541,000
Fire Protection	77,388	\$9.98	SF	\$772,000
Electrical	77,388	\$40.90	SF	\$3,165,000
TOTAL CONSTRUCTION COSTS (3)				\$21,219,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION				\$6,366,000
TOTAL PROJECT COSTS (4)				\$27,585,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

27 WILDWOOD SCHOOL

LOCATION: 182 Wildwood Street, Built 1955

SUMMARY:

CURRENT GRADE LEVELS: Grades Pre-K - K

CURRENT NUMBER OF STUDENTS: 186 in 10 regular classrooms

STUDENT CAPACITY: 156

BUILDING AREA: 29,160 GSF, One story



BUILDING CONDITION: Poor Condition. This is the oldest facility of the schools evaluated for this study.

SITE AREA: 7.5 acres

PROGRAMMATIC ASSUMPTIONS:

The Wildwood School is over capacity by 30 students. It is very small and is less efficient to operate than a larger school. Wildwood would be closed, and the students redistributed to an enlarged school as part of the overall strategy for facilities recommended in this *Plan*.

IMPROVEMENTS:

SITE AND BUILDING IMPROVEMENTS:

Depending upon the phasing and timing of construction of replacement facilities, the Town may need to provide interim improvements to maintain the operational quality and appropriate learning environment.

PROGRAMMATIC IMPROVEMENTS:

Using the MSBA standard the space provided to replace this school, the total school area should increase by 4,320 square feet to accommodate its enrollment. This is based on a calculation of 186 students and 180 square feet of area per student. The reallocated area would be 33,480 square feet.

COST ANALYSIS:

Based on the recommendation to close this facility, the program would be redistributed to an improved, consolidated elementary school. As a result, there would be no costs attributed to the Town's capital budget for this school, and the costs to expand other schools is separately estimated and allocated.

28 WOBURN SCHOOL

LOCATION: 227 Woburn Street, Built 1963

SUMMARY:

CURRENT GRADE LEVELS: Grades 1 - 3

CURRENT NUMBER OF STUDENTS: 403 in 21 regular classrooms

STUDENT CAPACITY: 471



BUILDING AREA: 53,450 GSF, three stories including a daylight basement.

BUILDING CONDITION: Fair Condition.

SITE AREA: 10 acres

PROGRAMMATIC ASSUMPTIONS:

Woburn has the largest student capacity of the schools with 21 regular classrooms. To meet MSBA standards for its current population Woburn should be expanded. In addition, it would absorb a net increase in student population due to the school consolidation process. This would include absorption of Pre-K and Kindergarten students, and the reassignment of 3rd graders to an intermediate school.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The formal main entrance faces Woburn Street but the parking is located at the left side and rear of the school which creates a potential supervision and security issue. The bus loop and the car parking systems are well separated for safety. The school appears to have adequate parking at the rear and the south side, although the spaces are not marked in all locations. There are two large playfields, a playground, and a large paved play area directly adjacent to the north of the school. There are two public tennis courts and a basketball court on campus.



Architectural and Structural Improvements

Building Exterior – Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings. Replacement of the window and exterior door systems has been scheduled for FY19. Additional insulation should be provided at this facility. The original construction documents

indicate solid masonry exterior walls with little to no wall insulation. The window systems appear to be original with single glazed, non-insulated glass, in frames that are not thermally broken. Exterior doors are well worn and should be tested for air infiltration at the head and jambs. There is a thermal vestibule at the main entrance which provides energy benefits. There are some rock-faced spandrel panels that should be replaced with a metal system when the windows and doors are replaced. The gym roof was replaced in 2015 but the others are 12 – 20 years old. These aging tar and gravel roofs will need to be replaced. The Wilmington School The pedestrian ramp at Main Entrance is not fully accessible and should be improved. Some rear entrances have steps and are not fully accessible.

Basement – There is a daylight basement that contains four classrooms, Art and Music. Access should be upgraded as described in the recommendations for the building interior, below.

Building Interior – Several classrooms have poorly functioning moveable walls between them. These should be replaced with new permanent walls with better acoustic separation and provided with doors between classrooms if they are needed. All flooring tile was replaced in 2010. The gym has a moveable wall that does not function well and should be replaced with a gym divider curtain. Gym floor boards are separating in some areas and will need to be repaired and refinished. Spacing of stairwell balusters does not meet current code standards and will need to be upgraded. There is no elevator linking the three floor levels. A wheelchair lift is used to move from floor to floor in this three-story building and is technically compliant. However, renovations could include an elevator as part of significant additions and renovations, which will require upgrades to achieve full accessibility compliance. The casework throughout the school is in need of repair, resurfacing, or replacement.

Building System Improvements

Mechanical (HVAC) – The boiler system is the original 1962 installation and should be replaced. Items of concern include breaching insulation and poor heat regulation. All associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. Most interior rooms (those without windows) have poor ventilation. The combustion air system does not meet code and should be upgraded. There is no code-required ventilation at the corridors and administration offices. Improvements should include replacing the toilet ventilation system. The asbestos pipe insulation should be removed and replaced. If an addition is contemplated, replacement of the pneumatic controls with a DDC system is recommended. The kitchen hood over the cooking area has no make-up air and there is no dishwasher exhaust system; these should be upgraded to meet code standard.

Plumbing - The school has a new on-site septic system under the playfields (2013) and municipal water. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards, are not water conserving, and should be replaced.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 56,253 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water

flow is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection. A sprinkler system should be provided as part of building additions and renovations.

Electrical - The building has three phase power service. The main electrical switchboard and distribution panels should be upgraded and replaced. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Teachers report that circuit breakers trip regularly. Kitchen receptacles are not GFI protected and should be upgraded. The paging system should be updated. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as security vestibule at main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the Woburn School is to provide 45 square feet per student and a maximum of 20 students per classroom. When this review was undertaken, the 20-student maximum was exceeded some cases, particularly clustered in the third grade. Special education students were included in the total allocation of students.

Using the MSBA standard, the school is smaller than the minimum sought by the state. The existing building area is 53,450 square feet. Using the enrollment of 403 students and 168 square feet of school area/student, the school area requirement would increase by 14,164 square feet, to a total of 67,704 square feet. Existing regular classroom sizes are reasonably close to meeting the MSBA standards of PreK-K classrooms (1,100-1,300 square feet), and Grades 1-8 classrooms (900-1,000 square feet).

However, the allocation of space within the building does not conform with MSBA standards. For example, the ratios of existing areas to the recommended MSBA standard size at the Woburn School for the library is 66%, the music room is 42%, the computer room is 31%, the kitchen is 47% and for the gym is 42%. There should be also be additional spaces for conference rooms, offices, small group meetings, storage, staff lounge, nurse, administration, and special education programs.

Additional space will be need accommodate the consolidation changes associated with absorbing the Pre-K and K levels, after taking into account the reduction in area allocated for the third grades that will relocate to intermediate school facilities. This will contribute to approximately 12,250 square feet of new construction.

COST ANALYSIS:

WOBURN	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	27,856	-	SF	-
Existing Site Area less building footprint	339,910	\$1.00	SF	\$340,000
Minor repairs and upgrade	66,636	\$2.66	SF	\$178,000
New parking	3,500	\$12.30	SF	\$44,000
New landscape improvements	273,274	\$1.20	SF	\$328,000
Utility improvements	-	Allowance	-	\$50,000
Sitework associated with Additions	12,250	\$9.31	SF	\$115,000
Total Site Area	343,410	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	53,450	-	SF	-
Renovated Area	53,450	\$108.46	SF	\$5,798,000
Additions/New Construction	12,250	\$259.35	SF	\$3,178,000
Total Building Area	65,700	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	65,700	\$53.20	SF	\$3,496,000
Plumbing	65,700	\$7.32	SF	\$481,000
Fire Protection	65,700	\$9.98	SF	\$656,000
Electrical	65,700	\$40.70	SF	\$2,674,000
TOTAL CONSTRUCTION COSTS (3)				\$17,338,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION				\$5,202,000
TOTAL PROJECT COSTS (4)				\$22,540,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

OTHER TOPICS

Emergency Response/ Substation

This study considered the potential need for improved response times for fire equipment and emergency medical services provided by the Town. These services are currently provided out of the Public Safety Building and are staffed on a 24-hour basis. Concerns have been raised about whether the services can achieve appropriate response times for remote portions of Town. A primary concern has been the ability to reach the most northerly areas of Wilmington. These areas have limited access routes from the southerly portions of Town due to the intervening interstate highway and commuter rail alignments.

The Harriman team examined several years of accumulated data on emergency calls and response time that has been compiled by the Town's first responders. Apparent response times to emergency calls were mapped to consider whether a pattern of long response times could be established. This evaluation considered benchmark response time goals and practices from several sources. These benchmarks ranged from 8 minutes to 15 minutes.

Evaluation of the existing data revealed that it has not been assembled and correlated in a manner that would allow an accurate assessment of the probable response times. As formatted, the data did not indicate a concentration of long response times and indicated that long response times represented a small proportion of incidents.

In order to establish a data base of information about actual response times, the Town will need to review the methodologies available and update its information and reporting methods. This evaluation can be used to determine the extent of problems that may exist and can take into account circumstances such as emergency responses provided by neighboring towns, more accurate information about the nature of the call, and other factors.

However, based on the layout of the Town and concentration of uses in the northern areas of Wilmington, it is likely that a threshold will be reached in the future where additional measures will be needed to maintain acceptable response times for fire and emergency medical apparatus, such as a substation. The Town can also consider the potential for increased community cooperation or joint facilities with neighboring communities to enhance available services.

Conditions for access to remote portions of Town, including its northern areas, are likely to worsen in conjunction with growth in the community and increase traffic. There are also significant tracks of land that could be developed, including the potential for "Chapter 40B" housing that could not be limited by zoning.

The Town should establish a policy and regulations for provision of offsetting public benefits for new developments that trigger significant impacts on public emergency services or other municipal services. Offsetting benefits could include contributions to the cost of providing equipment, crews, or land areas for an additional substation if it is shown to be necessary.

Senior Housing

Provision of additional senior housing in Wilmington is an important community interest considered in the context of this Facility Master Plan. Town property could be used as a site for senior housing if it is constructed and managed by private entities. To facilitate such housing, the Town would need to offer land for lease or sale through a competitive Request for Proposals process.

The potential for senior housing was considered for all of the candidate sites for municipal facilities. This process considered whether such housing could be co-located with municipal facilities. This process also allowed the consideration of trade-offs for possible locations of senior housing relative to municipal facilities.

The studies concluded that three sites could reasonably accommodate senior housing, among those sites evaluated within the scope of this Master Plan. Moderately scaled senior housing or assisted living facilities range in size from about 60 to 80 units within the Greater Boston region. The sites that could accommodate buildings, parking and site improvements include St. Dorothy's, the Swain School site, and the existing Town Hall site.

The evaluation of alternative siting scenarios for the Municipal Facilities concluded that the Swain School site and existing Town Hall site were best suited for the future Town Hall/School Administration complex and the future Senior Center. The capacity of the St. Dorothy's site was tested for the absorption of a senior housing development. The studies concluded that there is ample space for a facility of at least average size on that site.

As a result, the Town could consider offering that site for senior housing development without concern that it would preclude its use for a municipal facility in the foreseeable future.

The Town could issue a Request for Proposal with programmatic, design or other requirements. Approval of a disposition or sale would require a positive vote of Town Meeting.



IMPLEMENTATION

IMPLEMENTATION

SUMMARY OF ESTIMATED CAPITAL IMPROVEMENT COSTS

Municipal Facility Name	Estimated Project Cost
Art Council	\$290,000
Bath House	\$104,000
Book Store Next Door	\$19,000
Buzzell Senior Center	\$6,707,000
Cemetery Garage	\$88,000
Cemetery Office	\$0
Department of Public Works Highway Garage	\$7,170,000
Department of Public Works Water Division Garage	\$46,000
Department of Public Works Water Division Office	\$0
Department of Veteran Services	\$20,000
Fourth of July Headquarters	\$64,000
Harnden Tavern Carriage House	\$110,000
Harnden Tavern Minuteman Headquarters	\$0
Harnden Tavern	\$747,000
Memorial Library	\$7,841,000
Moth House/Morse Barn	\$103,000
Public Buildings Offices	\$644,000
Public Safety Buildings	\$2,048,000
Scalekeeper' s Office	\$0
School Administration	\$0
Former South School (Food Pantry)	\$297,000
Town Hall	\$19,316,000
Subtotal Municipal Facilities Costs	\$45,614,000

Note: Estimates are 2017 costs. Costs based on prevailing wage rates.

Educational Facility Name	Estimated 2017 Costs
North Intermediate	\$22,870,000
West Intermediate	\$27,585,000
Shawsheen	\$24,964,000
Woburn	\$22,540,000
Subtotal Educational Facilities Costs	\$97,959,000

*Additional costs for temporary facilities or other phasing requirements will vary according to the sequence of projects and have not been included in these estimates.

Estimated Total Facilities Costs	\$143,573,000
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FINANCIAL STRATEGY

Since 2001 Wilmington taxpayers made a significant investment in a new Middle School, Public Safety Building, and most recently in a state of the art High School which opened in February of 2015. However, the Town's remaining municipal building stock ranges in age from the former West School constructed in 1790 which serves as the office for Veterans' Services to the Shawsheen Elementary School, constructed in 1970, which provides education space for students in first through third grades. Significant efforts are ongoing to maintain functionality in these buildings, however the fact that the "newest" of the remaining Town facilities are approaching 50 years, raises a host of issues including space constraints, patron and occupant accessibility, in addition to cost effective heating and climate control.

The Town also maintains a variety of historic buildings including the former Town Hall "Arts Council", the Harnden Tavern and Carriage House and the South School which are used regularly although not to the same degree as spaces like the Town Hall or Roman House. Nevertheless, these facilities all require varying levels of attention and investment.

With the changing requirements and responsibilities for schools and general government, building spaces that once accommodated those functions are now challenged to meet the demands of the 21st century.

This *Facility Master Plan* identifies many of the deficiencies in the physical plant as well as the needs for functional improvements to spaces to accommodate the services expected by residents. This plan seeks to address many of the identified deficiencies over a 20-year time horizon. Projects from the *Facility Master Plan* will be incorporated into the Town's 5-year Capital Improvement Plan (CIP). The *Facility Master Plan* will be periodically updated and modified to reflect current conditions.

The following narrative is a summary of the proposed strategy for balancing the financial demands resulting from aging facilities with the ability of residents to pay for the investments required to repair, renovate or replace Town buildings. Financing these efforts will be done through a combination of drawing from annual operating revenue, tapping into one-time reserves notably the Capital Stabilization Fund and available funds "free cash," grants and borrowing.

The *Facility Master Plan* has an estimated \$143,570,069 in costs associated with twenty-six (26) facilities throughout Wilmington. Investment in these buildings can be distributed over the next sixteen years to improve functionality and begin to address the long-term capital improvements liability.

It is noteworthy that, for the first three years of the *Facility Master Plan*, no significant capital projects will be undertaken. Recognizing that residents continue to pay for the most expensive capital improvement project in the Town's history (the high school) this three-year period will provide additional time for the impact to taxpayers to diminish slightly as principle and interest payments continue to decline. The next three years also provides additional time to add to the Capital Stabilization Fund and possibly free cash to "save up" for capital improvements, expected to start in FY2022. Continuing to build up these reserves will enable the Town to draw from those reserves to offset a portion of future borrowing costs.

Costs for capital improvements that are identified in this plan will be addressed in one of two ways: (1) capital outlay through annual operating budget; (2) capital expenditures through long term borrowing.

Each year as part of the annual operating budget an amount is recommended for expenditure on capital outlay projects. These expenditures are supported by revenue generated within the limits of Proposition 2 1/2. Based upon current estimates roughly \$3,544,000 from the total *Facility Master Plan* estimate of

costs can be addressed through capital outlay over the course of the next twenty (20) years. The projects will be incorporated into annual funding along with other capital expenditures that already exist in the Town's CIP.

The second and far more significant classification of expenditures will require long term borrowing. Borrowing is expected to comprise about \$140,026,069 of the expenditures identified in this plan. Long Term Bonds will be issued for projects including the Town/School Administration Building and new Senior Center and for the expansion of the four (4) elementary schools, for example. The debt tables used to estimate these borrowing costs use a term of twenty-five years. The Town could borrow for any period up to thirty years for these projects in accordance with Massachusetts General Law (MGL) Chapter 44. The Town has generally used shorter terms when possible in funding prior Capital Projects. A final determination will be made regarding the term of the loans when the projects have been approved. Interest rates are based on a conservative estimate using current rates and increasing them by a quarter of a percent.

Ideally, as long-term debt from previously approved capital projects is retired, funds otherwise being expended on principal and interest from those projects would become available to spend on debt for new projects. However, Wilmington's debt ratio, as a percentage of annual operating budget, is quite low. Annual debt payments only comprise about 3% of the Town's annual operating budget. The vast majority of that debt is associated with the high school which is outside of the limits of Proposition 2 ½. As the High School debt is retired, the reduction in annual principle and interest payments cannot be replaced with new debt without the approval of another debt exclusion. As a result, future borrowing will result in increasing annual debt payments as part of the annual operating budget. To the greatest extent possible the Town will strive to keep borrowing costs within the levy limit.

As each of these large-scale projects are brought forward for consideration, options will be evaluated to offset the borrowing costs. The Town has established a Capital Stabilization Fund for the purpose of funding capital projects and large capital outlay items. The current balance in the account is \$6,000,000. The Town expects to continue to fund this account for the foreseeable future. Using money from the Capital Stabilization Fund to apply towards specific capital improvement projects will reduce the amount of borrowing required.

Available funds/free cash is another reserve of discretionary money that can be earmarked to specific capital projects for the purpose of reducing the scale of borrowing required. As with Capital Stabilization Funds these funds can also be applied towards future debt payments reducing the debt payment amounts that must be appropriated as part of the operating budget.

Another means to reduce borrowing costs for school related projects is through reimbursement grants from the Massachusetts School Building Authority (MSBA). The School administration has determined that consolidating schools and reducing the number of transitions between buildings as student progress through elementary school is a preferred strategy. Pursuing this strategy will require renovations and expansions to the North and West Intermediate Schools, the Shawsheen School and the Woburn Street School. Maintaining education equity is important so that students living in all areas of the community progress through the schools with the same number of transitions and through schools of comparable quality. This plan calls for seeking authorization to spend approximately \$97.9 million in today's dollars to expand and upgrade these four (4) school buildings. The Town would seek a single debt authorization for these school projects.

Grant funding is made available based upon formulas that account for factors like need and the type of project proposed. For the recently constructed high school the MSBA funded approximately 50%. The Town anticipates a 50% reimbursement of cost provided in this document. There will likely be variations in the percentage. As project specifics and timing become better known a more precise amount will be determined. The MSBA may also change the way the funding formulas are calculated. These variations could be significant. The Town expects to pursue MSBA grants for these school projects.

The final means available for funding capital projects that require borrowing would be through a “Debt Exclusion.” Such an effort will require Town meeting approval in addition to approval of a ballot question. The principle and interest payments associated with this type of borrowing would be from property taxes outside of the limits set by Proposition 2 1/2. Given the fact that this approach places an additional burden on taxpayers, this mechanism for financing capital projects will be used sparingly.

Items which are determined to be addressed as Capital Outlay will be included in budgets to be determined on a yearly basis in conjunction with other capital outlay items in the CIP and as part the annual budget. Capital Projects would be funded at least in part by the issuance of debt. These typically consist of larger projects which include construction of new or upgraded facilities. These long-term debt issues will be repaid over a term to be finalized at the time of issuance. For the purpose of this review, the term employed was twenty-five years. A year by year determination will establish the extent of any funding options that are available.

Establishment of a Town and School Administration Building and a new Senior Center are the first major projects proposed for 2022. This will create both operational and building efficiencies. There will be significant opportunities for shared space with a single administrative building. While the estimated cost of these projects is approximately \$25.4 million in today’s dollars, these projects are proposed to be funded through a combination of funds from the Capital Stabilization Account and available funds “free cash” and borrowing. The exact combination of financing will be determined when these projects are closer to consideration at Annual Town Meeting.

School funding is for four elementary school additions which would include renovations. This funding is proposed as a single debt authorization and it is anticipated that a debt exclusion would be included with MSBA funding. The funding for all school additions would be authorized simultaneously, but construction and related borrowing would span several years.

Financing Scenarios

The following two charts provide a projected scenario for the sequence of projects and associated financing for the facility improvements contained in this *Facility Master Plan*. The Town has considered the prospective timing of projects that may best correlated with future needs and management of its annual budgets and borrowing. The results are reflected in the following charts and tables.

- Table 1: Project Sequencing and Cash Flow Model - This table indicates the potential sequencing of projects and allocates the cash flow that would be associated with listed projects. It indicates whether the sources would be from the Town's capital operating budgets or through capital borrowing. Some projects would likely be funded through annual operating and maintenance budgets, as noted.
- Table 2: Debt Schedule, All Existing Projects Associated with Tax Levy – This is the projected debt schedule for all existing projects.
- Table 3: Debt Schedule, Projects within the Facility Master Plan – This is the proposed allocation of debt based on the borrowing for projects listed in this document.
- Table 4: Combined Debt Schedule – This table assembles the existing and proposed debt allocation.
- Chart 5: Existing, Proposed and Combined Debt by Year – This chart graphically displays the components from Table 4.

1. PROJECT SEQUENCING AND CASH FLOW MODEL

Facility Name	Estimated Costs	Fiscal Year															
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Art Council	\$290,000																
Bath House	\$104,000																
Book Store Next Door	\$19,000																
Buzzell Senior Center	\$6,707,000																
Cemetery Garage	\$88,000																
Cemetery Office **																	
Department of Public Works Garage	\$7,170,000																
DPW Water Division Garage	\$46,000																
DPW Water Division Office **																	
Department of Veteran Services	\$20,000																
Fourth of July Headquarters	\$64,000																
Harnden Carriage House	\$110,000																
Minuteman Headquarters **																	
Harnden Tavern	\$747,000																
Memorial Library	\$7,841,000																
Moth House/Morse Barn	\$103,000																
Public Buildings Offices	\$644,000																
Public Safety Buildings	\$2,048,000																
Scalekeeper' s Office **																	
School Administration (included with Town Hall)																	
Former South School (Food Pantry)	\$297,000																
Town Hall	\$19,316,000																
Subtotal Municipal Facilities Costs	\$45,614,000																

Capital Borrowing

Capital Operating

Facility Name	Estimated Costs	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
North Intermediate	\$22,870,000																
West Intermediate	\$27,585,000																
Shawsheen	\$24,964,000																
Woburn	\$22,540,000																
Subtotal Educational Facilities Costs	\$97,959,000																

Total Annual Operating Expenditures																	
Total Annual Borrowing Expenditures																	
Estimated Total Facilities Costs	\$143,573,000																

* The cost estimates included in this chart are in 2017 dollars

** Costs associated with improvements and correction of deficiencies are expected to be budgeted through ongoing annual building and repair budgets

TABLE 2. DEBT SCHEDULE, ALL EXISTING PROJECTS ASSOCIATED WITH TAX LEVY

DEBT SCHEDULE ALL EXISTING PROJECTS ASSOCIATED WITH TAX LEVY							TOTAL EXISTING DEBT
SEWER INTERCEPTOR REHAB (\$1,250,000)	REMODELING SHAWSHEEN (\$715,000)	WILMINGTON HIGH SCHOOL (\$44,190,00)	EQUIPMENT- LADDER TRUCK (\$975,000)	YENTILE FARMS (\$4,800,000)	FIRE PUMPER (\$650,000)		
TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	
2018	94,302.50	79,975.00	3,205,400.00	108,537.50	0.00	0.00	3,488,215.00
2019	91,540.00	77,000.00	3,111,650.00	104,500.00	512,000.00	91,000.00	3,987,690.00
2020	88,940.00	74,200.00	3,018,150.00	100,700.00	499,200.00	88,400.00	3,869,590.00
2021	86,340.00	71,400.00	2,929,800.00	96,900.00	486,400.00	85,800.00	3,756,640.00
2022	79,200.00	0.00	2,859,300.00	0.00	473,600.00	83,200.00	3,495,300.00
2023	77,460.00	0.00	2,771,050.00	0.00	460,800.00	80,600.00	3,389,910.00
2024	75,660.00	0.00	2,682,800.00	0.00	448,000.00	78,000.00	3,284,460.00
2025	73,822.50	0.00	2,594,550.00	0.00	435,200.00	75,400.00	3,178,972.50
2026	71,910.00	0.00	2,541,600.00	0.00	422,400.00	72,800.00	3,108,710.00
2027	69,930.00	0.00	2,488,650.00	0.00	409,600.00	70,200.00	3,038,380.00
2028	67,875.00	0.00	2,435,700.00	0.00	396,800.00	67,600.00	2,967,975.00
2029	65,737.50	0.00	2,365,100.00	0.00	384,000.00	0.00	2,814,837.50
2030	63,525.00	0.00	2,303,325.00	0.00	371,200.00	0.00	2,738,050.00
2031	61,200.00	0.00	2,241,550.00	0.00	358,400.00	0.00	2,661,150.00
2032	0.00	0.00	2,179,775.00	0.00	345,600.00	0.00	2,525,375.00
2033	0.00	0.00	2,118,000.00	0.00	332,800.00	0.00	2,450,800.00
2034	0.00	0.00	2,047,400.00	0.00	0.00	0.00	2,047,400.00
2035	0.00	0.00	1,976,800.00	0.00	0.00	0.00	1,976,800.00
2036	0.00	0.00	1,906,200.00	0.00	0.00	0.00	1,906,200.00
2037	0.00	0.00	1,835,600.00	0.00	0.00	0.00	1,835,600.00
2038	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2056	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1,067,442.50	302,575.00	49,612,400.00	410,637.50	6,336,000.00	793,000.00	58,522,055.00

TABLE 3. DEBT SCHEDULE, PROJECTS WITHIN THE FACILITY MASTER PLAN

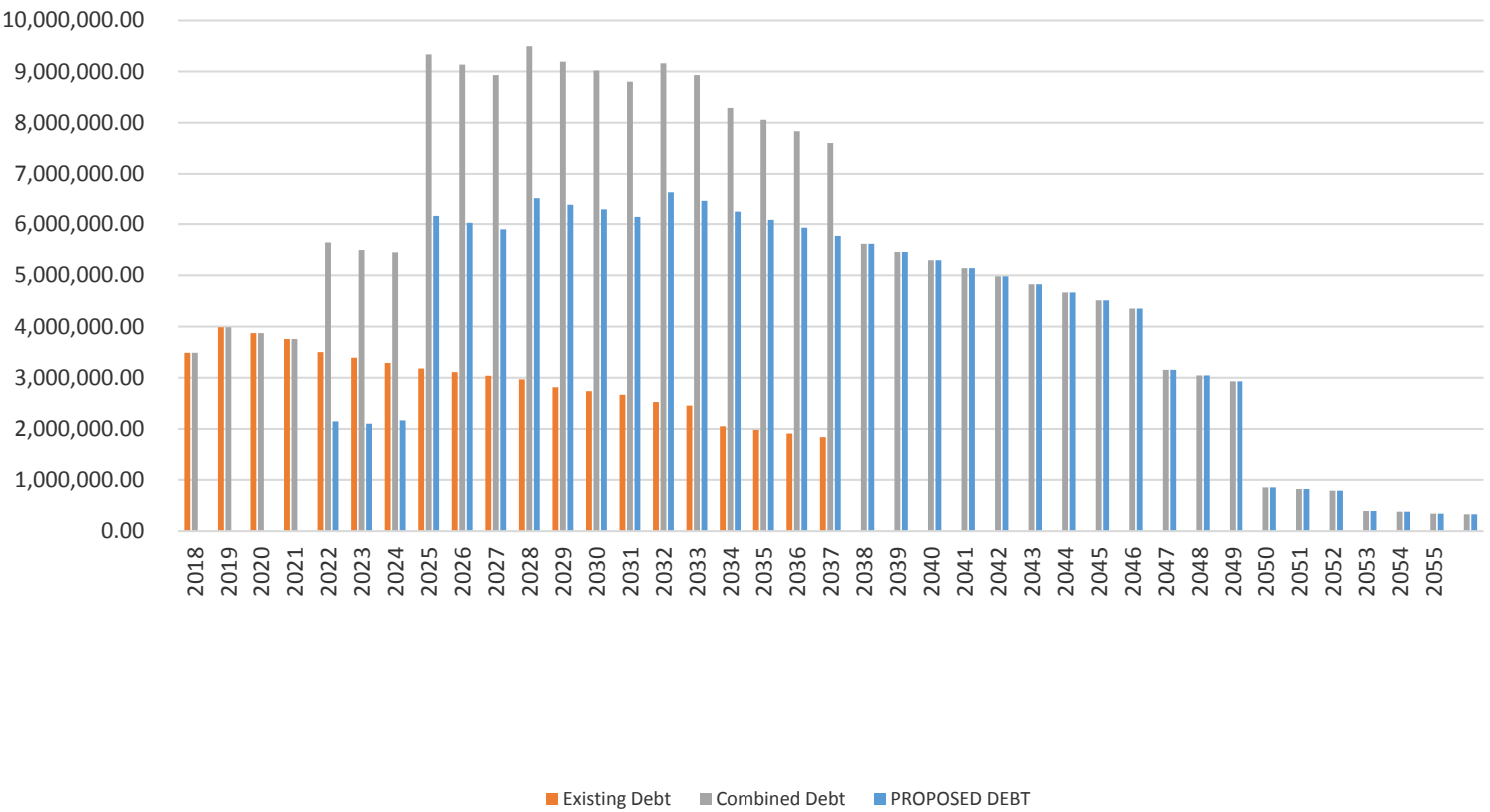
DEBT SCHEDULE							TOTAL PROPOSED DEBT
ALL PROPOSED PROJECTS TOTAL							
PRINCIPAL & INTEREST							
TOWN HALL, SCHOOL ADMIN BUILDING & SENIOR CENTER \$26,023,000	SCHOOL IMPROVEMENTS 50% \$48,979,500	HARDEN TAVERN \$747,000	DPW GARAGE & PUBLIC SAFETY BUILDING \$9,218,000	PUBLIC BUILDINGS \$644,000	LIBRARY IMPROVEMENTS \$7,841,000		
TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	
2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	2,146,897.50	0.00	0.00	0.00	0.00	0.00	2,146,897.50
2023	2,102,658.40	0.00	0.00	0.00	0.00	0.00	2,102,658.40
2024	2,058,419.30	0.00	106,447.50	0.00	0.00	0.00	2,164,866.80
2025	2,014,180.20	4,040,808.75	103,272.75	0.00	0.00	0.00	6,158,261.70
2026	1,969,941.10	3,957,543.60	100,098.00	0.00	0.00	0.00	6,027,582.70
2027	1,925,702.00	3,874,278.45	96,923.25	0.00	0.00	0.00	5,896,903.70
2028	1,881,462.90	3,791,013.30	93,748.50	760,485.00	0.00	0.00	6,526,709.70
2029	1,837,223.80	3,707,748.15	90,573.75	744,814.40	0.00	0.00	6,380,360.10
2030	1,792,984.70	3,624,483.00	87,399.00	729,143.80	53,130.00	0.00	6,287,140.50
2031	1,748,745.60	3,541,217.85	84,224.25	713,473.20	52,035.20	0.00	6,139,696.10
2032	1,704,506.50	3,457,952.70	81,049.50	697,802.60	50,940.40	646,882.50	6,639,134.20
2033	1,660,267.40	3,374,687.55	77,874.75	682,132.00	49,845.60	633,552.80	6,478,360.10
2034	1,616,028.30	3,291,422.40	0.00	666,461.40	48,750.80	620,223.10	6,242,886.00
2035	1,571,789.20	3,208,157.25	0.00	650,790.80	47,656.00	606,893.40	6,085,286.65
2036	1,527,550.10	3,124,892.10	0.00	635,120.20	46,561.20	593,563.70	5,927,687.30
2037	1,483,311.00	3,041,626.95	0.00	619,449.60	45,466.40	580,234.00	5,770,087.95
2038	1,439,071.90	2,958,361.80	0.00	603,779.00	44,371.60	566,904.30	5,612,488.60
2039	1,394,832.80	2,875,096.65	0.00	588,108.40	43,276.80	553,574.60	5,454,889.25
2040	1,350,593.70	2,791,831.50	0.00	572,437.80	42,182.00	540,244.90	5,297,289.90
2041	1,306,354.60	2,708,566.35	0.00	556,767.20	41,087.20	526,915.20	5,139,690.55
2042	1,262,115.50	2,625,301.20	0.00	541,096.60	39,992.40	513,585.50	4,982,091.20
2043	1,217,876.40	2,542,036.05	0.00	525,426.00	38,897.60	500,255.80	4,824,491.85
2044	1,173,637.30	2,458,770.90	0.00	509,755.40	37,802.80	486,926.10	4,666,892.50
2045	1,129,398.20	2,375,505.75	0.00	494,084.80	36,708.00	473,596.40	4,509,293.15
2046	1,085,159.10	2,292,240.60	0.00	478,414.20	35,613.20	460,266.70	4,351,693.80
2047	0.00	2,208,975.45	0.00	462,743.60	34,518.40	446,937.00	3,153,174.45
2048	0.00	2,125,710.30	0.00	447,073.00	33,423.60	433,607.30	3,039,814.20
2049	0.00	2,042,445.15	0.00	431,402.40	32,328.80	420,277.60	2,926,453.95
2050	0.00	0.00	0.00	415,731.80	31,234.00	406,947.90	853,913.70
2051	0.00	0.00	0.00	400,061.20	30,139.20	393,618.20	823,818.60
2052	0.00	0.00	0.00	384,390.60	29,044.40	380,288.50	793,723.50
2053	0.00	0.00	0.00	0.00	27,949.60	366,958.80	394,908.40
2054	0.00	0.00	0.00	0.00	26,854.80	353,629.10	380,483.90
2055	0.00	0.00	0.00	0.00	0.00	340,299.40	340,299.40
2056	0.00	0.00	0.00	0.00	0.00	326,969.70	326,969.70
	40,400,707.50	76,040,673.75	921,611.25	14,310,945.00	999,810.00	12,173,152.50	144,846,900.00

TABLE 4. COMBINED DEBT SCHEDULE

DEBT SCHEDULE TOTAL PROPOSED, EXISTING & COMBINED DEBT			
	TOTAL PROPOSED DEBT	TOTAL EXISTING DEBT	TOTAL DEBT
2018	0.00	3,488,215.00	3,488,215.00
2019	0.00	3,987,690.00	3,987,690.00
2020	0.00	3,869,590.00	3,869,590.00
2021	0.00	3,756,640.00	3,756,640.00
2022	2,146,897.50	3,495,300.00	5,642,197.50
2023	2,102,658.40	3,389,910.00	5,492,568.40
2024	2,164,866.80	3,284,460.00	5,449,326.80
2025	6,158,261.70	3,178,972.50	9,337,234.20
2026	6,027,582.70	3,108,710.00	9,136,292.70
2027	5,896,903.70	3,038,380.00	8,935,283.70
2028	6,526,709.70	2,967,975.00	9,494,684.70
2029	6,380,360.10	2,814,837.50	9,195,197.60
2030	6,287,140.50	2,738,050.00	9,025,190.50
2031	6,139,696.10	2,661,150.00	8,800,846.10
2032	6,639,134.20	2,525,375.00	9,164,509.20
2033	6,478,360.10	2,450,800.00	8,929,160.10
2034	6,242,886.00	2,047,400.00	8,290,286.00
2035	6,085,286.65	1,976,800.00	8,062,086.65
2036	5,927,687.30	1,906,200.00	7,833,887.30
2037	5,770,087.95	1,835,600.00	7,605,687.95
2038	5,612,488.60	0.00	5,612,488.60
2039	5,454,889.25	0.00	5,454,889.25
2040	5,297,289.90	0.00	5,297,289.90
2041	5,139,690.55	0.00	5,139,690.55
2042	4,982,091.20	0.00	4,982,091.20
2043	4,824,491.85	0.00	4,824,491.85
2044	4,666,892.50	0.00	4,666,892.50
2045	4,509,293.15	0.00	4,509,293.15
2046	4,351,693.80	0.00	4,351,693.80
2047	3,153,174.45	0.00	3,153,174.45
2048	3,039,814.20	0.00	3,039,814.20
2049	2,926,453.95	0.00	2,926,453.95
2050	853,913.70	0.00	853,913.70
2051	823,818.60	0.00	823,818.60
2052	793,723.50	0.00	793,723.50
2053	394,908.40	0.00	394,908.40
2054	380,483.90	0.00	380,483.90
2055	340,299.40	0.00	340,299.40
2056	326,969.70	0.00	326,969.70
	144,846,900.00	58,522,055.00	203,368,955.00

CHART 5. EXISTING PROPOSED AND COMBINED DEBT BY YEAR

Proposed, Existing & Combined Debt
Payments By Fiscal Year



PHASING

Phasing for the Senior Center, New Town Hall and School Administration Facilities

The Town has several options for phasing the design and construction of the future Senior Center and the combined Town Hall and School Administration Buildings. Ideally, the detailed site planning and preliminary architectural design should occur simultaneously, so that the Town can consider the most beneficial approach to final locations and phasing.

The Town could construct both projects simultaneously, in which case the new Senior Center would need to be sited so that the Town Hall/School Administration Building could continue to operate at its current site. Similarly, the New Town Hall/School Administration Building would need to be sited so that the Buzzell Senior Center could continue to operate until construction of the new facility is completed. Once the new facilities would be available, the former buildings would be demolished, and their sites made available for open space or parking. The Town could also advance and complete either of the projects first, which would result in additional siting flexibility because the former buildings could be demolished, and the sites cleared for new construction.

School Phasing

Wilmington Public Schools have approximately 1,633 student's grades PreK – 5. The six existing schools have about 80 regular classrooms in use to accommodate these students. These numbers were used to assess consolidation options. When schools close due to consolidation, those students and regular classrooms must be relocated.

This report describes the overall recommended approach for consolidating and reconfiguring Wilmington Public Schools grades PreK – 5. This will require coordinated, phased improvements to allow continuous operation of the schools. The strategy for phasing the construction is based on these principles:

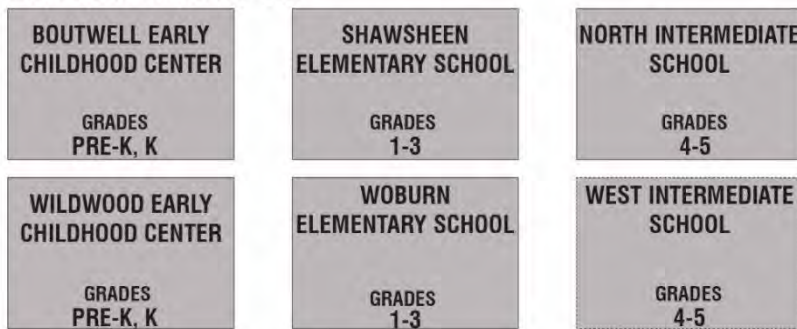
- Geographic equity within the Town – The phasing will renovate the schools in pairs by grade level to maintain equity in the completed facilities on each side of Town.
- Limited impacts – The phasing should minimize the impact on learning to students and teachers during construction and insure their safety.
- Continued operations – The Wilmington Public Schools must maintain operations at the schools during construction.
- Minimizing the cost of phasing – This will be accomplished by keeping the phasing plan simple and the length of construction as short as is reasonable to complete the construction properly.
- Financing – Dividing the overall construction into phases will help make the bonding schedule more manageable for the Wilmington Public Schools.

The phasing concept is expressed in the following diagram which illustrates a preferable scenario.

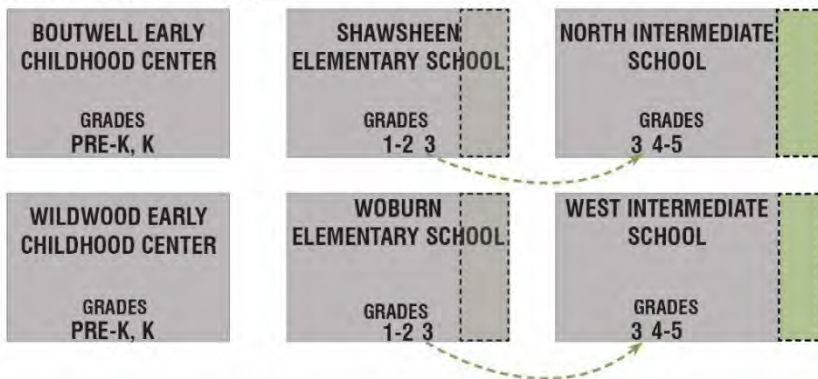
The first expansion would be provided for the intermediate schools. With additional capacity, they can absorb the third-grade students from the elementary schools. Renovations and expansions in the

elementary school will benefit from the smaller school population. When completed, the elementary schools will absorb the students from the early learning facilities, which can then be closed.

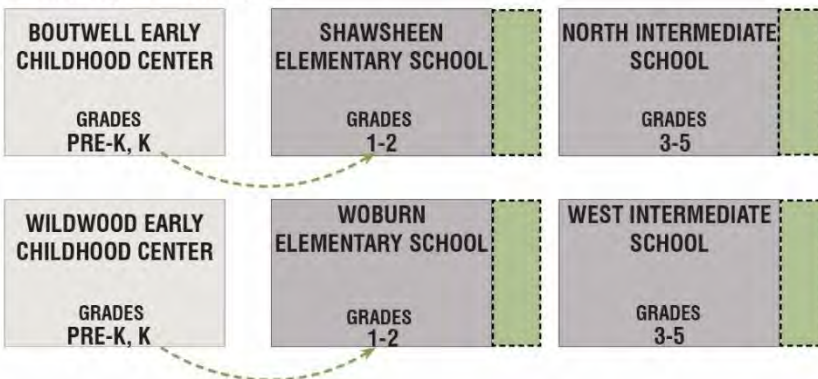
EXISTING CONDITIONS



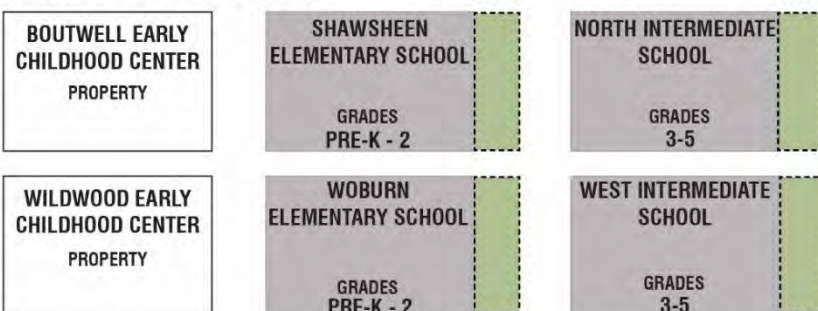
SCENARIO 1 - PHASE 1



SCENARIO 1 - PHASE 2



COMPLETED CONDITION



The following diagrams illustrate how additional space can be added to the existing buildings, expanding their capacity while limiting disturbance of the ongoing educational functions.



WOBURN



SHAWSHEEN



WEST INTERMEDIATE



NORTH INTERMEDIATE

PUBLIC SAFETY/EMERGENCY RESPONSE

As noted previously, the format and extent of existing data is insufficient to draw clear conclusions about the current effective response times for fire apparatus and emergency medical response teams. The need for additional facilities, apparatus, staff, or other measures is contingent upon establishing current and projected performance levels. It is also contingent upon the Town's policies and goals for this aspect of the community services.

It is likely that a threshold will be reached in the future where additional measures will be needed to maintain acceptable response times. Conditions for access to some portions of Town, including its northern areas, are likely to worsen in conjunction with growth in the community and increase traffic. In particular, there is a potential for substantial new development on properties in the northern portions of Wilmington.

Recommendations include the following:

- Emergency Response Planning Team – A committee should be assembled with resources provided to conduct a study that updates and evaluates the response time data, prepares projections of future conditions, and considers Town policies. The outcome of this effort should be recommendations for Town policies, with consideration of alternative methods to provide acceptable response targets, and methods for monitoring these conditions and triggering Town actions.
- Land Use and Development Regulations and Policies – The Town should establish zoning conditions and other policies to help identify and require mitigation of negative impacts on emergency response times in the event of large scale development in areas of Wilmington that would exacerbate current conditions.

SENIOR HOUSING AND MUNICIPAL LAND

The Town should finalize its strategy for provision of senior housing, with supporting planning and due diligence efforts of Town staff in coordination with the appropriate boards and committees. Technical assistance can be provided through non-profit organizations such as the Massachusetts Housing Partnership.

PROPERTY USE AND POTENTIAL DISPOSITIONS

The Town should anticipate the abandonment or relocation of existing uses and prepare market and redevelopment use studies to establish the reuse potential to facilitate its decisions.



FACILITY MASTER PLAN REPORT

for the TOWN OF WILMINGTON

APPENDICES



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Appendix D: Facility Conditions Evaluations..... APP:29



APPENDIX A FACILITY ALTERNATIVES

APPENDIX A : FACILITIES ALTERNATIVES

MUNICIPAL FACILITIES ALTERNATIVES

	Swain School Site	Buzzell Senior Center Site	Town Hall Site	St. Dorothy Parcel	Library Site	Public Buildings Site	Public Works Sites	All other Town Buildings
M1 Baseline Scenario <i>Uses remain in their existing locations, but the facilities are upgraded to correct deficiencies and accommodate future needs</i>	No construction on this site	Extend useful life of existing building. Upgrade systems and expand facilities if required to meet future needs.	Extend useful life of existing building. Upgrade systems and expand facilities if required to meet future needs absorb School Administration.	No construction on this site	Extend useful life of existing building. Upgrade systems and expand facilities if required to meet future needs.	Extend useful life of existing building. Upgrade systems and expand facilities if required to meet future needs.	Extend useful life of existing building. Upgrade systems and expand facilities if required to meet future needs.	Extend useful life of existing building. Upgrade systems and expand facilities if required to meet future needs.
M2 Town Hall Common <i>The Town Hall/School Administration moves to the Town Common, the Senior Center moves to the Town Hall site, and other changes are made</i>	Build combined Town Hall and School Administration Building	Allocate site and building to surplus disposition or land banking	Build a new Senior Center	Make available for senior housing development	Same as Baseline Scenario	Close and repurpose for possible housing or mixed use development	Renovate and expand to include Public Buildings Offices and Garage	Same as Baseline Scenario
M3 Community Common <i>The new Senior Center is moved to the Town Common, the Town Hall/School Administration move to the St. Dorothy site, and other changes are made</i>	Build a new Senior Center	Allocate site and building to surplus disposition or land banking	Make available for senior housing development	Build combined Town Hall and School Administration Building	Same as Baseline Scenario	Same as Baseline Scenario	Same as Baseline Scenario	Same as Baseline Scenario
M4 Library Common <i>The Library is moved to the Town Common, the Senior Center is moved to the Library site, and other changes are made</i>	Build a new Library	Allocate site and building to surplus disposition or land banking	Same as Baseline Scenario	Make available for senior housing development	Relocate Senior Center into a new or renovated building on this site	Same as Baseline Scenario	Same as Baseline Scenario	Same as Baseline Scenario

EDUCATIONAL FACILITIES ALTERNATIVES

Description of Alternative	Boutwell Childhood Center (current: grades Pre-K, K)	Wildwood Childhood Center (current: grades Pre-K, K)	Shawsheen Elementary (current: grades 1-3)	Woburn Elementary (current: grades 1-3)	North Intermediate (current: grades 4-5)	West Intermediate (current: grades 4-5)
S1 Existing Schools, Targeted Improvements: Extend the life of the existing facility, correct deferred maintenance items, and improve the quality of education spaces without building additions.	Improvements are limited to finishes and deferred maintenance. Code and ADA upgrades limited to work areas. Work would be limited to incremental changes in the existing space allocation.	Improvements are limited to finishes and deferred maintenance. Code and ADA upgrades limited to work areas. Work would be limited to incremental changes in the existing space allocation.	Improvements are limited to finishes and deferred maintenance. Code and ADA upgrades limited to work areas. Work would be limited to incremental changes in the existing space allocation.	Improvements are limited to finishes and deferred maintenance. Code and ADA upgrades limited to work areas. Work would be limited to incremental changes in the existing space allocation.	Improvements are limited to finishes and deferred maintenance. Code and ADA upgrades limited to work areas. Work would be limited to incremental changes in the existing space allocation.	Improvements are limited to finishes and deferred maintenance. Code and ADA upgrades limited to work areas. Work would be limited to incremental changes in the existing space allocation.
S2 Existing Schools, Improved to Meet Current Space Standards: Improve the existing buildings including major renovation and addition as required to meet current education standards that would apply to new facilities or major renovations. Building-wide ADA and code upgrades are anticipated.	Renovation and major addition of most core and support spaces	Renovation and addition of most core and support spaces and building infrastructure. Reuse space currently occupied by the school district for education program	Renovation and improvements to the facility	Renovation and minor addition to the facility	Renovation and improvements to the facility	Renovation of the facility. Reuse space currently occupied by the school district for education program
S3 Four Elementary Schools: Create 4 schools of relatively equal size, all housing Pre-K through grade 5. The extent of modifications is determinant on the existing condition of each remaining school.	Close facility	Close facility and build a new Pre-K - 5 elementary school on the site	Renovation and small addition to convert into a Pre-K - 5 elementary school	Close facility	Renovation and major addition to convert into a Pre-K - 5 elementary school	Renovation and major addition to convert into a Pre-K - 5 elementary school
S4 One Pre-K/Kindergarten School, Three Elementary Schools: Modify an existing school to create a single school for grades Pre-K – K. Create 3 schools of relatively equal size, all housing grade 1 through grade 5. The extent of modifications is determined on the existing condition of each remaining school.	Close facility	Close facility and build a new 1 - 5 elementary school on the site	Close facility	Renovate to convert to a Pre-K- K Early Childhood Education Center	Renovation and addition to convert to a 1 - 5 elementary school	Renovation and addition to convert to a 1 - 5 elementary school
S5 One Pre-K School, Three K-5 Elementary Schools: Modify an existing school to create a single school for Pre-K. Create 3 schools of relatively equal size, all housing grades K through grade 5. The extent of modifications is determinant on the existing condition of each remaining school.	Close facility	Close facility and build a new K- 5 school on the site	Close facility	Renovate to convert to a Pre-K Education Center	Major renovation and addition to convert into a K-5 elementary school	Major renovation and addition to convert into a K-5 elementary school
S6 Two Pre-K to Grade 2 Schools, Two Grade 3 to Grade 5 Schools: Through renovations and additions, consolidate to 4 schools. Two schools would provide Pre-K through Grade 2, and two schools would be for Grades 3 to 5.	Close facility	Close facility	Renovation and addition to create a Pre-K through Grade 2 School	Renovation and addition to create a Pre-K through Grade 2 School	Renovation and addition to convert into Grades 3-5 elementary school	Renovation and addition to convert into Grades 3-5 elementary school



APPENDIX B

ALTERNATIVE SCENARIO GRAPHICS

APPENDIX B : ALTERNATIVE SCENARIO GRAPHICS

INTRODUCTION

The following pages are a series of graphics that depict the municipal and educational facility alternatives. The visuals were made available on the Wilmington website and also were displayed for public commentary in the most visited facilities around town.

WHAT:

The Town of Wilmington is preparing a Facility Master Plan to establish a long term strategy for the allocation of its municipal uses among buildings and sites. This planning process will establish a sequence of short-term, mid-term and long-term recommendations that will guide the Town's decisions about the best approach to its capital investments and operations. The Facility Master Plan will focus on facilities that may require significant repairs, additions, replacement or re-organization to ensure that the facilities and the services that they support match the goals of the community cost-effectively. The preparation of the Facility Master Plan began in December of 2015 and is expected to be completed by this summer.

HOW:

The process includes evaluating the existing facilities and their effectiveness, taking into account both existing and potential future Town functions and space requirements. The process will include opportunities for public input. After examining alternative choices for allocating space and facilities, the process will establish a recommended path for effective use of Town funds in providing and operating buildings and grounds. The recommendations will then be advanced to the Board of Selectmen, the Town Administration and other participating boards and commissions for their consideration and action.

WHO:

The process is being directed by the Facility Master Plan Committee, composed of Town staff and representatives of various Town committees. They are being assisted by a professional team led by The Cecil Group/Harriman composed of facility planners, architects, engineers and cost estimators.

COMMENTS AND CONTACT:

Notices and information about the planning process and its recommendations will be posted on the Town website. For further information, please contact:

Valerie Gingrich
Director of Planning & Conservation
Town of Wilmington
121 Glen Road
Wilmington MA 01887
978-658-8238
vgingrich@wilmingtonma.gov

CONCEPTUAL SCENARIOS:

The following diagrams represent several potential scenarios for providing appropriate sites and building facilities for several of the key municipal and educational buildings and their properties. These scenarios are based on projections of future needs relative to existing facilities and their condition. The scenarios are diagrammatic representations of conceptual building ideas. These are not the final design layouts. Each scenario has different positive and negative implications ("pros" and "cons"). We hope that you will consider the relative merits of these scenarios and provide your input to the Town staff and the Facility Master Plan Committee responsible for recommending the strategy to provide efficient, cost effective, and user-friendly facilities over time. Please write your thoughts on the scenario boards in the PROS and CONS sections.

Wilmington Facilities Map



M1 BASELINE SCENARIO

BASELINE SCENARIO

- Town Hall would receive an addition to absorb the School Administration Department.
- The Senior Center would be expanded.
- The Library would be expanded.
- All other buildings would receive renovations and or upgrades at their existing locations.

PROS: Write your thoughts below.



CONS: Write your thoughts below.



LIBRARY SITE PLAN



SENIOR CENTER SITE PLAN



TOWN HALL SITE PLAN

M2 TOWN HALL COMMON SCENARIO

TOWN HALL COMMON SCENARIO

- A new Senior Center would be built on the Town Hall existing site.
- The Town Hall which includes the School Administration Department would either take over the Swain site or the Buzzell Senior Center site.
- Senior Housing would be created and placed on the Saint Dorothy parcel.
- All other buildings would receive renovations and or upgrades at their existing locations.

PROS: *Write your thoughts below.*



CONS: *Write your thoughts below.*



TOWN HALL AT SWAIN SITE PLAN A



TOWN HALL AT SWAIN SITE PLAN B



SENIOR HOUSING AT SAINT DOROTHY SITE PLAN



SENIOR CENTER AT TOWN HALL SITE PLAN

M3 COMMUNITY COMMON SCENARIO

COMMUNITY COMMON SCENARIO

- Senior Housing would be created and placed on the Town Hall site.
- The new Senior Center would either take over the Swain site or be replaced at its Existing site.
- The Town Hall which includes the School Administration Department would be placed on the Saint Dorothy parcel.
- All other buildings would receive renovations and or upgrades at their existing locations.

PROS: Write your thoughts below.



CONS: Write your thoughts below.



SENIOR CENTER AT SWAIN SITE PLAN A



SENIOR CENTER AT SWAIN SITE PLAN B



TOWN HALL AT SAINT DOROTHY SITE PLAN



SENIOR HOUSING AT TOWN HALL SITE PLAN

M4 LIBRARY COMMON SCENARIO

LIBRARY COMMON SCENARIO

- The new Library would either take over the Swain site would either take over the Buzzell Senior Center site.
- A new Senior Center would be placed on the Library site.
- Senior Housing would be created and placed on the Saint Dorothy parcel.
- All other buildings would receive renovations and or upgrades at their existing locations.

PROS: *Write your thoughts below.*



CONS: *Write your thoughts below.*



LIBRARY AT SWAN SITE PLAN A



SENIOR CENTER AT LIBRARY SITE PLAN



LIBRARY AT SWAN SITE PLAN B

S6 PREFERRED EDUCATION SCENARIO

ALTERNATIVE S6

Two Pre-K to Grade 2 Schools, Two Grade 3 - 5 Schools and closing Boutwell and Wildwood.

This alternative is considered preferred because it eliminates schools that need the most work, eliminates a transition, keeps geographic balance and invests in our existing infrastructure with additions and renovations to existing schools.

BASELINE SCENARIOS

S1 Existing schools targeted improvements

Extend the life of the existing facility, correct deferred maintenance items, and improve the quality of education spaces without building additions.

S2 Existing schools improved to meeting current space standards

Improve the existing buildings including major renovation and addition as required to meet current education standards that would be applicable to new facilities or major renovations. Building-wide ADA and code upgrades are anticipated.

CONSOLIDATION AND ADDITION SCENARIOS

S3 Four Elementary Schools

Create 4 schools of relatively equal size, all housing pre-kindergarten (Pre-K) through grade 5. The extent of modifications is determinant on the existing condition of each remaining school.

S4 One Pre-K Kindergarten School, Three Elementary Schools

Modify an existing school to create a single school for grades Pre-K - K. Create 3 schools of relatively equal size, all housing grade 1 through grade 5. The extent of modifications is determinant on the existing condition of each remaining school.

S5 One Pre-K School, Three K-5 Schools

Modify an existing school to create a single school for grades Pre-K. Create 3 schools of relatively equal size, all housing grades K through grade 5. The extent of modifications is determinant on the existing condition of each remaining school.

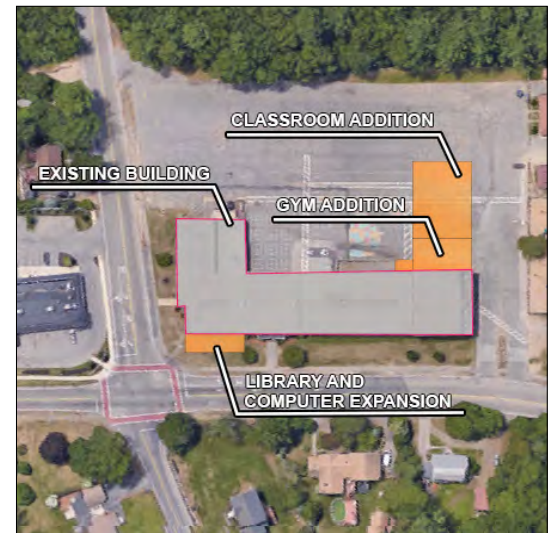
COMMENTS: *Write your thoughts below.*



WOBURN



WEST INTERMEDIATE



SHAWSHEEN



NORTH INTERMEDIATE



APPENDIX C COMMUNITY SURVEY REPORT

APPENDIX C : COMMUNITY SURVEY RESPONSES

INTRODUCTION

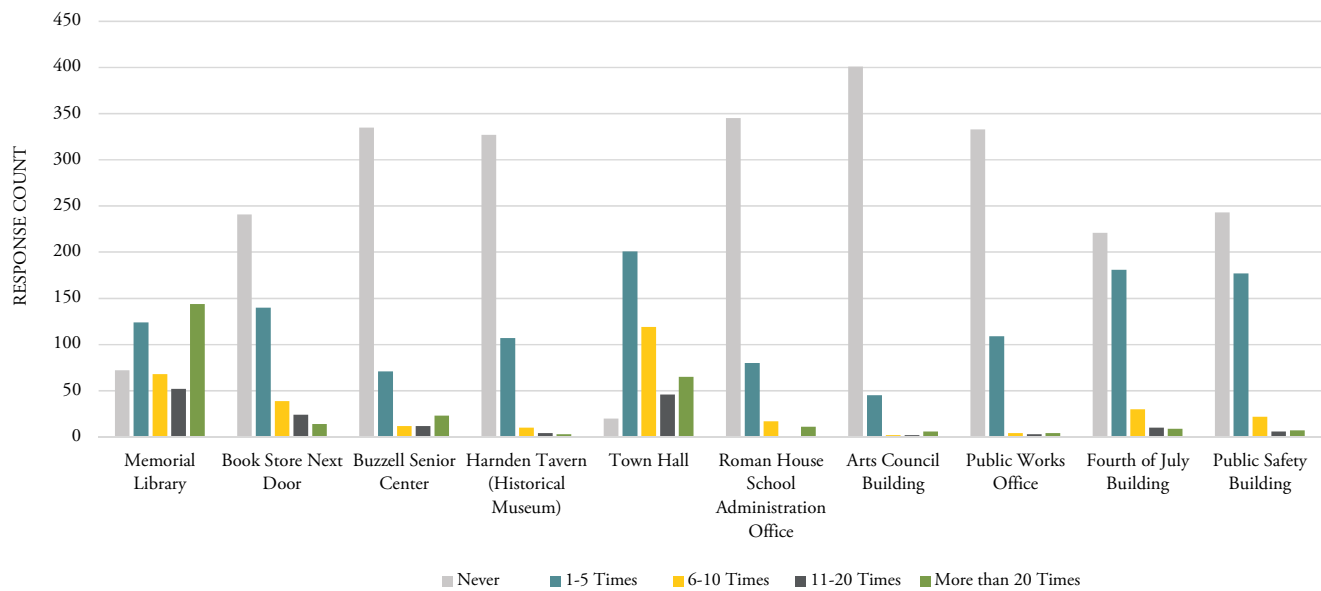
The Town of Wilmington is preparing a Facility Master Plan to establish a long term strategy for the allocation of its municipal uses among buildings and sites. This planning will establish a sequence of short-term, mid-term and long-term recommendations that will guide the Town’s decisions relative to investment, expansion, decommissioning, and rebuilding our facilities.

This result report includes the opinions on the Town’s existing facilities. The survey was 21 questions and took approximately 10 minutes to complete. The responses here will directly inform the development of the Facility Master Plan.

There was a total of 461 surveys submitted. Comments have not been edited or altered.

QUESTION 1

HOW OFTEN HAVE YOU VISITED THE FOLLOWING TOWN FACILITIES IN THE PAST YEAR?

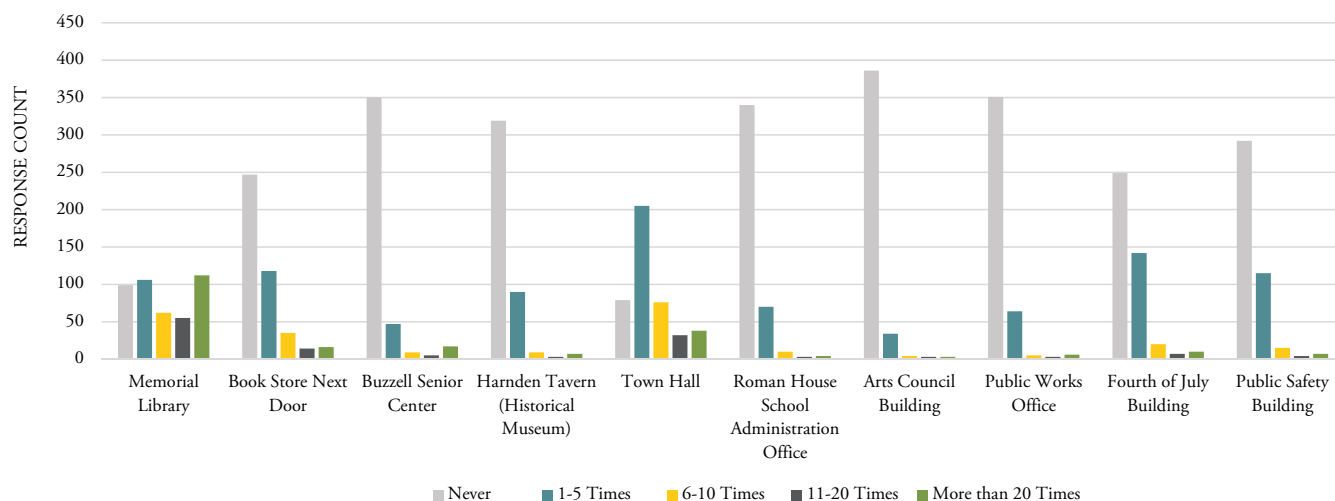


QUESTION 1 COMMENTS:

- 3 Respondents Answered Recycling Center
- 3 Respondets Answered Schools
- 2 Respondents Answered Playgrounds
- 1 Respondent Answered Art Center

QUESTION 2

HOW OFTEN HAVE OTHER MEMBERS OF YOUR HOUSEHOLD VISITED THE FOLLOWING TOWN FACILITIES IN THE PAST YEAR?



QUESTION 2 COMMENTS:

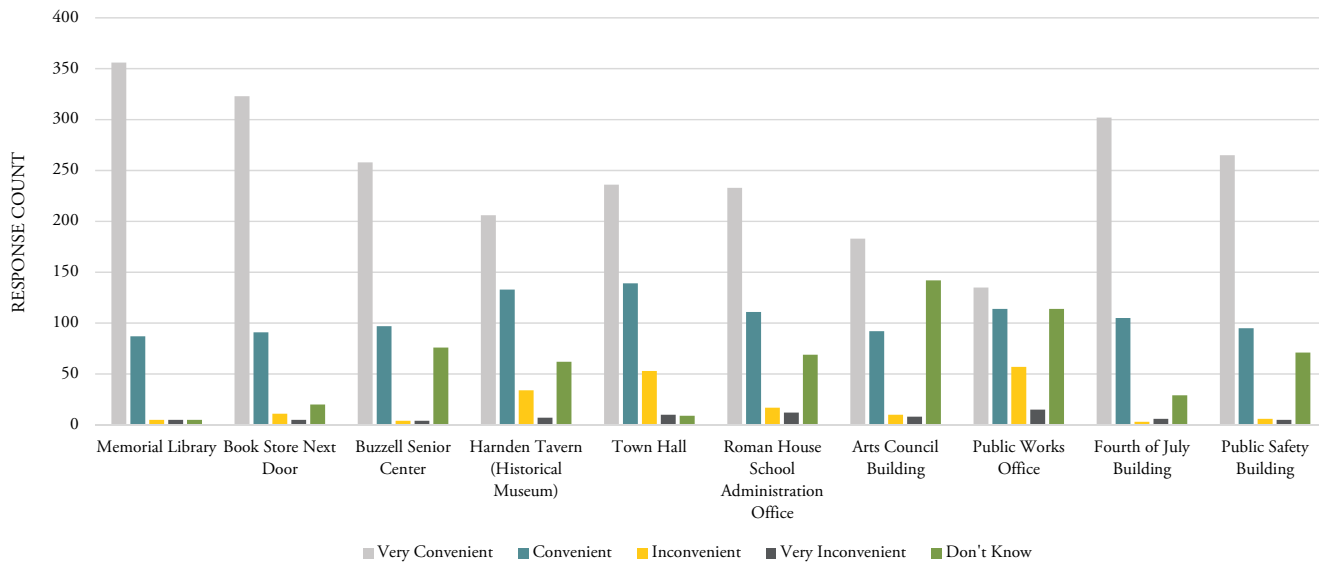
- 7 Respondents Answered Not applicable
- 2 Respondents Answered Playgrounds

QUESTION 2 OTHER COMMENTS:

- Need more yard waste pickup at the home. Water mineral content is too high and corrosive ruins faucets showers harder dishwasher and dishes.
- I am not a Wilmington resident, but love your art center, have taken classes there and paint there regularly. I hope it will always be there- such a beautiful building. Those long windows provide excellent light.
- Recycling Center

QUESTION 3

HOW CONVENIENT ARE THE FOLLOWING TOWN FACILITIES TO GET TO?

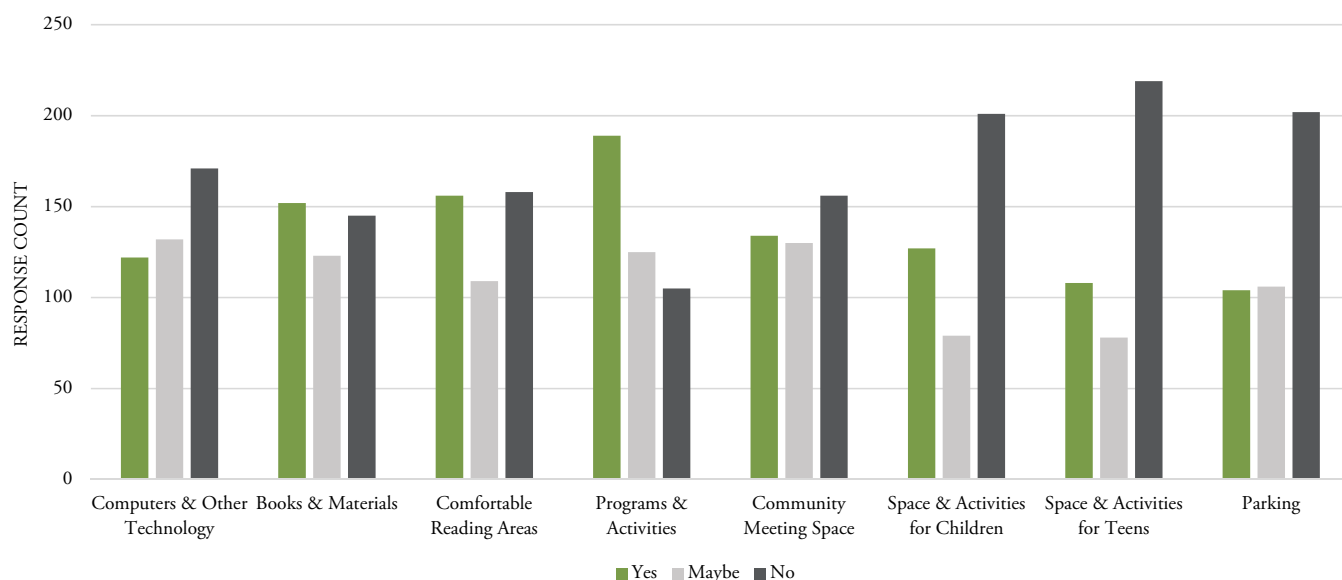


QUESTION 3 COMMENTS:

- Book store next door hours too limiting - I wish for Sunday library hours.
- Often not enough parking at library.
- When school is in session, the Roman House is not convenient depending on the parking availability. Entering the side door, especially during inclement weather can be treacherous, especially for people with back/leg issues.
- When school is in session, Roman House inconvenient for parking. Entering the building is extremely inconvenient, especially for handicapped.
- The library location is fine, but taking a left out of the library driveway is terrifying.
- Town hall is a disgrace and needs to be rebuilt.
- Location of Library/BSND is very convenient, central to town, but getting out of the parking lot can be very difficult.
- I don't know where the Public Works Office is.
- Very inconvenient due to poor traffic lights at Glen Road
- Town hall will be better when lights are working
- We need a NEW Town Hall.
- I think the Roman House looks old and out of place next to the new High School. I am for preserving old homes but I feel like it's not that attractive and just doesn't look like it belongs next to a modern building like the HS.

QUESTION 4

WOULD YOU OR MEMBERS OF YOUR HOUSEHOLD USE THE LIBRARY MORE FREQUENTLY IF IT HAD MORE OF THE FOLLOWING?



QUESTION 4 COMMENTS:

- 3 Respondents Answered more handicapped accessible bathrooms
- 3 Repondents ansewered that they use the library very frequently
- 2 Respondents Answered the library is fine the way it is
- 2 Repondents Answered that there is adequate parking

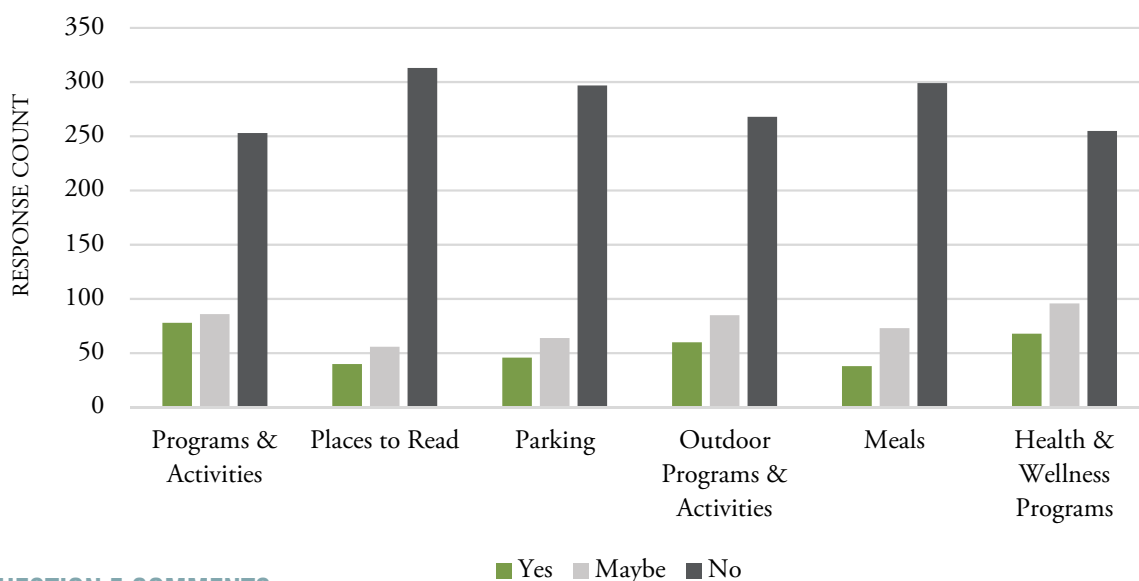
QUESTION 4 OTHER COMMENTS:

- THE LIBRARY DOES A GREAT JOB WITH ALL THEY HAVE
- The library is suitable and has all of these things this senior center
- I think the library does a great job! (full disclosure: a family member is an employee)
- We love the library
- Libraries are useless. They should be converted to community centers. No one reads books and there are bigger libraries in surrounding towns.
- A modern library is a symbol of a community's commitment to its high standards. It shows that the community values learning and values providing resources for its people. Our current library staff has done an outstanding job with the resources provided, but it is time to improve what we have in terms of physical structure and space to accommodate additional resources within.
- I think the space in the library is used really well with so many great programs and resources for the town.
- Library staff do an excellent job with very inadequate facility and books
- I Think the Library is doing very well
- New Lego Books Adult Activities
- No Opinion
- Quiet Reading Areas comfortable reading chairs
- The library is great starting resource Lucky to have

- Library has all the things, but is too small I support a new larger library
- Our library is WONDERFUL! Many activities for kids and families alike!
- Along with Friends of the Library, Tina Stewart has made the most she can of the facility.
- The library is too small to meet our community needs. We desperately need more quiet study and reading space as well as a larger teen and children's areas. In addition, the staff needs more room to work. Our library is a community gathering center that cannot accommodate our community.
- The Library already has most of what I need
- I have never had a parking problem at the library. The book and media collections are fairly slim compared to other public libraries (such as Medford, Malden, Newton, Shrewsbury, Lexington, and Amherst). The borrower policies are generous and the staff is great. They need more space and materials. I love the new study area, but there's nowhere cozy to read.
- Only used to renew library card for ebooks
- I know they do all that they can with what they have, but that building is a little sad and not what I would call a library. I think many more high schoolers would use it also if it had a quiet, study area.
- We use the library. It is a wonderful community resource, and we were disappointed that plans for a new library fell through twice.

QUESTION 5

WOULD YOU OR MEMBERS OF YOUR HOUSEHOLD USE THE SENIOR CENTER MORE FREQUENTLY IF IT HAD MORE OF THE FOLLOWING?



QUESTION 5 COMMENTS:

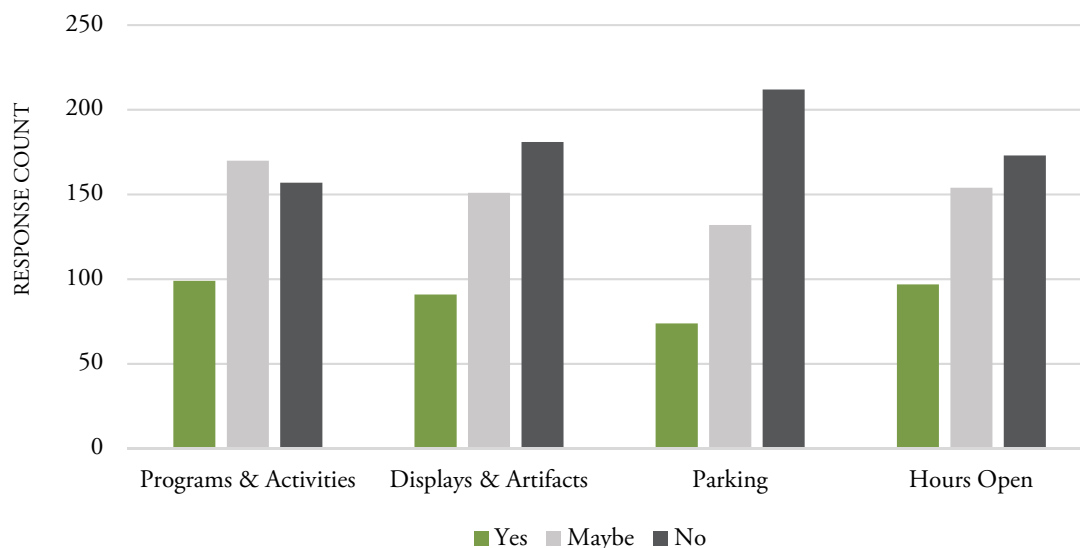
- 20 Respondents Answered not age applicable
- 6 Repondents Answered that they do not use this facility
- 2 Repondents Answered that they use the facility frequently

QUESTION 5 OTHER COMMENTS:

- Very inadequate
- Pretty Happy with senior Center as it is
- Its fine just the way it is !
- Needs to be painted white or some bright color on the inside dark and no friendly inside
- Senior Center thrut store
- A building like billericas would be nice
- The senior center is in dire need of updating.
- If there was a public area to study outside library hours or community music I might go. I never hear much publicity from them.
- We need to build a new Senior Center ie; Tewksbury's Senior Center is modern and more enjoyable to visit plus they have a beautiful hall for activities. Our Senior population is growing each year and since we are paying higher RE taxes for a new High School; what about the older Senior's who are paying these high taxes? Buzzell Senior Center is very dark, old and outdated. I believe it reflects poorly on Wilmington and its regard for the Seniors that built this town. We deserve to have a new, bright and modern facility to spend our days and recreational hours. This should have a place of NEW Facilities to be built in Wilmington. Since we are building a park for the children what about a new place for Seniors?
- The senior center always looks well-attended and the folks that go, seem to enjoy it.
- This senior Center is well staffed but very old fashion for a town like this It is dark and dumpy not a place you look forward to visiting
- More activities to connect the youth in the community with the older generations.
- Not currently a member of the senior center but would like to see this area of our community expanded.

QUESTION 6

WOULD YOU OR MEMBERS OF YOUR HOUSEHOLD USE THE HARNDEN TAVERN MORE FREQUENTLY IF IT HAD MORE OF THE FOLLOWING?

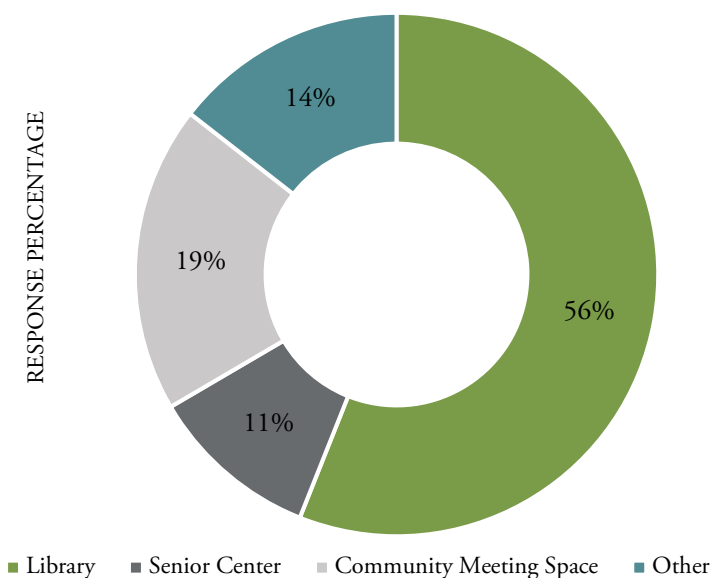


QUESTION 6 COMMENTS:

- I have never visited
- Its fine just the way it is !
- Not sure Lived here all my life and have not visited once
- Not and easy place for people with back/leg issues.
- Rental space for small groups or private functions? I've actually never been inside!
- I was not aware that this was a museum!
- Nice town resource, especially for children.
- I always thought it would be cool to be able to host small events on the grounds, like baby or wedding showers that are small in size
- No real interest
- Have attended programs there when kids were younger.
- Would like more hours on the weekends
- The Harnden Tavern is very important to the Town, as is the Butters Farmhouse which needs work both on the roof and inside.
- No Opinion

QUESTION 7

WHICH OF THE FOLLOWING FACILITIES HAVE YOU VISITED A NEIGHBORING COMMUNITY TO ACCESS?
(CHECK ALL THAT APPLY)



QUESTION 7 COMMENTS:

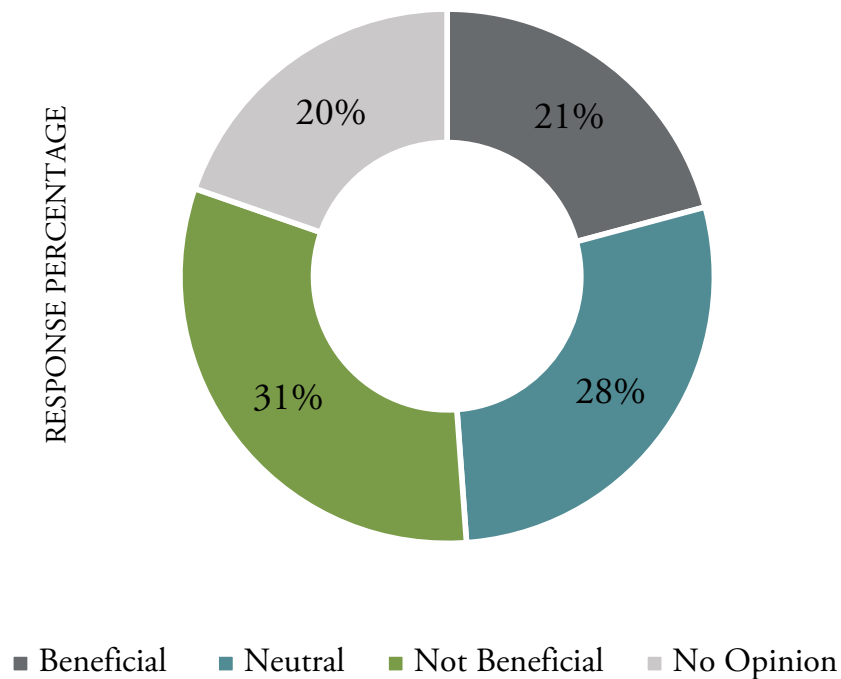
- 21 Repspondents Answered None
- 5 Respondents Answered Reacreation Parks and Playgrounds
- 8 Repondents Answered No Opinion
- 2 Repondents Answered Bike Path Trails

QUESTION 7 OTHER COMMENTS:

- Programs for Grandchild free at neighboring libraries, like we have in Wilmington. Close by and extra offerings.
- Reading ymca and dog parks in several communities
- Tewksbury has a Beautiful Senior Center. Buzzell. Center is old, dark and dreary.
- Programs at High school, such as plays or historical presentations
- Boys club
- Theatre space for children
- Events at town green
- I have often used the library in Burlington
- Just love all libraries.
- Hallenbrook skating rink., lexington library, Horn Pond

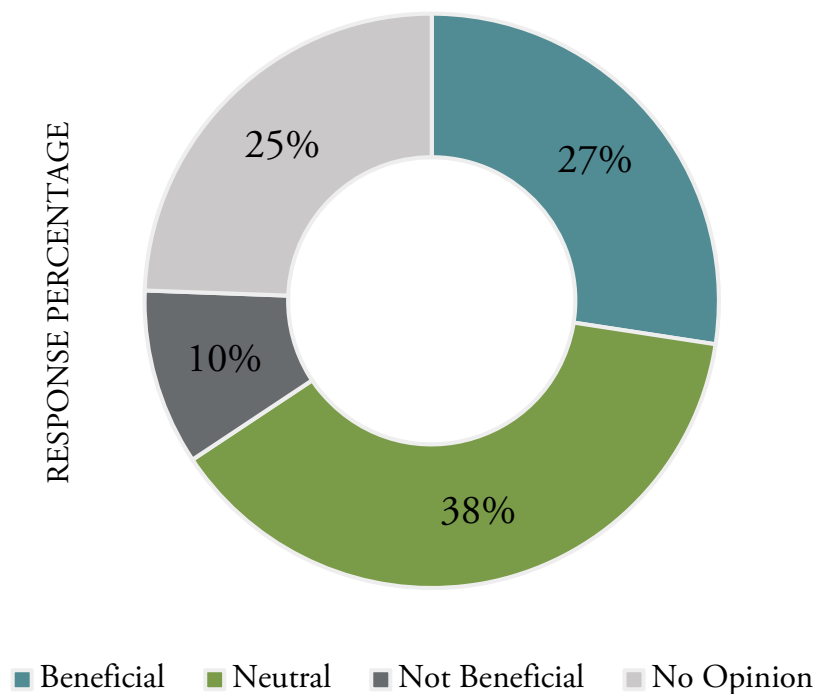
QUESTION 8

HOW WOULD YOU RATE THE NUMBER OF TRANSITIONS FOR STUDENTS UP TO GRADE 5.



QUESTION 9

HOW WOULD YOU RATE THE THE LOCATIONS OF THE SCHOOL BUILDINGS FOR PRE-KINDERGARTEN THROUGH GRADE 5?



QUESTION 10

WHAT DOES “CIVIC SPACE” MEAN TO YOU?

- 114 Respondents Answered Public Space for the Wilmington Community
- 75 Respondents Answered Gathering Spaces for events, entertainment and meeting space
- 7 Respondents Answered Governmental and or Municipal spaces
- 6 Respondents Answered Town owned public buildings or properties
- 13 Respondents Answered Doesn't know
- 7 Respondents Answered Nothing

QUESTION 10 OTHER COMMENTS:

- NO, we don't need to spend more money on anything !
- An extension of the community a coming together of residents
- Public buildings or outdoor areas we could “use” like the library or such, not just visit like town hall to pay taxes
- Meeting rooms and areas where people can learn about local affairs from meetings or available literature
- Town hall, library, etc, where meetings take place and literature is available to learn about local affairs.
- Where's my cat park!?
- A welcoming well maintained space open to all residents with convenient hours and access. Civic space should evoke a sense of civic pride.
- Building and sites that are well appointed/maintained and that are user-friendly and intentionally welcoming for a range of ages. Residents generally feel pride in their shared ownership of these spaces.
- Parks, Libraries, Trails, Sidewalks, Recreational Facilities.
- Civic spaces are an extension of the community.
- Community center type place
- Common areas where community happens.
- It is a place that uses our tax dollars to run the town and provide beneficial services to the town.
- space accessed (by a fee) for use by town residents?
- Open parks and playgrounds.
- A place for the Taxpayers to use !!
- It means a place to conduct business in your community and a place that serves the public. I don't think its necessary to spend money just to have brand new buildings. Its more important that the services that are provided meet the needs of the community. There should be money allocated to keep the buildings looking good and not run down.
- Locations maintained by the town for personal use.
- A recreation center
- Rooms in public building to be reserved by the taxpayers
- Community center. Replace the library

QUESTION 11

WHICH TOWN BUILDING OR SPACE WOULD YOU RATE AS THE BEST?

- 106 Respondents Answered the Wilmington High School
- 72 Respondents Answered the Wilmington Public Library
- 61 Respondents Answered the Wilmington Public Safety Building

- 14 Respondents Answered the Wilmington Town Hall
- 13 Respondents Answered the Wilmington Town Commons
- 12 Respondents Answered the Wilmington Middle School
- 4 Respondents Answered the Wilmington 4th of July building
- 4 Respondents Answered No Opinion
- 3 Respondents Answered None
- 3 Respondents Answered the Book Store Next Door
- 3 Respondents Answered the Wilmington Harnden Tavern
- 2 Respondents Answered the Wilmington Silver lake
- 2 Respondent Answered the Wilmington Buzzell Senior Center
- 2 Respondents Answered the Wilmington The Roman House

QUESTION 11 OTHER COMMENTS:

- Unfortunately they are all lacking
- We need a “Main Street”
- I don’t think any are really adequate for community space although I have not been on some of them.
- Typically use churches for meeting space
- St. Thomas of Villanova Church
- Wilmingtons Veteran Services Facility

QUESTION 12

WHICH TOWN BUILDING OR SPACE WOULD YOU RATE AS THE WORST?

- 115 Respondents Answered the Wilmington Town Hall
- 51 Respondents Answered the Wilmington The Roman House
- 25 Respondents Answered the Wilmington Library
- 23 Respondents Answered the Wilmington Schools in general
- 19 Respondent Answered the Wilmington Buzzell Senior Center
- 17 Respondents Answered the Wilmington Boutwell School
- 14 Respondents Answered Do Not Know
- 10 Respondents Answered the Wilmington DPW
- 8 Respondents Answered the Wilmington Wildwood School
- 7 Respondents Answered the Wilmington Harnden Tavern
- 4 Respondents Answered No Opinion
- 6 Respondents Answered None
- 6 Respondents Answered the Book Store Next Door
- 5 Respondents Answered the Wilmington 4th of July building

QUESTION 12 OTHER COMMENTS:

- The Whitfield. You tore down a historical building that was not maintained & could have been put to use to create open space.
- Rotary park...No parking, no fence to keep small kids from busy street

- Boutwell school if it counts town hall is also bad but children and public don't spend much time there so perhaps less of a priority the library facility in general and lack of proper handicapped bathrooms is an embarrassment however the staff are great and doing the best they can
- All the schools other than the middle and high school. The buildings are an eyesore inside and out (with some exceptions). The town does not take care of it's property, the roman house is a prime example. If you made it nice looking instead of trying to destroy it, more Roman house early childhood spaces (Wildwood)
- The Roman House is not an appropriate space for school administrators. The structure lacks the necessities for efficient functioning. Furthermore, it now looks ridiculous in front of the new high school. The Roman House should be relocated if possible to some space along that street and sold to a family interested in restoring it to its former glory and function.
- The former fire department
- Train Station parking Lot/ post office parking
- Town Firing Range
- The town hall should be moved closed to our historical bldgs ie. Library high school etc
- I have visited the senior center. That building is very old and despite a fabulous welcoming staff, it's just doesn't seem a comfortable space. Don't our seniors deserve more?
- School administration/ Roman House - merits preservation as an historic reminder of the roman families philanthropy but not as an office space
- Computer recycle center and the Valenti Electronics stores
- Town Hall. Although I think it says something for our local politicians that money has not been spent to upgrade their offices, I think the town hall is due for an upgrade if the town can afford it.
- Library. I need to get most of my books from the Consortium rather than from the Wilmington library.
- Baby beach being closed, the town center is useless, with no parking and no reason to walk to and enjoy
- School admin house/building Roman House. It's a creaking disaster of a building. It should have been torn down when WHS was built.
- West Intermediate with Windows you can't see out of, missing ceiling panels and mold spots, Public Safety Building with poor ventilation and a stove in the firefighter's kitchen that hasn't been up to code in many years and the Boutwell with it's disgusting ceiling

QUESTION 13

WHICH COMMUNITIES DO YOU BELIEVE ARE COMPARABLE TO WILMINGTON?

TOP RESPONSES

- Reading
- North Reading
- Tewksbury
- Burlington
- Billerica
- Andover

QUESTION 13 OTHER COMMENTS:

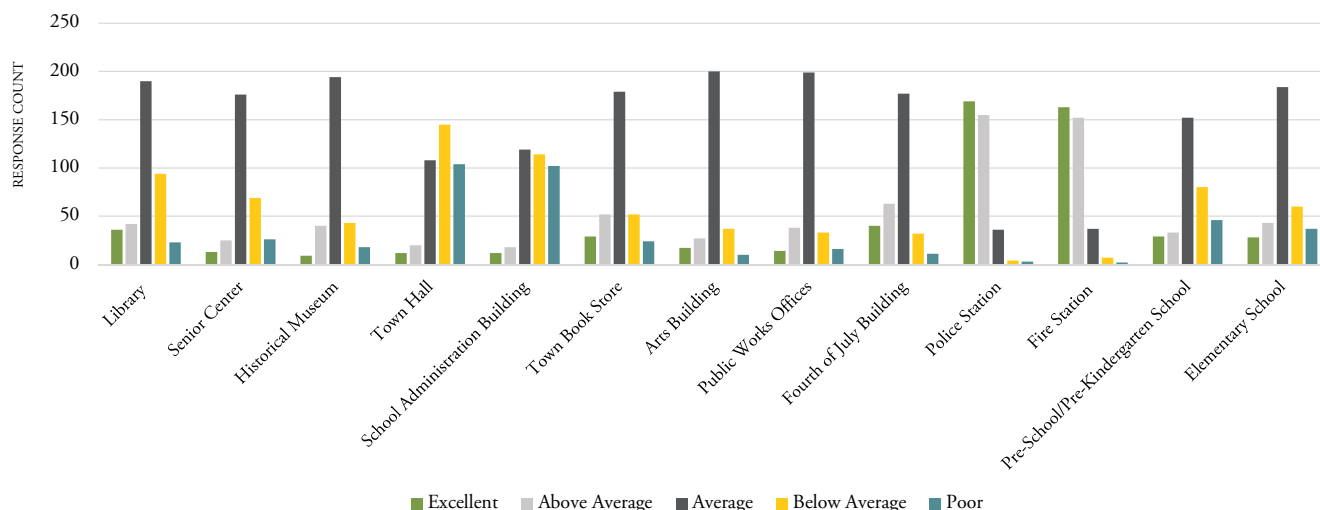
- Wilmington is a great town to live in. We NEED more SENIOR housing in additions to densing way-town owned not
- I think with a little cosmetic work in certain areas of town, i.e. Rt. 38 around Firestone, near train tracks is atrocious. Probably Tewksbury is closest in comparison. I think Wilmington is a very nice community and is affordable for the average person, but I would like to see a general clean up of certain areas in town. The actual center of town could be

eye catching with those brick buildings, put a few planters out front on the sidewalk, plant some perennials across the street in front of the stone wall in front of Big Joes. The new buildings on Church St. look great.

- Grafton, MA or Beverly, MA. It's a unique place in the area, still lots of beauty and greenery, near the train to Boston, decent amenities and not much crime. We could not afford to live closer to Boston except in poor school districts, nor could we afford Lexington, Newton, or Lincoln types of towns. There appear to be many jobs right in town too. It's an unusual mix, and I hope the town focuses on its schools and related services in the future.
- Wilmington wants to be Andover/Burlington/until it's time to pay to be like those towns. I suppose we are comparable to Tewksbury or other New Hampshire towns that don't have centers "downtowns".
- I don't care about other communities. I care about here and don't want to attract outsiders. I don't like the changes in the town. We have become too large and have too much crime.

QUESTION 14

HOW WOULD YOU RATE THE QUALITY OF WILMINGTON'S BUILDINGS COMPARED TO OTHER COMMUNITIES?



QUESTION 14 COMMENTS:

- 10 Respondents Answered No Opinion
- 6 Respondents Answered Do not know

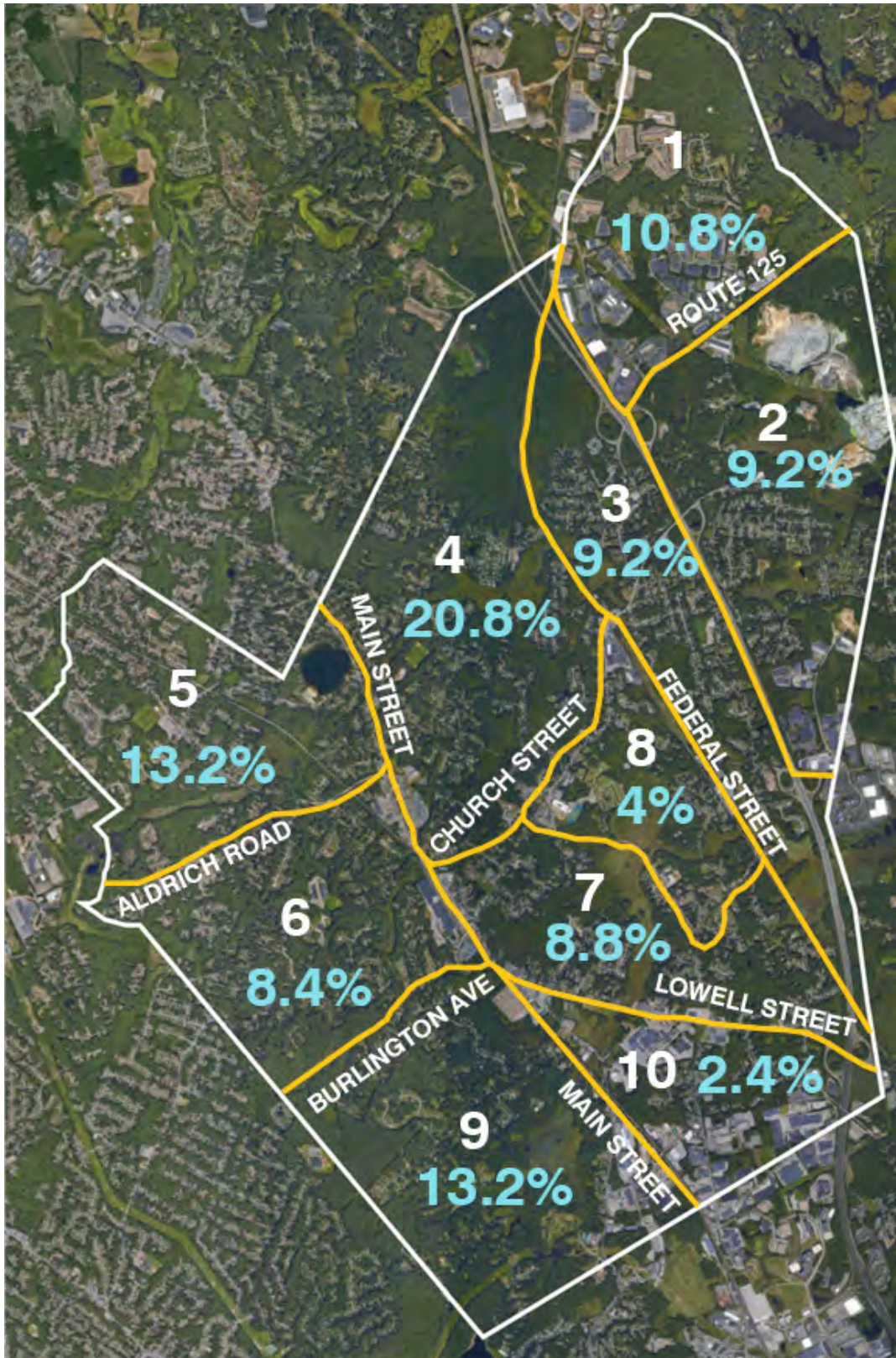
QUESTION 14 OTHER COMMENTS:

- I would like to see a new library building with more comfortable settings for community meetings. A library with business technologies for local small businesses. A large space for meetings that can be used for local children groups such as scouts and Destination Imagination. I would like to see the library to take the lead in offering continuous art and music classes for adults and children. Some interesting and ongoing science as well as gardening programs would be great.
- Most Buildings are fine, we need to do a better job of keeping them updated. Wilmington lets them go into disrepair too easily and then tears them down. Library is an excellent example of a well maintained building in our town.
- I've lived in town for only a couple months, I don't know. The town in general seems rundown and meh though.
- The window/door upgrades to the Shawsheen and North are improvements, however all the elementary schools (K, 1-3, and Interm) are really a disappointing, outdated eyesores compared to Elem schools in other communities
- Pre school kindergarten buildings are shameful
- Town hall really should be a visual highlight to the town, placed somewhere prominent with a nice public space around it. Our town hall is buried in a residential neighborhood occupying an old schoolhouse from the 80.
- Wilmington should be commended for making good use of some very old buildings. But now it's time to upgrade some of these buildings.
- The curb appeal of the kindergarten and elementary schools (Wildwood and Woburn Street) are horrendous. There are large Boston Public Schools in the middle of the city that are more attractive and less institutional looking!
- North Intermediate is touch most in need of improve and very isolated
- It shouldn't be about keeping up with the Jones ie other towns
- Facilities are Old -with global warming % increased temperatures classroom are to hot !! I cannot imagine how teachers and students are expected to concentrate with sun streaming in windows without shades no air conditioning or fans.
- Middle School Above Average
- I really don't have much to compare them with, other than the police station.
- Most of the buildings in Town are in serious need of repair or leveling and starting over! They have been neglected for far too long. Town Hall tops the list of the worst!

- There are no other towns with a town book store which makes ours the Best ! some for the 4th of July bldg. Both buildings could use improvement E.g. new windows at the BSND
- WHS and WMS Excellent - Bookstore poor building but great resource
- There is still a need for a sub fire station in North Wilmington
- I think wilmingtion is a good town. However, I think we need to slow down purchasing "open land" and concentrate our resources where they MAY be most needed. Does that mean replacing the Roman House - not necessarily. Funny how talk about that came about only after we built the new High School - which I understand has a cafeteria that does not accomodate as it was meant to and many "small group"/"large group" rooms that seemed a little much when I took the tour. And I particularly liked School Committee Chairwoman Peggy Kane's comments in the 8/20/15 Advocate that "everywhere I go this summer, I've been questioned about the Roman House". Really? Did she take names? In Lowell, they have 27 schools, 2 of which are over 100yrs old and still going strong. Winchester has a Town Hall which appears to have been built many years ago. How is it that Wilmington can't seem to use what they have? We did not get a new Library but the staff has done a heck of a job utilizing their space and making everything work quite well. We have more committees and reports than Custer had Indians - and how much do all of those cost? Cautious is good but I think the town goes overboard - and may very well keep hiring firms for those reports until they get one they "like" rather than one that may not coincide with the powers that be. Am I annoyed - a resounding YES - everytime I get my tax bill. town Hall
- New middle school is VERY nice, other schools have a tired look to them
- they should upgrade Town Hall and move to the Town Center when I moved here 27 years ago from Woburn I could not believe it was in a strange location and in an old elementary school and still is today
- High School and Middle School are excellent
- Our library is nice and I like it a lot. In comparison, the library in Wakefield is nicer and has more ambience. When I'm in the Wakefield library, I ask myself why the Wilmington library can't be more like that. A library is like a community center. Besides the books and those types of resources, it provides a safe and inviting space to read, job hunt, place to go to, etc.; use of computers and wifi to learn/practice new skills, job hunt, etc.; events (such as movie nights and talks) that get people out and about to stimulate the body and the brain; and much more.

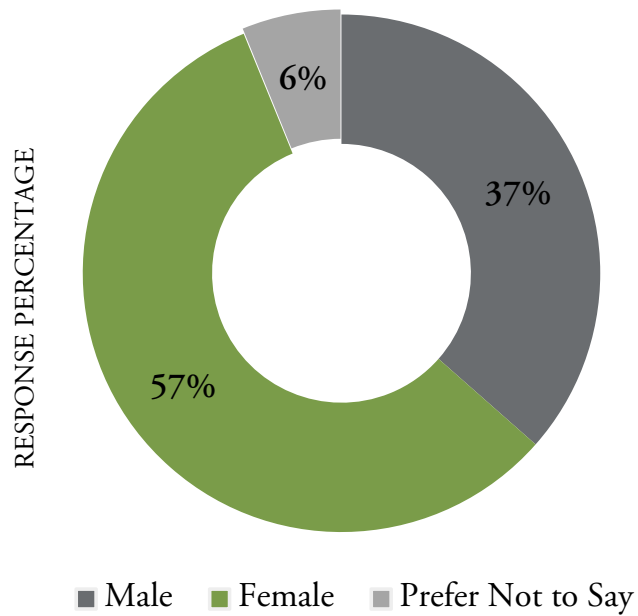
QUESTION 15

USING THE MAP, INDICATE WHICH ZONE YOU RESIDE IN.



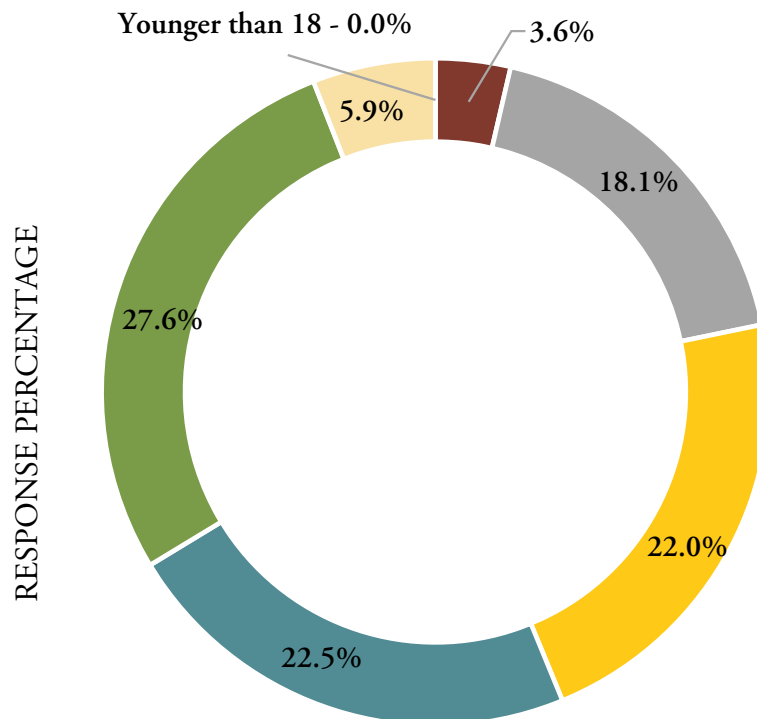
QUESTION 16

WHICH BEST DESCRIBES YOUR GENDER?



QUESTION 17

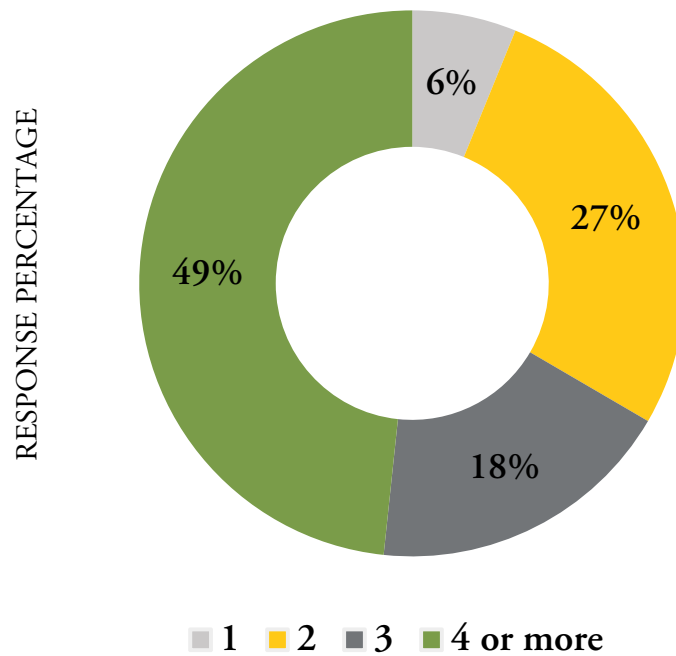
WHICH BEST DESCRIBES YOUR AGE ?



Younger than 18 ■ 18 to 29 ■ 30 to 39 ■ 40 to 49 ■ 50 to 59 ■ 60 or Older ■ Prefer Not to Say

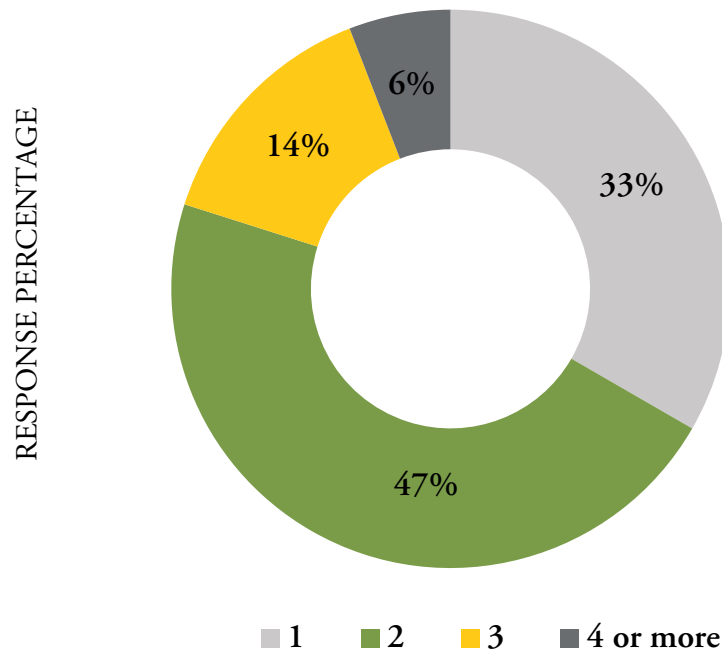
QUESTION 18

HOW MANY PEOPLE LIVE IN YOUR HOUSEHOLD?



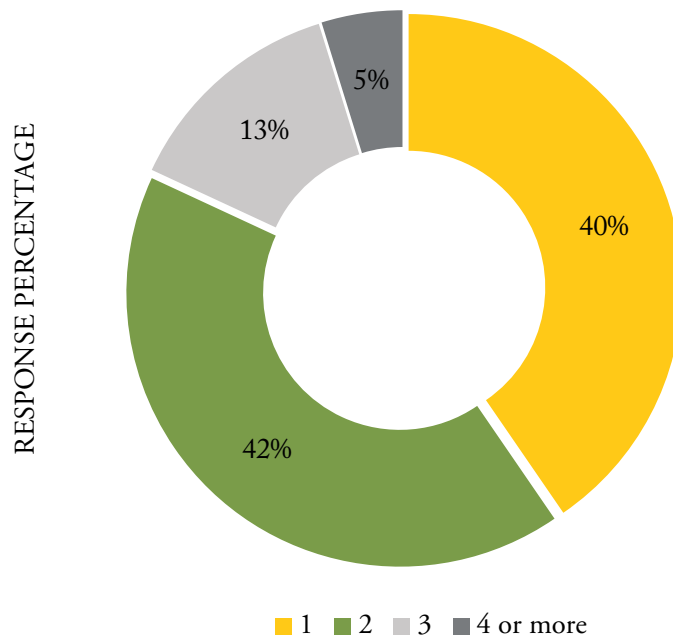
QUESTION 19

HOW MANY SCHOOL AGED CHILDREN LIVE IN YOUR HOUSEHOLD?



QUESTION 20

HOW MANY CHILDREN IN YOUR HOUSEHOLD ATTEND WILMINGTON PUBLIC SCHOOLS ?



QUESTION 21

ADDITIONAL COMMENTS

- MY FAMILY HAS LIVED IN WILMINGTON SINCE 1954 AND WE NEED TO SLOW DOWN WITH THE BUILDING ITS MORE LIKE CHARLESTOWN THESE DAYS
- I think this town desperately needs a new building to house Town Hall. The one we now have is embarrassing.
- All schools up to the middle school are in poor shape- many having asbestos in them. These buildings are a disgrace, look awful and are an embarrassment to the town.
- My other family members often comment Wilmington lacks a "proper" town hall, in a more central location.
- We've been in the Community over 20 years. The Town has made improvements but still has a way to go in my opinion. We're getting better but more can be done to improve the community
- The town needs a hockey rink.
- Please, no more "improvements" like the high school. Stop destroying the character of our town. Newer does not mean better.
- I'd like to see more activities for school age kids at the recreation Dept
- Our children are older and do not live in town but all attended public schools in town and went on to graduate from colleges
- Send child to private school in Andover
- A lot of work needs to be done in numerous Town buildings. The Town Hall should be placed in the center of Town where it is more accessible to residents and people from outside Town. Historical buildings need MORE work done to keep them in good shape for visitors of all ages to visit and to come to know our heritage.
- The library in town is an invaluable resource for so many. My children are aged 12-21 and there is always something going on to appeal to the age range and to myself and my husband. With an updated facility even more could be offered by the wonderful staff.

- 2 seniors in household - 66 + 59 years old PS. we should have done a rotary at Glen Road + Church Street + Wildwood. How about Yellow Blinkers except at rush hour ?
- Town needs better elementary schools+ Playgrounds , bike paths, bigger library - quiet reading space, Dept of Rec Space + More programs for 0-3 olds
- Library does an excellent job with inadequate facility need space so teaching cant take place in a separate area need space for more books
- Town Spending is increasing way beyond rate of inflation or rate of economic growth - must be slowed down !
- I wish Wilmington Had more pedestrian Friendly downtown
- Although it is not part of the Town Building the WETU station is a VERY important part of the town
- To See School Buildings with holes in the exterior maintenance doors (Woburn street school) Is disgraceful and at Deming Way Too.
- More Crafts please for Adults + Children Boys
- Children went through Wil Pub Sch. + are graduated
- No, we don't need more !!
- Playground equipment updates and safety need to be a priority - school + Public playgrounds are in disrepair
- Library does so much with so little but should be bigger / newer to do more. Could arts building and maybe new library be combined with new town hall ?
- I know space is limited and so is funding but would be great if there were a community center for the youth of Wilmington.
- 2 of my children graduated from Wilmington High school and both have masters degrees im very happy with the school system.
- An investment in their schools and libraries enrich the quality of life in the community. I hope the recommendations of this study support this investment.
- Although Wilmington has been fiscally conservative over the years, this policy has left us with many outdated, inadequate public buildings that all need replacing in a short period of time. Cheapest isn't always best in the long run. We need a plan for Wilmington that assesses the quality of our facilities and plans how to replace them so we don't end up needing six new buildings all at once.
- Please consider fixing sidewalks on Main St across from St. Dorothy's
- Please save Roman House. It may look "different" than the new high school (which I also like), but it is such a beautiful building and asset to our town center.
- Senior Housing in this Town should be on the list of projects to be discussed . There is a great need for housing for Senior Citizens in this Town.
- A separate children's library would be great and create more space in the library
- My children are grown but i have 2 Grandchildren that attend Wilmington Public Schools. #19 & 20 should have had 0 as an option.
- I appreciate the conservative approach to spending but , walking in to our schools should be a welcoming hello. We don't even provide signs for our schools and doors have peeling paint. Good luck on the plan.. Wish we had one the billion dollar Powerball in January
- Knock down the Roman house. It makes the high school look bad
- I Answered this survey to comment specifically on the horrible Town Hall. The library is a disappointment, too, only relieved (somewhat) by inter-library loan.
- The library is a real nice place, some other buildings I never use (like the Roman house, 4th of July, Art building).
- Schools need upgraded, need more fields, specifically with turf/drainage.
- Need senior housing



APPENDIX D

FACILITY CONDITIONS EVALUATIONS

APPENDIX D : FACILITY CONDITIONS EVALUATIONS

INTRODUCTION

This section of the Report consists of detailed reviews of the sites and buildings that are the subject of the Facilities Master Plan. This information will be used as a reference source and help form the basis of specific recommendations for potential improvements or changes in the future.

Each assessment contains a description of the facility and information about its location, age, size, and use. The assessment includes a summary evaluation of architectural, engineering, and site elements as well as a rating table of the building's condition. Supporting documentation, per building, includes detailed notes of building systems prepared by Garcia Galuska Desousa Engineers and facility photographs.

Please note that repairs, upgrades and changes may have occurred since the assessment has been recorded in early 2016.

Methodology

The information regarding the facility conditions was assembled using the following methods:

- Site visits – Each facility and site was visited by both an architect and building engineers to generally review visible conditions. Notes were taken and are reflected in narrative form that are included in this document.
- Condition ratings – Each of the major site and building components were assigned a condition rating on a scale of 0 to 5, with 5 being excellent condition that would not require repairs other than normal maintenance. These condition ratings are a means to compare and categorize the building and site conditions which could require capital improvements or replacement.
- Photographs – The photographs of typical and prominent conditions have been prepared and assemble.
- Plans and reports – Where available and pertinent, plans or previous reports have been reviewed.
- Discussions – As part of the site visit process, discussions regarding building conditions were held with staff from the Public Buildings Department.

Sources of Information

The sources of information have included a variety of sources. In general, the available architecture and engineering plans are largely limited to the schools, public safety building and the library. There are no preceding building condition analyses, although basic information regarding the building areas, date of construction and other facts appear in Town documents.

The site information has been assembled from the Town's GIS system and includes approximate property lines, lot areas, building footprints and relationship to adjacent parcels and streets.

NORTH INTERMEDIATE SCHOOL

LOCATION: 320 SALEM STREET
TOTAL # OF STORIES: 2
YEAR CONSTRUCTED: 1962
BUILDING AREA: 54,569 GSF
BUILDING OCCUPANCY: SCHOOL



Description

North Intermediate School is a brick and curtain wall building that serves grades 4 & 5 for roughly 280 students. It is located just south of exit 41 on Interstate 93. Solid original construction, and recent building upgrades have kept this facility in good condition. The main entrance to the school is off the bus loop area on Salem Street. Building identification is primarily letter signage on the façade of the cafetorium next to the main entry.

Observations and Findings

SITE ASSESSMENT

This school is located at the corner of Salem and Ballardvale Streets near Interstate 93. Playing fields and courts are located to the immediate north and northwest of the building. Landscaping is limited to a few trees along the road and play field edges. Otherwise the site is completely open. Grass typically covers all non-paved surfaces. Parking is located in the northeast corner off Ballardvale St. There is a separate bus loop off Salem St. Parent drop off, staff parking, and deliveries all share the single parking lot which can create conflict and safety issues especially at drop off and pick up times. This lot is also the only paved surface for the school which creates competition between parking and play.

BUILDING EXTERIOR

Exposed foundation areas show deterioration and require repair. Otherwise, the brick veneer is in good condition. All openings have been very recently replaced including curtain wall, Kalwall panels, and exterior doors. Most of the roof and roof trim have also been recently replaced.

BUILDING INTERIOR

Sections of terrazzo flooring have remained in good condition. Most of the flooring is 9x9 VCT, which likely contains asbestos, and is in fair to poor condition with worn or chipped areas throughout the building. Replacement VCT has been made with newer 12x12 tiles. Plaster ceilings in the common areas are in fair condition and the 12x12 ACT ceilings throughout most of the program spaces are in poor condition. Walls are typically painted CMU which is mostly in good condition. There is wood paneling in the entry / office area and ceramic tile over CMU in the toilet rooms, both in fair condition. Corridors are lined with functioning metal lockers.

STRUCTURE

Structure consists of steel frame on a C.I.P. concrete basement. The cafetorium is framed with deep glue laminated beams with wood roof decking above. The gym is framed with exposed open web joists with corrugated metal decking above, which is the typical system for the building overall.

BUILDING SYSTEMS

Electrical panels and distribution is largely original to the building, is beyond its intended useful life, and should be replaced. Unlocked electrical panels were observed which are of concern for safety. Interior and exterior lighting should be upgraded to LED along with associated lighting controls and paging system. Kitchen outlets need to be replaced with GFI protected circuits. Boilers are brand new but original distribu-

tion piping insulation is suspected to contain asbestos. Kitchen hood, air handling units, and unit ventilators are all in poor condition. Plumbing systems were noted to be beyond their useful life. Vestigial fixtures such as emergency showers in classrooms and consideration should be made for removal.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

The building contains several internal level changes without appropriate accessibility accommodations. Emergency lighting and exit signs, fire alarms, horn strobes, pull stations, and smoke detectors are brand new for this non-sprinklered building and appear to meet current requirements. The kitchen vent hood has no dedicated make up air of an Ansul fire suppression system. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

NORTH INTERMEDIATE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	0
Brick / Masonry	3
Siding / Cladding	4
Windows	5
Doors	5
Canopies / Overhangs	1
Roof	0
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	5
Life Safety: Exit Signs	5
Life Safety: Emergency Lighting	5
INTERIOR	
Condition of Walls	3
Base	2
Flooring	1
Ceiling	1
Stairs	1
Handrails	1
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	1
Panel / Distribution	2
LIGHTING	
Lighting	1
Lighting Controls	N/A

MECHANICAL	
Boiler	5
Fuel	N/A
HVAC	1
PLUMBING	
Toilet Rooms	2
Kitchen	4
Domestic Water	2
STRUCTURE	
Observable Steel	3
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

NORTH INTERMEDIATE SCHOOL

Executive Summary - Electrical

Most of the existing electrical equipment is original to the building with some exceptions. The fire alarm system including the control panel, devices, door holders, and speaker/strobes are relatively new and meet the latest requirements. Original equipment installed in 1962 is beyond its intended useful life. Existing electrical service equipment, distribution panels, non LED interior and exterior lighting, lighting controls and paging system should be replaced. It was noted that some of the corridor panels were not locked and could be easily accessed. Unlocked panels are a safety concern and should be addressed.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs underground to a building mounted meter. The service is rated at 800 Amps, 120/208 Volts, 3 Phase, 4 Wire. An 800 Ampere Main Circuit Breaker switchboard is located in the basement next to the boiler room and is in poor condition. The equipment is manufactured by Federal Pacific. The equipment is obsolete and has met its life expectancy and should be replaced.

Rating: 1

- The lighting and power panels are Federal Pacific circuit breaker type and are located throughout the building. There is no TVSS (transient voltage suppressor) protection at the switchboard and remote plants. Circuits should be separate by load type and TVSS should be added to panels that serve computer equipment.

Rating: 2

- Existing lighting consists of surface wraparound fixtures with T12 lamps in classrooms, corridors, offices, and utility rooms. The cafeteria and the gymnasium has industrial 2'x4' surface mounted T5 fixtures. Controls are provided by local switches.

Rating: 1

- Exterior lighting consists of HID building mounted flood lights and wall packs. Some LED light fixtures are provided at exit doors.

Rating: 2

- The existing emergency lighting system is through self-contained emergency battery units. Exit signs appear to be LED type.
Rating: 3
- The building is equipped throughout with a new addressable automatic fire alarm system manufactured by Notifier; which consists of voice evacuation with speakers/strobes, smoke detectors, pull stations, and heat detectors.
Rating: 5
- Paging system consists of an old Bogen console with clocks/speaker panels and call switch in the classrooms.
Rating: 2
- Existing security system includes motion sensors and door contacts. Throughout the building, and exterior camera is provided at the main entrance with an intercom system.
Rating: 3
- There is no generator installed.
Rating: N/A
- The quantity of receptacles is minimum throughout the building.
Rating: 2
- Kitchen receptacles are not GFI protected. Also, there are no ansul system and EPOs (emergency power shut trap pushbuttons) installed in the kitchen.
Rating: N/A
- Telephone, CATV and fiber run underground from a utility pole to the electric room.
Rating: 3

Executive Summary - HVAC

The North Intermediate School equipment is mostly original to the building from 1962. Generally speaking, most systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, a continued limited service could be achieved, but the systems installed throughout the building are past their intended maximum serviceable life. HVAC equipment within the Mechanical Room was replaced in the summer of 2015.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The boilers were replaced in the summer of 2015. Three new gas fired high efficiency Camus boilers were installed. Boilers are sealed combustion type; flue venting is AL29-4C double wall venting to the outdoors with insulated ductwork for the combustion air. There are three floor mounted end suction pumps with variable frequency drives (VFD) to modulate pump speed based on system pressure.
All other equipment associated with the boilers, such as expansion tank and air separator, were also replaced.
The boilers service the domestic hot water needs of the building
Rating: 5
- Hot water supply and return piping appears to be schedule 40 black steel which is insulated. Insulation one new piping within mechanical room is good but existing piping is suspect and appears to be asbestos.
Rating: 1
- The automatic temperature control system is of the pneumatic type and is provided with a single storage tank with duplex compressor and motors. The system is provided with a refrigerated air dryer, as well as, an oil and water separators.
Rating: 3

- Existing kitchen equipment utilizes natural gas. There is an exhaust hood over the cooking equipment that is not code compliant (no ansul system). There is no dedicated make-up air system; make-up air is by surrounding spaces. There is no exhaust at the dishwasher. There is an air handling unit in the supply closet that supplies heat and ventilation to the kitchen area.

Rating: 1

- The cafeteria is served by a hot water air handling unit located above the ceiling in the storage closet, left of the stage. Ductwork runs above stage and supply air is supplied to the café via sidewall grilles. Return is accomplished by a transfer grille at the stage.

Rating: 1

- The gymnasium is provided with two indoor hot water air handling units. Each air handling unit have exposed galvanized sheet metal ductwork with two round diffusers which allows tempered air to travel into the space. The return ductwork associated with the air handler is centrally located at floor level.

Rating: 1

- Each classroom space is provided with a wall mounted classroom unit ventilator located on the exterior wall. The unit ventilators are provided with a hot water coil with pneumatic control valve. They are also provided with an outside air intake louver, as well as, filters, and a supply fan. Hot water fintube radiation is located behind the shelving.
In addition, many of the classrooms have ductless split cooling and units installed with an associated condensing unit located outdoors.

Rating: 1 for UV's and 5 for ductless cooling units

- The corridors located within the building were provided with wall mounted convectors and/or fin tube for generalized space heating. The individual convectors/fin tube was controlled through individual pneumatic wall mounted thermostats.

Rating: 1

- It was noted that there was no exhaust ventilation located throughout the corridor areas and no supply ventilation as well. This condition is not code compliant.

Rating: 1

- The administration area is heated through wall mounted fin tube with individual thermostatic control valves. Where the spaces are interior, ventilation is non-existent. This condition is not code compliant.

Rating: 1

- Ductless split air conditioning units or window units are utilized for cooling purposes where required.

Rating: 5

- Make-up air for the individual toilets was through the use of louvers located within the doors.

Rating: 1

- Heating of the toilet spaces were through the use of wall mounted fin tube radiation which was controlled through the use of a pneumatic thermostat.

Rating: 1

Executive Summary - Plumbing

The North Intermediate School was built in 1962. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping, and natural gas. On-site septic system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The school plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of wall hung water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Classroom sinks are counter mounted with gooseneck faucet. Electric water coolers are wall mounted with vinyl cabinet and stainless steel bowl. Some rooms have abandoned emergency showers. Art room sinks are equipped with sediment traps. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2
- Domestic water service is 3-inch in size and includes a water meter and pressure reducing valve. There is a 1-inch water meter and backflow preventer for the exterior irrigation system. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition. Water piping in the mechanical space is not insulated.
Rating – 2
- Domestic water for the building is generated through two indirect water heaters fed from the oil-fired heating boilers. The tank capacity of each heater is 119 gallons. Hot water is recirculated. There is a thermostatic mixing valve and expansion tank.
Rating – 4

- Natural gas service and meter are located on exterior of building adjacent to the Mechanical Room. Natural gas supplies three heating boilers and the Kitchen cooking equipment. Gas piping is black steel with threaded and welded joints depending on pipe size.
Rating – 4
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.
Rating – 2
- Mechanical room has a simplex sump ejector. System is original to the building. Pump appears operational. Tank cover is in place and tank is vented.
Rating - 2

Executive Summary – Fire Protection

The Building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine if adequate Municipal water supply is available.

Rating: N/A

FACILITY PHOTOGRAPHS



WEST INTERMEDIATE SCHOOL

LOCATION: 22 CARTER LANE
TOTAL # OF STORIES: 2
YEAR CONSTRUCTED: 1964
BUILDING AREA: 62,058 GSF
BUILDING OCCUPANCY: SCHOOL



Description

West Intermediate School is a brick and curtain wall building that serves grades 4 & 5 for roughly 255 students. It is located across from the Wilmington Middle School and North of the Boutwell ECC. Solid original construction, and recent building upgrades have kept this facility in fair to good condition. The main entrance to the school is off the bus loop on Carter Lane. Building identification is ground mounted signage next to the main entry.

Observations and Findings

SITE ASSESSMENT

This school is located in the education campus that serves West Wilmington. There is an active stream running parallel to the school to the immediate west side of the improved site boundary. A playing field is located just beyond the stream to the west of the building. Landscaping consists of small-medium trees along Carter Lane and bushes near the main entry. There is a grass strip buffer along the bus drop off zone running parallel with Carter Lane. Otherwise the site is completely paved. Parking is located on the north and south ends of the building and is clearly striped and organized. A large paved play area runs directly behind the classroom wing. The south parking area is used by West Intermediate and the north parking area is used primarily by the middle school with signed spaces. There is a separate bus zone along Carter Lane.

BUILDING EXTERIOR

The exposed foundation had several areas showing spalling and cracking along the face. Brick veneer and precast masonry panels in the window walls are in good condition. Building openings are extensively curtain wall and are in need of replacement. Most of the roof and roof trim has been replaced recently or is scheduled to be replaced in the near future.

BUILDING INTERIOR

The floor of the boiler room, at the lowest level of the building (and closest to the stream), is subject to continuous water infiltration and flooding throughout much of the year. Sections of terrazzo flooring have remained in good condition. Most of the flooring is 9x9 VCT, which likely contains asbestos, and is in fair condition with minor worn areas throughout the building. Replacement VCT has been made with newer 12x12 tiles. Ceilings are 24x24 ACT throughout most of the building and are in fair to poor condition. Several corridor locations have brand new ACT ceilings as part of a roof replacement project. Walls are typically painted CMU with a wainscot layer of epoxy paint which is wearing very well. Corridors are lined with functioning metal lockers.

STRUCTURE

Structure consists of steel frame on a C.I.P. concrete basement. The cafeteria framing was not observed but is presumed to match the rest of the building. The gym is framed with exposed open web joists with corrugated metal decking above, which is the typical system for the building overall.

BUILDING SYSTEMS

Electrical panels, electrical distribution, one boiler, HVAC, and plumbing systems are all presumably original to the building, and are beyond their intended useful life, and should be replaced. Unlocked electrical panels were observed which are of concern for safety. Interior and exterior lighting should be upgraded to LED along with associated lighting controls and paging system. Kitchen outlets need to be replaced with GFI protected circuits. One boiler is brand new but original distribution piping insulation is suspected to contain asbestos. Kitchen hood, air handling units, and unit ventilators are all in poor condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

The building contains several internal level changes and provides appropriate accessibility accommodations. There is a LULA serving the first and second floors at the end of the classroom wing. Emergency lighting and exit signs, fire alarms, horn strobes, pull stations, and smoke detectors are brand new for this non-sprinklered building and appear to meet current requirements. The kitchen vent hood has no dedicated make up air of an Ansul fire suppression system. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

WEST INTERMEDIATE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	3
Siding / Cladding	3
Windows	1
Doors	1
Canopies / Overhangs	2
Roof	N/A
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	3
Life Safety: Exit Signs	3
Life Safety: Emergency Lighting	3
INTERIOR	
Condition of Walls	3
Base	2
Flooring	2
Ceiling	1
Stairs	2
Handrails	2
Doors	2
Glazing	3
ELECTRICAL	
Service Entrance	N/A
Panel / Distribution	N/A
LIGHTING	
Lighting	N/A
Lighting Controls	N/A

MECHANICAL	
Boiler	5
Fuel	N/A
HVAC	1
PLUMBING	
Toilet Rooms	2
Kitchen	3
Domestic Water	2
STRUCTURE	
Observable Steel	3
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

WEST INTERMEDIATE SCHOOL

Executive Summary - Electrical

Most of the existing electrical equipment is original to the building with some exceptions. The fire alarm system including the control panel, devices, and horn/strobes should be replaced with a voice evacuation system and devices to meet current requirements. Original equipment installed in 1964 is beyond its intended useful life. Existing electrical service equipment, distribution panels, non LED interior and exterior lighting, lighting controls and paging system should be replaced. It was noted that some of the corridor panels were not locked and could be easily accessed. Unlocked panels are a safety concern and should be addressed.

Rating

5 - Brand New
4 - Very Good
3 - Good
2 - Fair
1 - Poor
0 - Requires repair
X - Requires immediate
N/A - Not applicable

Existing Conditions:

- The secondary electrical service consists of a Westinghouse main disconnect switch rated at 1,000 Amperes, 120/208Volts, 3 Phase, 4 Wire with an exterior utility company meter located at the pad mounted transformer. The service is underground from a pad mounted transformer.
Rating: 2
- The lighting and power panels are Westinghouse circuit breaker type and are located throughout the building. There is no TVSS (transient voltage suppressor) protection at the distribution panel and remote panels. Circuits should be separate by load type and TVSS should be added to panels that serve computer equipment.
Rating: 1
- Existing lighting consists of surface wraparound fixtures with T12 lamps in classrooms, corridors, offices, and utility rooms. The cafetorium has 2x4 recessed prismatic fixtures and the gymnasium has industrial 2'x4' surface mounted T5 fixtures. Controls are provided by local switches.
Rating: 2
- Exterior lighting consists of HID building mounted wall packs and pole lights. Main entrance has recessed HID square fixtures mounted in the canopy.
Rating: 2
- The existing emergency lighting system is through self-contained emergency battery units. Exit signs appear to be LED type.
Rating: 3

- The building is equipped throughout with an addressable automatic fire alarm system manufactured by Notifier; which consists of horn/strobes, pull stations, heat and smoke detectors. System is not a voice evacuation type. There is insufficient coverage for a building without sprinklers.
Rating: 2
- Paging system consists of an old Bogen console with clocks/speaker panels and call switch in the classrooms.
Rating: 2
- Existing security system includes motion sensors and door contacts throughout the building. An exterior camera is provided at the main entrance with an intercom system.
Rating: 3
- There is no generator installed.
Rating: N/A
- The quantity of receptacles is minimum throughout the building.
Rating: 2
- Kitchen receptacles are not GFI protected. Also, there are no ansul system and EPOs (emergency power shut trip pushbuttons) installed in the kitchen.
Rating: N/A
- Telephone, CATV and fiber services runs underground from utility pole to the electric room.
Rating: 3

Executive Summary - HVAC

The West Intermediate School equipment is mostly original to the building from 1964. Generally speaking, most systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, a continued limited service could be achieved, but the systems installed within this building are past their intended maximum serviceable life.

Existing Conditions:

- There are two boilers installed in the mechanical room. One boiler is from the late 80's or early 90's and is still being used. The other boiler is a Weil McLain and was just recently installed. Both boilers are oil fired hot water boilers and are induced draft type venting to an existing masonry chimney. There are two floor mounted end suction pumps.
Rating: 5 for the new boiler, 2 for all other equipment
- Hot water supply and return piping appears to be schedule 40 black steel which is insulated. Insulation on new piping within mechanical room is good but existing piping is suspect and appears to be asbestos.
Rating: 1
- The automatic temperature control system is of the pneumatic type and is provided with a single storage tank with duplex compressor and motors. The system is provided with a refrigerated air dryer, as well as, an oil and water separators.
Rating: 2

- Existing kitchen equipment utilizes LP gas. There is a hood over the cooking equipment that is not code compliant (no ansul system). Also, there is no dedicated make-up air system. Make-up air is by surrounding spaces. There is no exhaust at the dishwasher. There is an air handling unit in the supply closet that supplies heat and ventilation to the kitchen area.

Rating: 1

- The cafeteria is served by a hot water air handling unit located above the ceiling in the storage closet left of the stage. Air is supplied to the room via ceiling mounted supply diffusers along the exterior of the room. Return is accomplished by a transfer grille in the storage room door and a return grille in the storage room ceiling.

Rating: 1

- The gymnasium is provided with two indoor hot water air handling units. The air handling units have galvanized sheet metal ductwork associated with its respective unit which allows tempered air to travel into the space and terminate at the ceiling with diffusers. The return ductwork associated with the air handler is centrally located at floor level. Also, located within the gymnasium was a length of fin tube radiation located along the exterior walls approximately 12 feet above finished floor.

Rating: 1

- Each classroom space is provided with a wall mounted classroom unit ventilator located on the exterior wall. The unit ventilators are provided with a hot water coil with a pneumatic control valve. They are also provided with an outside air intake louver, as well as, filters and a supply fan. These spaces were also provided with individual exhaust units. The units are extremely antiquated.

Rating: 1

- The corridors located within the building were provided with wall mounted convectors and/or fin tube for generalized space heating. The individual convectors/fin tube was controlled through individual pneumatic wall mounted thermostats.

Rating: 1

- It was noted that there was no exhaust ventilation located throughout the corridor areas and no supply ventilation as well. This condition is not code compliant.

Rating: 1

- The administration area is heated through wall mounted fin tube with individual thermostatic control valves. Ventilation is through the use of operable windows within the space. The exhaust system is minimal and in some cases no exhaust was provided. This condition is not code compliant.

Rating: 1

- Ductless split air conditioning units or window air conditioning units are utilized for cooling purposes where required.

Rating: 5

- Make-up air for individual toilets was through the use of louvers located within the doors.

Rating: 1

- Heating of the toilet spaces were through the use of wall mounted fintube radiation which was controlled through the use of a pneumatic thermostat.

Rating: 1

Executive Summary - Plumbing

The West Intermediate School was built in 1964. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping, and LP gas. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The school plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Existing Conditions:

- Plumbing fixtures consist of wall hung water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Classroom sinks are counter mounted with gooseneck faucet. Electric water coolers are wall mounted with vinyl cabinet and stainless steel bowl. Some rooms have abandoned emergency showers. Art room sinks are equipped with sediment traps. In general the fixtures do not meet accessibility standards and are not water conserving.

Rating – 2

- Domestic water service is 4-inch in size and includes a 2-inch water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition. Water piping near service and water heaters is not insulated.

Rating – 2

- Domestic water for the building is generated through two indirect water heaters fed from the oil-fired heating boilers. The tank capacity of each heater is 119 gallons. Hot water is recirculated. There is a thermostatic mixing valve and expansion tank.

Rating – 4

- LP gas supplies the Kitchen cooking equipment. Gas piping is black steel with threaded joints.

Rating – 3

- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Rating – 2

- Mechanical room has a duplex sewage ejector. System is original to the building. Pumps appear operational. Tank cover is in place and tank is vented. Shutoff valves on pump discharge lines have been replaced and look new.

Rating – 3

- Basement mechanical room has a groundwater infiltration issue. There is a simplex sump pump located in open pit which does not appear to be sized appropriately for the infiltration issue. New system should be designed to handle infiltration problem.

Rating - X

Executive Summary – Fire Protection

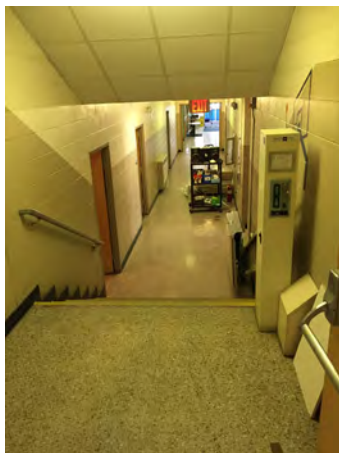
The Building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine if adequate Municipal water supply is available.

Rating: N/A

FACILITY PHOTOGRAPHS



WOBURN STREET SCHOOL

LOCATION: 227 WOBURN STREET

TOTAL # OF STORIES: 3

YEAR CONSTRUCTED: 1963

BUILDING AREA: 53,540 GSF

BUILDING OCCUPANCY: SCHOOL



Description

The Woburn Street School is a brick building that serves grades 1, 2, & 3 for roughly 400 students. It is located west of Interstate 93. Solid original construction have kept this facility in fair condition but deferred maintenance and lack of space have put substantial pressure on the facility. The main entrance to the school is off the bus loop area on High Street. Building identification is letter signage on the fascia over the main entry but is difficult to see.

Observations and Findings

SITE ASSESSMENT

Woburn School has a dedicated bus drop off on the east side with parking and vehicular circulation on the other three sides up to the building. Playing fields run north-south to the west of the school. Courts are at the north edge beyond the parking area. The site is well landscaped with a grove of trees buffering the school from Woburn and High Street. Further landscape buffers lie between the school and the bus loop. Parking is broken into sections with parent drop off at the north end, and staff and visitor parking at the southern end. Handicap parking is located off the bus loop near the main entry. A new septic system which includes a grease interceptor, was recently installed.

BUILDING EXTERIOR

The building exterior consists of a brick façade in good condition, a precast masonry panel at glazing zones in good condition, and metal windows and doors in poor condition that are in need of replacing. The roof is a combination of ballasted and EPDM broken into several sections. The original classroom wing is in the worst condition and the gym roof is in the best. Areas that have not been recently reroofed will require replacement in the near future.

BUILDING INTERIOR

Sections of terrazzo flooring have remained in good condition. Most of the flooring is 12x12 VCT. The gym has a wood floor in good condition. Typical ceilings are a combination of 24x24 and 24x48 ACT which are in fair to poor condition. Walls are typically painted CMU which is mostly in good condition. There is ceramic tile over CMU in the toilet rooms in fair condition. Classrooms in the newer part of the classroom wing are double sized with operable partitions. Partitions always stay closed and are in fair condition.

STRUCTURE

Structure consists of steel frame on a C.I.P. concrete basement. The gym is framed with exposed open web joists with corrugated metal decking above, which is the typical system for the building overall. No other exposed structure was observed.

BUILDING SYSTEMS

Electrical panels, electrical distribution, one boiler, HVAC, and plumbing systems are all presumably original to the building, and are beyond their intended useful life, and should be replaced. Interior and exterior lighting should be upgraded to LED along with associated lighting controls and paging system. Kitchen outlets need to be replaced with GFI protected circuits. Original distribution piping insulation is suspected to contain asbestos. Kitchen hood, air handling units, and unit ventilators are all in poor condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

The building contains several internal level changes without appropriate accessibility accommodations. Emergency lighting and exit signs, fire alarms, horn strobes, pull stations, and smoke detectors are brand new for this non-sprinklered building and appear to meet current requirements. The kitchen vent hood has no dedicated make up air of an Ansul fire suppression system. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

WOBURN STREET SCHOOL BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	3
Siding / Cladding	2
Windows	1
Doors	1
Canopies / Overhangs	2
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	4
Life Safety: Exit Signs	4
Life Safety: Emergency Lighting	4
INTERIOR	
Condition of Walls	3
Base	2
Flooring	3
Ceiling	2
Stairs	3
Handrails	2
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	2
Panel / Distribution	2
LIGHTING	
Lighting	1
Lighting Controls	N/A

MECHANICAL	
Boiler	0
Fuel	N/A
HVAC	1
PLUMBING	
Toilet Rooms	1
Kitchen	4
Domestic Water	2
STRUCTURE	
Observable Steel	3
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

WOBURN STREET SCHOOL

Executive Summary - Electrical

Most of the existing electrical equipment is original to the building with some exceptions. The fire alarm system including the control panel, devices, door holders, and speaker/strobes are relatively new and meet the latest requirements. Original equipment installed in 1963 is beyond its intended useful life. Existing electrical service equipment, distribution panels, non LED interior and exterior lighting, lighting controls and paging system should be replaced. It was noted that some of the corridor panels were not locked and could be easily accessed. Unlocked panels are a safety concern and should be addressed.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The secondary electrical service consists of a Westinghouse main disconnect switch rated at 600 Amperes, 120/208Volts, 3 Phase, 4 Wire with an exterior utility company meter on the utility pole. The service is overhead from a pole mounted transformer.

Rating: 2

- The lighting and power panels are Federal Pacific house circuit breaker type and are located throughout the building. There is no TVSS (transient voltage suppressor) protection at the distribution panel and remote panels. Circuits should be separate by load type and TVSS should be added to panels that serve computer equipment.

Rating: 2

- Existing lighting consists of surface wraparound fixtures with T12 lamps in classrooms, corridors, offices, and utility rooms. The cafetorium has 2x4 recessed prismatic fixtures and the gymnasium has industrial 2'x4' surface mounted T5 fixtures. Controls are provided by local switches.

Rating: 1

- Exterior lighting consists of HID building mounted flood lights and wall packs. Some LED light fixtures are provided at exit doors.

Rating: 2

- The existing emergency lighting system is through self-contained emergency battery units. Exit signs appear to be LED type.

Rating: 3

- The building is equipped throughout with a new addressable automatic fire alarm system manufactured by Notifier; which consists of voice evacuation with speakers/strobes, smoke detectors, pull stations, heat detectors and door holders.
Rating: 5
- Paging system consists of an old Bogen console with clocks/speaker panels and call switch in the classrooms.
Rating: 2
- Existing security system includes motion sensors and door contacts throughout the building. An exterior camera is provided at the main entrance with an intercom system in the domain office.
Rating: 3
- There is no generator installed.
Rating: N/A
- The quantity of receptacles is minimum throughout the building.
Rating: 2
- Kitchen receptacles are not GFI protected. Also, there are no ansul system and EPOs (emergency power shut trip pushbuttons) installed in the kitchen.
Rating: N/A
- Telephone, CATV and fiber services run overhead from the utility pole to the building with termination in the electric room.
Rating: 3

Executive Summary - HVAC

The Woburn Street School equipment is all original to the building from 1963. Generally speaking, most systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, a continued limited service could be achieved, but the systems installed within this building are past their intended maximum serviceable life.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The boiler room is provided with two individual HB Smith 450 MILLS water tube boilers generating hot water. The boilers are original from 1962. Hot water is circulated throughout the building utilizing six base mounted end suction pumps for heating purposes. Each boiler is provided with a single fuel no. 2 fuel oil burner.
Rating - 0 (replace)
- The breeching from each boiler appears to be welded black steel and is insulated with what appears to be calcium silicate insulation with a canvas jacket. The boiler breeching enters a masonry chimney.
Rating - 0 (replace with boiler)
- No. 2 fuel oil is recirculated from a buried underground storage tank. Fuel oil is distributed to the boilers through the use of threaded black steel pipe. Each burner has a supply and return pipe associated with it which allows the fuel oil to circulate through the burner.
Rating - N/A
- Hot water supply and return piping appears to be schedule 40 black steel which is insulated. Insulation is suspect; appears to be asbestos.
Rating - 1
- Combustion air is provided through one individual duct which originates at a wall mounted louver and terminates at approximately twelve inches above the floor. The present condition is non-code compliant. Code requires one opening high and one opening low.
Rating - 0 (repair with boiler replacement)
- The automatic temperature control system is of the pneumatic type and is provided with a single storage tank with one compressor and motor. The system is provided with a refrigerated air dryer as well as an oil and water separators.
Rating - 1

- Existing kitchen equipment utilizes propane gas. There is a hood over the cooking equipment that is not code compliant. Also, there is no dedicated make-up air system. Make-up air is by surrounding spaces. There is no exhaust at the dishwasher.
Rating - 1
- The cafeteria is served by a hot water air handling unit located above the ceiling in the storage closet left of the stage. Air is supplied to the room via ceiling mounted supply diffusers. Return is accomplished by a transfer grille in the storage room door and a return grille in the storage room ceiling.
Rating - 1
- The gymnasium is provided with two indoor hot water air handling units. The air handling units has galvanized sheet metal ductwork associated with its respective unit which allows tempered air to travel into the space and terminate at the ceiling with diffusers. The return ductwork associated with the air handler is centrally located at floor level. Also located within the gymnasium was a length of fintube radiation located along the exterior walls approximately 12 feet above finished floor.
Rating – 1
- Each classroom space is provided with a wall mounted classroom unit ventilator located on the exterior wall. The unit ventilators are provided with a hot water coil with a pneumatic control valve. They are also provided with an outside air intake louver as well as filters, and a supply fan. These spaces were also provided with individual exhaust units. The units are extremely antiquated.
Rating - 1
- The corridors located within the building were provided with wall mounted convectors and/or fin tube for generalized space heating. The individual convectors/fin tube was controlled through individual pneumatic wall mounted thermostats.
Rating - 1
- It was noted that there was no exhaust ventilation located throughout the corridor areas and no supply ventilation as well. This condition is not code compliant.
Rating - 1
- The administration area is heated through wall mounted fin tube with individual thermostatic control valves. Ventilation is through the use of operable windows within the space. The exhaust system is minimal and in some cases no exhaust was provided. This condition is not code compliant.
Rating - 1
- Window mounted air conditioning units are utilized for cooling purposes where required.
Rating - 1
- Make-up air for the individual toilets was through the use of louvers located within the doors.
Rating - 1
- Heating of the toilet spaces were through the use of wall mounted fintube radiation which was controlled through the use of a pneumatic thermostat. It was noted that the radiation was damaged and had surface contamination.
Rating - 1

Executive Summary - Plumbing

The Woburn Street School was constructed in 1963. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping and LP gas. On-site septic system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The school plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of floor mounted water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Classroom sinks are stainless steel counter mounted with single temperature gooseneck faucet and bubbler. Electric water coolers are wall mount with vinyl cabinet and stainless steel bowl. Majority of water coolers are bagged so students cannot use fixture. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 1
- Domestic water service appears to be 2-inch in size and includes a water meter and pressure reducing valve. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition. Water piping around the meter and service entrance is not insulated.
Rating – 2
- Domestic water for the building is generated through two indirect water heaters fed from the oil-fired heating boilers. The tank capacity of each heater is 119 gallons. Hot water is recirculated. There is a thermostatic mixing valve and expansion tank. Water piping near the heaters is not insulated.
Rating – 4
- LP gas service is provided to the kitchen cooking equipment only. There are two exterior 120 gallon capacity storage tanks. Gas piping is black steel with threaded joints.
Rating – 4
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use. Roof was recently replaced.
Rating – 3

Executive Summary – Fire Protection

The Building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine if adequate Municipal water supply is available.

Rating: N/A

FACILITY PHOTOGRAPHS



SHAWSHEEN SCHOOL

LOCATION: 298 SHAWSHEEN AVENUE

TOTAL # OF STORIES: 3

YEAR CONSTRUCTED: 1970

BUILDING AREA: 56,253 GSF

BUILDING OCCUPANCY: SCHOOL



Description

The Shawsheen School is a brick building that serves grades 1, 2, & 3 for roughly 350 students. It is located at the intersection of Shawsheen Avenue and Hopkins Street. Solid original construction, and recent building upgrades have kept this facility in good condition. This building has benefitted from the most upgrades of any of the six schools in the study. The main entrance to the school is directly off Shawsheen Avenue. Building identification is letter signage on the fascia over the main entry which cannot be seen from Hopkins Street or by those approaching from the south.

Observations and Findings

SITE ASSESSMENT

Shawsheen School has a single paved area running along the west side of the building which includes a parking area on the north end of the school. Pavement runs up to the building façade. Bus drop off occurs within this paved area and is delineated with white striping. Circulation for children from the school to the play areas are also delineated with striping. Parent drop off occurs in the paved area at the north end of the building. There is a paved play area between the striped bus zone and the classroom wing. Handicap access to the School is via a ramped approach off Hopkins Street. Playing fields and playground are located north of the school just beyond the paved area. The site is minimally landscaped with only a few trees buffering the school from the streets. There is a moderate grass buffer zone between the streets and the school. The west edge of the site is a thick stand of trees beyond the parking area. Parking is not clearly marked from either Shawsheen Ave. or Hopkins St. Handicap parking is located close to the cafeteria and sidewalk travel is required to get to the accessible ramp which is not clearly identified.

BUILDING EXTERIOR

The building exterior consists of a brick façade in good condition, precast masonry panels at glazing zones in good condition. Concrete spandrel panels running between the top of windows and bottom of roof flashing edge is also in good condition. All building openings consisting of curtain wall systems for windows, doors, and spandrels between floors, were recently replaced and are in brand new condition. The roof was not accessible for the review but was reported to have been recently replaced. Metal roof flashing appears to be in very good to new condition.

BUILDING INTERIOR

Sections of terrazzo flooring have remained in good condition with signs of cracking for slab on grade areas. Most of the flooring is 9x9 VCT, which likely contains asbestos, and is in fair to poor condition with worn, cracked, or chipped areas throughout the building. A significant crack was observed in the Music Room running most of the length of the space. Replacement VCT has been made with newer 12x12 tiles. Typical ceilings are a combination of 24x24 and 24x48 ACT which are in fair to poor condition. Walls are typically painted CMU which is mostly in good condition. Classrooms throughout the building are double sized with operable partitions. Partitions always stay closed and are in fair condition.

STRUCTURE

Structure consists of steel frame on a C.I.P. concrete basement. The gym is framed with exposed open web joists with corrugated metal decking above, which is the typical system for the building overall. No other exposed structure was observed.

BUILDING SYSTEMS

Electrical panels and distribution is largely original to the building, is beyond its intended useful life, and should be replaced. Electrical panels were observed in stairways which are a code violation. Unlocked electrical panels were observed which are of concern for safety. Interior and exterior lighting should be upgraded to LED along with associated lighting controls and paging system. Kitchen outlets need to be replaced with GFI protected circuits. Boilers are brand new but original distribution piping insulation is suspected to contain asbestos. Kitchen hood, air handling units, and unit ventilators are all in poor condition. Plumbing systems were noted to be beyond their useful life.

Additional notes from the building systems consultants are provided on following pages.

REGULATORY COMPLIANCE

The building contains a stair lift at the gymnasium end to provide minimal accessibility accommodations to all three floors. Emergency lighting and exit signs, fire alarms, horn strobes, pull stations, and smoke detectors are brand new for this non-sprinklered building and appear to meet current requirements. The kitchen vent hood has no dedicated make up air of an Ansul fire suppression system. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

SHAWSHEEN SCHOOL BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	3
Siding / Cladding	3
Windows	4
Doors	4
Canopies / Overhangs	3
Roof	4
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	4
Life Safety: Exit Signs	4
Life Safety: Emergency Lighting	4
INTERIOR	
Condition of Walls	3
Base	3
Flooring	2
Ceiling	2
Stairs	2
Handrails	2
Doors	2
Glazing	3
ELECTRICAL	
Service Entrance	2
Panel / Distribution	2
LIGHTING	
Lighting	1
Lighting Controls	N/A

MECHANICAL	
Boiler	5
Fuel	N/A
HVAC	2
PLUMBING	
Toilet Rooms	2
Kitchen	3
Domestic Water	2
STRUCTURE	
Observable Steel	3
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

SHAWSHEEN SCHOOL

Executive Summary - Electrical

Most of the existing electrical equipment is original to the building with some exceptions. The fire alarm system including the control panel, devices, door holders, and speaker/strobes are relatively new and meet the latest requirements. Original equipment installed in 1970 is beyond its intended useful life. Existing electrical service equipment, distribution panels, non LED interior and exterior lighting, lighting controls and paging system should be replaced. It was noted that some of the corridor panels were not locked and could be easily accessed. Unlocked panels are a safety concern and should be addressed.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The secondary electrical service consists of a GE main disconnect switch rated at 1,200 Amperes, 120/208Volts, 3 Phase, 4 Wire with an exterior utility company meter on the utility pole. The service is underground from a pad mounted transformer.

Rating: 2

- The lighting and power panels are GE circuit breaker type and are located throughout the building. There is no TVSS (transient voltage suppressor) protection at the distribution panel and remote panels. Circuits should be separate by load type and TVSS should be added to panels that serve computer equipment.

Rating: 2

- Existing lighting consists of surface wraparound fixtures with T12 lamps in classrooms, corridors, offices, and utility rooms. The cafetorium has 2x4 recessed prismatic fixtures and the gymnasium has industrial 2'x4' surface mounted T5 fixtures. Controls are provided by local switches.

Rating: 1

- Exterior lighting consists of HID building mounted and pole mounted flood lights, wall packs. Some LED light fixtures are provided at exit doors. Main entrance has surface mounted HID square fixtures.

Rating: 2

- The existing emergency lighting system is through self-contained emergency battery units. Exit signs appear to be LED type.

Rating: 3

- The building is equipped throughout with a new addressable automatic fire alarm system manufactured by Notifier; which consists of voice evacuation with speakers/strobes, smoke detectors, pull stations, and heat detectors.
Rating: 5
- Paging system consists of an old Bogen console with clocks/speaker panels and call switch in the classrooms.
Rating: 2
- Existing security system includes motion sensors and door contacts. Throughout the building, and exterior camera is provided at the main entrance with an intercom system.
Rating: 3
- There is no generator installed.
Rating: N/A
- The quantity of receptacles is minimum throughout the building.
Rating: 2
- Kitchen receptacles are not GFI protected. Also, there are no ansul system and EPOs (emergency power shut trap pushbuttons) installed in the kitchen.
Rating: N/A
- Electrical panels in boiler room were located within the path of stairway, this is a code violation.
Rating: N/A
- Telephone, CATV and fiber run underground from a utility pole to the electric room.
Rating: 3

Executive Summary - HVAC

The Shawsheen School was built in 1970. This building has received the most upgrades than any other school building we viewed. Generally speaking, most systems are operating and maintaining reasonable space temperature control.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- There are three boilers. Two new gas fired high efficiency Camus boilers were installed recently. Both boilers are sealed combustion type; flue venting is AL29-4C double wall venting to the outdoors with insulated galvanized ductwork for the combustion air. The third boiler is approximately ten years old and is a Weil McLain Series 88 boiler. There are two floor mounted end suction pumps with variable frequency drives (VFD) to modulate pump speed based on system pressure.
All other equipment associated with the boilers, such as expansion tank and air separator, were replaced also.
Rating: 5
- Hot water supply and return piping appears to be schedule 40 black steel which is insulated. Insulation on new piping within mechanical room is good but existing piping is suspect and appears to be asbestos.
Rating: 1
- The automatic temperature control system is of the pneumatic type and is provided with a single storage tank with duplex compressor and motors. The system is provided with a refrigerated air dryer, as well as, oil and water separators.
Rating: 2
- Existing kitchen equipment utilizes natural gas. There is a hood over the cooking equipment that is not code compliant (no ansul system). Also, there is no dedicated make-up air system. Make-up air is by surrounding spaces. There is an exhaust system at the dishwasher. There is an air handling unit in the supply closet that supplies heat and ventilation to the kitchen area.
Rating: 2
- The cafeteria is served by a hot water air handling unit located above the ceiling in the storage closet left of the stage. Air is supplied to the room via ceiling mounted supply diffusers. Return is accomplished by a transfer grille in the storage room door and a return grille in the storage room ceiling.
Rating: 1

- The gymnasium is provided with two indoor hot water air handling units. The air handling units have galvanized sheet metal ductwork associated with its respective unit which allows tempered air to travel into the space and terminate at the ceiling with diffusers. The return ductwork associated with the air handler is centrally located at floor level. Also, located within the gymnasium was a length of fin tube radiation located along the exterior walls approximately 12 feet above finished floor.

Rating: 1

- Each classroom space is provided with a wall mounted classroom unit ventilator located on the exterior wall. The unit ventilators are provided with a hot water coil with a pneumatic control valve. They are also provided with an outside air intake louver, as well as, filters and a supply fan. These spaces were also provided with individual exhaust units. The units are extremely antiquated.

Also, there are ductless cooling units in many of the classrooms.

Rating: 1 for UV's and 5 for ductless cooling units

- The corridors located within the building were provided with wall mounted convectors and/or fin tube for generalized space heating. The individual convectors/fin tube was controlled through individual pneumatic wall mounted thermostats.

Rating: 1

- It was noted that there was no exhaust ventilation located throughout the corridor areas and no supply ventilation as well. This condition is not code compliant.

Rating: 1

- The administration area is heated through wall mounted fin tube with individual thermostatic control valves. Ventilation is through the use of operable windows within the space. The exhaust system is minimal and in some cases no exhaust was provided. This condition is not code compliant.

Rating: 1

- Ductless split air conditioning units are utilized for cooling purposes where required.

Rating: 5

- Make-up air for the individual toilets was through the use of louvers located within the doors.

Rating: 1

- Heating of the toilet spaces were through the use of wall mounted fintube radiation which was controlled through the use of a pneumatic thermostat.

Rating: 1

Executive Summary - Plumbing

The Shawsheen School was built in 1970. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping, natural gas, and LP gas. On-site septic system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The school plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of floor mounted water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Classroom sinks are stainless steel counter mounted with single temperature gooseneck faucet and bubbler. Electric water coolers are wall mount with vinyl cabinet and stainless steel bowl. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2
- Domestic water service appears to be 2-inch in size and includes a water meter and pressure reducing valve. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition.
Rating – 2
- Domestic water for the building is generated through two indirect water heaters fed from the oil-fired heating boilers. The tank capacity of each heater is 119 gallons. Hot water is recirculated. There is a thermostatic mixing valve and expansion tank. Water piping near the heaters is not insulated.
Rating – 4
- Natural gas supplies the heating boilers. Installation appears to be recent. Natural gas piping is black steel with welded joints. Gas meter is located on exterior of the building adjacent to the Mechanical room.
Rating – 4
- LP gas service is provided to the kitchen cooking equipment only. There are a single horizontal exterior 500 gallon capacity storage tank. Gas piping is black steel with threaded joints. It was indicated that the Kitchen will soon be converted to natural gas.
Rating – 3

- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use. Roof was recently replaced.
Rating – 3
- Mechanical room has a duplex sewage ejector. System is original to the building. Pumps appear operational. Tank cover is in place and tank is vented.
Rating - 2

Executive Summary – Fire Protection

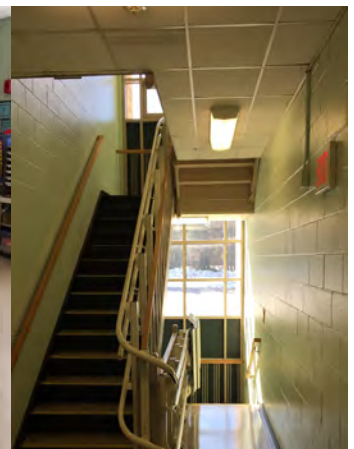
The Building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine if adequate Municipal water supply is available.

Rating: N/A

FACILITY PHOTOGRAPHS



WILDWOOD SCHOOL

LOCATION: 182 WILDWOOD STREET

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1955

BUILDING AREA: 29,160 GSF

BUILDING OCCUPANCY: SCHOOL



Description

The Wildwood Early Childhood Center is a masonry building that serves grades Pre-K and K for roughly 165 students. It is located relatively close to Wilmington High School which is to the northwest. This facility is the oldest building owned by Wilmington Public Schools. Its age has created a long list of exterior and infrastructure upgrade requirements. The main entrance to the school faces Wildwood Street but is set back and is at a higher elevation than the street. Building identification is ground mounted signage next to the main entry and a sign mounted to the façade of the cafetorium / gym.

Observations and Findings

SITE ASSESSMENT

The school sits on a large parcel of land with drop off circulation in the front and parking at both sides and at the rear. Play areas, fields, and courts are located behind the building to the east. Landscaping is mainly grass with a few deciduous trees and shrubs near the building. Parking is fairly well defined with the exception of the large paved area behind the building. Handicap parking is located along a linear zone at the bus drop off area near the main entry.

BUILDING EXTERIOR

Pointing is required in several masonry locations on the brick façade and chimney. Clearstory glazing of glass block has been covered along the north side of the cafeteria and broken glass block units were observed from the roof. The EPDM roof was observed to be in poor condition with ponding in areas that were associated with common leaks below. Replacement of the roof is required in the near future.

BUILDING INTERIOR

Wildwood's interior finishes are all generally in poor condition. Notably, a spray applied acoustic treatment was added and not finished to specifications. The intent was a trowel finish but it looks like the entire common area and large program area ceilings have spray applied fireproofing. The result is that the finish collects dirt and grime and is impossible to clean.

STRUCTURE

The building structure is presumed to be load bearing masonry with wood framed roof joists and decking. The cafetorium is framed with structural steel with masonry infill.

BUILDING SYSTEMS

Electrical panels and distribution are largely original to the building. These are beyond the intended useful life, and should be replaced. Unlocked electrical panels were observed which are of concern for safety. Interior and exterior lighting should be upgraded to LED along with associated lighting controls and paging system. Kitchen outlets need to be replaced with GFI protected circuits. Similarly, the boilers and its distribution piping are old. Occupied spaces suffer from very inconsistent temperature control, often with rooms sig-

nificantly overheating. Facilities staff noted that piping is constantly failing and patching boiler distribution piping has become a continuous effort. Kitchen hood, air handling units, and unit ventilators are all in poor condition. All original systems have outlived their useful life and should be replaced. Plumbing systems were noted to be beyond their useful life. Much of the plumbing distribution runs along an unheated attic space and is subject to freezing. Burst pipes have been a continual problem.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Emergency lighting and exit signs, fire alarms, horn strobes, pull stations, and smoke detectors are brand new for this non-sprinklered building and appear to meet current requirements. The kitchen vent hood has no dedicated make up air of an Ansul fire suppression system. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

WILDWOOD SCHOOL BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR

Exposed Foundation	3
Brick / Masonry	1
Siding / Cladding	1
Windows	1
Doors	2
Canopies / Overhangs	1
Roof	2

LIFE SAFETY

Sprinkler Y/N	N
Fire Alarm / Early Detection	2
Life Safety: Exit Signs	4
Life Safety: Emergency Lighting	3

INTERIOR

Condition of Walls	1
Base	1
Flooring	1
Ceiling	1
Stairs	N/A
Handrails	N/A
Doors	1
Glazing	2

ELECTRICAL

Service Entrance	1
Panel / Distribution	1

LIGHTING

Lighting	1
Lighting Controls	N/A

MECHANICAL

Boiler	2
Fuel	N/A
HVAC	1

PLUMBING

Toilet Rooms	1
Kitchen	N/A
Domestic Water	2

STRUCTURE

Observable Steel	2
Observable Masonry	2
Headers / Lintels	2

COMMENTS

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

WILDWOOD SCHOOL

Executive Summary - Electrical

Most of the existing electrical equipment is original to the building with some exceptions. The fire alarm system including the control panel, devices, door holders, and speaker/strobes are relatively new and meet the latest requirements. Original equipment installed in 1955 is beyond its intended useful life. Existing electrical service equipment, distribution panels, non LED interior and exterior lighting, lighting controls and paging system should be replaced. It was noted that some of the corridor panels were not locked and could be easily accessed. Unlocked panels are a safety concern and should be addressed.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The secondary electrical service consists of a GE main disconnect switch rated at 400 Amperes, 120/208Volts, 3 Phase, 4 Wire with an exterior utility company meter mounted on the exterior of the building. The service is overhead from a pole mounted transformer.

Rating: 1

- The lighting and power panels are Westinghouse (old) and Murray (new) circuit breaker type and are located throughout the building. There is no TVSS (transient voltage suppressor) protection at the distribution panel and remote panels. Circuits should be separate by load type and TVSS should be added to panels that serve computer equipment.

Rating: 1

- Existing lighting consists of surface wraparound fixtures with T12 lamps in classrooms, offices, and utility rooms. The cafetorium/gymnasium has industrial 2'x4' surface mounted T5 fixtures. Controls are provided by local switches. Corridors have wall mounted linear fluorescent fixtures. Classrooms are provided with pendant parabolic fluorescent with T12 lamps.

Rating: 1

- Exterior lighting consists of HID building mounted flood lights and wall packs. Main entrance has recessed HID square fixtures.

Rating: 2

- The existing emergency lighting system is through self-contained emergency battery units. Exit signs appear to be LED type.

Rating: 3

- The building is equipped throughout with a new addressable automatic fire alarm system manufactured by Notifier; which consists of voice evacuation with speakers/strobes, smoke detectors, pull stations, heat detectors and door holders.
Rating: 5
- Paging system consists of an old Bogen console with clocks/speaker panels and call switch in the classrooms.
Rating: 2
- Existing security system includes motion sensors and door contacts throughout the building. An exterior camera is provided at the main entrance with an intercom system.
Rating: 3
- There is no generator installed.
Rating: N/A
- The quantity of receptacles is minimum throughout the building. Receptacles installed in Pre-K and kindergarten classrooms are not tamper resistant safety receptacles.
Rating: 2
- Kitchen receptacles are not GFI protected. Also, there are no ansul system and EPOs (emergency power shut trip pushbuttons) installed in the kitchen.
Rating: N/A
- Telephone, CATV and fiber services run overhead from the utility pole to the building with termination in the electric room.
Rating: 3

Executive Summary - HVAC

Wildwood School equipment is mostly original to the building from 1955. Generally speaking, systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, a continued limited service could be achieved, but the systems installed within this building are past their intended maximum serviceable life. HVAC equipment within the Mechanical Room was replaced in 1998.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The boilers were replaced in 1998. Two new oil fired Weil McLain steam boilers were installed. Boilers are atmospheric type; Breeching is insulated and run to the existing masonry chimney. Other equipment associated with the boilers, such as condensate return pumps and the boiler water feed unit, were replaced also.

Rating: 2

- Condensate is returned to the boiler room through schedule 80 black steel condensate return system.

Rating: 1

- Low-pressure steam supply piping appears to be schedule 40 black steel insulated with what appears to be fiberglass insulation (within mechanical room). Insulation throughout the building is suspect, and appears to be asbestos.

Rating: 1

- The automatic temperature control system is of the pneumatic type. On the day of our visit, we were told the system wasn't working and was set up to operate with only one thermostat controlling the entire building.

Rating: 0

- Existing kitchen equipment utilizes propane gas. There is a hood over the cooking equipment that is not code compliant (no ansul system). Also, there is no dedicated make-up air system. Make-up air is by surrounding spaces. There is no exhaust at the dishwasher.

Rating: 1

- The cafeteria/gymnasium is served by a steam air handling unit located above the stage. Air is supplied to the cafe via exposed ductwork through four large circular diffusers. Return is accomplished by a return grille below the stage.

Rating: 1

- Each classroom space is provided with a wall mounted classroom unit ventilator located on the exterior wall. The unit ventilators are provided with a steam coil. They are also provided with an outside air intake louver, as well as, filters and a supply fan. Exhaust in these spaces is through an exhaust grille located in the closet.
For cooling, there are window air conditioning units in many of the classrooms at the high window.
Rating: 1
- The corridors located within the building were provided with wall mounted convectors and/or fin tube for generalized space heating. Cabinet heaters were located in the entry vestibules.
Rating: 1
- It was noted that there was an operating exhaust system for the corridor areas.
Rating: 1
- The administration area is heated through wall mounted fin tube. Ventilation is through the use of operable windows within the space. The exhaust system is minimal and in some cases no exhaust was provided. This condition is not code compliant.
Rating: 1
- There was only one ductless split air conditioning unit which was located in the staff break room.
Rating: 4
- Make-up air for the individual toilets was through the use of louvers located within the doors.
Rating: 1
- Heating of the toilet spaces were through the use of wall mounted fintube radiation.
Rating: 1

Executive Summary - Plumbing

Wildwood School was constructed in 1955. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and storm drain piping. On-site septic system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The school plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of wall hung and floor mounted water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Student lavatories are supplied with cold water only. Classroom sinks are counter mounted with gooseneck faucet. Drinking fountains are wall mounted vitreous china. Electric water coolers are wall mounted, vinyl cabinets with stainless steel bowl. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 1
- Domestic water service appears to be 3-inch in size and includes a compound water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition. Water piping in the mechanical space is not insulated.
Rating – 2
- Domestic water for the building is generated through an electric tank type water heater, 50 gallon capacity. Hot water is recirculated. There is a thermostatic mixing valve and expansion tank on the system.
Rating – 3
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.
Rating – 2

Executive Summary – Fire Protection

The Building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine if adequate Municipal water supply is available.

Rating: N/A

FACILITY PHOTOGRAPHS



BOUTWELL SCHOOL

LOCATION: 17 BOUTWELL STREET

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1961

BUILDING AREA: 20,800 GSF

BUILDING OCCUPANCY: SCHOOL



Description

The Boutwell Early Childhood Center is a masonry building that serves grades Pre-K and K for roughly 165 students. It is located to the south of the Wilmington Middle School and West Middle School. Solid original construction have kept this facility in fair condition but deferred maintenance has created a long list of exterior and infrastructure upgrade requirements. The main entrance to the school is immediately off the parking lot at the end of Carter Lane. Building identification is ground mounted signage next to the parking lot entry.

Observations and Findings

SITE ASSESSMENT

This school is located in the education campus that serves West Wilmington. Site circulation is distinct and clearly splits off of Carter Lane. Playground and play field is immediately to the West. A school district playing field is located across Carter Lane to the east of the building. Landscaping consists of small-medium trees along Carter Lane and bushes near the main entry. There is a sizeable grass buffer separating the school from Carter Lane which also provides a distinct entry for vehicles to the parking lot. Parking is located on the south end of the building with a vehicular loop providing 360 degree access and a bus loop zone. The parking area is clearly striped and organized with handicap parking striped next to the main entry.

BUILDING EXTERIOR

The building exterior is composed of brick veneer, metal windows, and painted wood trim and is generally in fair to good condition. Brick at boiler room chimney requires pointing. The exposed foundation shows signs of deterioration, especially at exterior door locations. Single pane, metal windows are original to the building and are thermally unbroken. They are well past their intended useful life and should be replaced to improve energy efficiency and occupant comfort. The roof has areas of ponding and large aggregate debris collection and needs to be repaired or replaced in the near future along with the associated edge trim flashing.

BUILDING INTERIOR

The interior contains a central cafetorium / gym / assembly space that is ringed by a circular corridor. Classrooms that are wedge shaped and create an outer ring compose most of the building's program area. Interior wall finishes are CMU with wood millwork and are in good condition. Cafetorium and classroom flooring is a mix of original 9x9 VCT, which very likely contains asbestos, and replacement 12x12 VCT. Corridors and toilet rooms have terrazzo flooring which is in good condition. Ceilings, which are plaster in the corridor/ toilet room areas and tongue and groove wood in the auditorium and office spaces, are in good condition.

STRUCTURE

The building structure is a hybrid of load bearing concrete masonry block walls and glue laminated beams. The beams run concentrically around the building acting as principal purlins. The glue laminated beams in the auditorium are directly supported by tube steel columns. Load bearing walls are supported by C.I.P. concrete foundation walls and footings. Evidence of minor building settling is evident by cracks in the flooring at the edges of the circular corridor.

BUILDING SYSTEMS

Electrical panels, electrical distribution, HVAC, and plumbing systems are all presumably original to the building, and are beyond their intended useful life, and should be replaced. Kitchen outlets need to be replaced with GFI protected circuits. The air handler, which utilizes natural gas, is new but original distribution piping insulation is original and inefficient. Kitchen hood, air handling units, and unit ventilators are all in poor condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Emergency lighting and exit signs, fire alarms, horn strobes, pull stations, and smoke detectors are brand new for this non-sprinklered building and appear to meet current requirements. The kitchen vent hood has no dedicated make up air of an Ansul fire suppression system. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection

BOUTWELL SCHOOL BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	1
Brick / Masonry	3
Siding / Cladding	2
Windows	1
Doors	1
Canopies / Overhangs	2
Roof	0
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	4
Life Safety: Emergency Lighting	4
INTERIOR	
Condition of Walls	3
Base	2
Flooring	1
Ceiling	2
Stairs	N/A
Handrails	N/A
Doors	2
Glazing	3
ELECTRICAL	
Service Entrance	1
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler	N/A
Fuel	N/A
HVAC	5
PLUMBING	
Toilet Rooms	2
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	3
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

BOUTWELL SCHOOL

Executive Summary - Electrical

Most of the existing electrical equipment is original to the building including the fire alarm system, intercom system service equipment, and distribution panels. Original equipment installed in 1961 is beyond its intended useful life. It was noted that some of the corridor panels were not locked and could be easily accessed. Unlocked panels are a safety concern and should be addressed. A new fire alarm system with voice evacuation and devices to meet current requirements should be provided.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The secondary electrical service consists of a Frank Adams main disconnect switch rated at 400Amperes, 120/208Volts, 3Phase, 4Wire with an interior utility company meter located in the storage area. The service is overhead from a pole mounted transformer.

Rating: 1

- The lighting and power panels are Frank Adams (old) and GE (new) circuit breaker type and are located throughout the building. There is no TVSS (Transient Voltage Suppressor) protection at the distribution panel and remote panels. Circuits should be separate by load type and TVSS should be added to panels that serve computer equipment.

Rating: 1

- Existing lighting consist of pendant mounted parabolic fixtures with T12 lamps in classrooms, offices, an utility rooms. The cafetorium/gym has 2x4 surface prismatic fixtures corridors have round surface mounted fluorescent fixtures. Controls are provided with local switch.

Rating: 2

- Exterior lighting consists of HID utility pole mounted flood lights and surface mounted HID under the canopy at the main entrance.

Rating: 2

- The existing emergency lighting system is through self-contained plug in emergency battery units. Exit signs appear not to be LED type.

Rating: 2

- The building is equipped throughout with a conventional automatic fire alarm system manufactured by Fire-Lite; which consists of horn/strobes, smoke detectors, pull stations, and heat detectors. Coverage is not sufficient for a non-sprinklered building. System does not meet ADA requirements.

Rating: 1

- Paging system consist of an old Rauland console with clocks/speaker and call switch in the classrooms.

Rating: 2

- Existing security system includes motion sensors and door contacts throughout the building. An exterior camera is provided at the main entrance with an intercom system.

Rating: 3

- There is no generator installed.

Rating: N/A

- The quantity of receptacles is minimum throughout the building. Receptacles installed in kindergarten classrooms are not tamper resistant safety receptacles.

Rating: 2

- Kitchen receptacles are not GFI protected. Also there are no ansul system and EPOs (emergency power shunt trip push buttons) installed in the kitchen.

Rating: N/A

- Telephone, CATV and fiber run underground from a utility pole to the electric room.

Rating: 2

Executive Summary - HVAC

The Boutwell School building is identical to the Town Hall Building. Equipment is all original to the building from 1961, with the exception of the air handling unit in the machine room. The HVAC system installed is called a dual duct system. There are two main ducts in the circular crawl space below; one is a hot deck and the other is a cold deck. Each duct is connected to mixing boxes which then supplies tempered air into a room. There is one mixing box per room. This system is a very antiquated system and is not energy efficient. Generally speaking, the system is operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, continued service could be achieved, but the system installed within this building is well past its intended maximum serviceable life.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The building air handler was replaced two years ago. The building was changed over from fuel oil to natural gas. The air handler is a Reznor forced hot air system.
Rating: 5
- The breeching from the air handler is all new and runs through the roof.
Rating: 5
- Combustion air is provided through one individual louver installed in the exterior wall.
Rating: 1
- There is a linear diffuser in each exterior room along the exterior within the cabinetry. Return air is through a wall mounted grille located near the floor at the door entrance.
Rating: 1
- The large meeting room is provided with minimal air from the house dual duct system. Supply air is located high in the space. The return ductwork associated with the air handler is centrally located at floor level.
Rating: 1
- Window mounted air conditioning units are utilized for cooling purposes where required.
Rating: 1
- Make-up air for the individual toilets was through the use of louvers located within the doors.
Rating: 1

Executive Summary - Plumbing

The Boutwell Early Childhood Center was built in 1961. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping, and natural gas. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The school plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of wall hung water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Classroom sinks are counter mounted with single temperature gooseneck faucet and bubbler. Drinking fountains are wall mounted vitreous china. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2
- Domestic water service is 2-inch in size and includes a water meter and pressure reducing valve. There is a 1-inch water meter and backflow preventer for the exterior irrigation system. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition. Water piping in the mechanical space is not insulated.
Rating – 2
- Domestic water for the building is generated through an electric tank type water heater, 80 gallon capacity. Hot water is recirculated. There is no thermostatic mixing valve to prevent scalding and there is no expansion tank on the system. There is a 40 gallon electric water heater adjacent to the Kitchen for washing.
Rating – 3
- Natural gas service and meter are located on exterior of building adjacent to the Mechanical Room. Natural gas supplies interior air handling units. Gas piping is black steel with threaded joints.
Rating – 4
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.
Rating – 2

Executive Summary – Fire Protection

The Building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine if adequate Municipal water supply is available.

Rating: N/A

FACILITY PHOTOGRAPHS



TOWN HALL

LOCATION: 121 GLEN ROAD

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1958

BUILDING AREA: 20,000 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES



Description

Wilmington Town Hall occupies a circular masonry structure that formerly housed a public elementary school. The building is located by itself, not near to any other municipal facilities. Cushing Field is located to the immediate North of the building. The building was not intended as a permanent location for Town Hall and many of the Town's municipal functions are shoehorned inside. The masonry construction creates significant limitations for program flexibility and renovations.

Observation and Findings

SITE ASSESSMENT

The facility is accessed off Glenn Road across from the intersection of Harnden Street. There is a sign on Glenn Road identifying the access road to Town Hall as well as a sign located directly in front of the main entry door. The circular building is surrounded by pavement and parking with a landscaped ring, roughly twelve feet deep, separating the building façade from the pavement. The building has an accessible entrance directly off the access spur from Glenn Road. Striped parking is provided around most of the building which is mostly single loaded, angled parking. Striping could be made more efficient and potentially yield more spaces. Designated handicap parking is on both sides of the striped entranceway. The facility is mostly surrounded by trees with the Cushing Field recreation fields located just to the north of the building.

BUILDING EXTERIOR

The building exterior composed of brick veneer, metal windows, and painted wood trim is generally in fair to good condition. Exposed foundation shows signs of deterioration especially at exterior door locations. Single pane, metal windows are original to the building and are thermally unbroken. They are well past their intended useful life and should be replaced to improve energy efficiency and occupant comfort. The roof was not observed but is reported to be a relatively new white EPDM by Town officials. There are a total of three building access doors around the perimeter and a second egress door servicing the Town Room (Room 9).

BUILDING INTERIOR

The interior contains a central auditorium assembly space that is ringed by a circular corridor. Town offices occupy former classrooms that are wedge shaped and create an outer ring, composing most of the building's program area. Interior wall finishes are CMU with wood millwork and are in good condition. Flooring is a mix of original 9x9 VCT, which very likely contains asbestos, and replacement 12x12 VCT. Toilet rooms have terrazzo flooring which are in good condition. Ceilings, which are plaster in the corridor / toilet room areas and tongue and groove wood in the auditorium and office spaces, are in good condition.

STRUCTURE

The building structure is a hybrid of load bearing concrete masonry block walls and glue laminated beams. The beams run concentrically around the building acting as principal purlins. The glue laminated beams in the auditorium are directly supported by tube steel columns. Load bearing walls are supported by C.I.P. concrete foundation walls and footings. Evidence of minor building settling is evident by cracks in the flooring at the edges of the circular corridor.

BUILDING SYSTEMS

Most of the building systems in Town Hall are original and are well past their intended useful life. This includes the dual duct HVAC system, plumbing system, and electrical system. With the exception of a newer ductless split system in the Town Room (Room 9), all building systems rated in poor or poor to fair condition. If the building is to be kept as a municipal facility, serious consideration should be made to replace the mechanical, electrical, and plumbing infrastructure.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Fire alarms, horn strobes, pull stations, and smoke detectors do not provide an appropriate amount of coverage for a non-sprinklered building. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection. The front door does have egress hardware.

OTHER COMMENTS

Although the building is in very good structural condition, significant capital improvements are required at a systems level and for exterior glazing and floor finishes, to provide functional longevity for this building.

TOWN HALL BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	3
Siding / Cladding	2
Windows	1
Doors	2
Canopies / Overhangs	2
Roof	N/A
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	3
Life Safety: Emergency Lighting	4
INTERIOR	
Condition of Walls	3
Base	2
Flooring	2
Ceiling	3
Stairs	N/A
Handrails	N/A
Doors	3
Glazing	3
ELECTRICAL	
Service Entrance	1
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler	1
Fuel	2
HVAC	1
PLUMBING	
Toilet Rooms	2
Kitchen	N/A
Domestic Water	3
STRUCTURE	
Observable Steel	2
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

TOWN HALL

Executive Summary - Electrical

Most of the existing electrical equipment is original to the building including the fire alarm system, intercom system, service equipment, and distribution panels. Original equipment is beyond its intended useful life. A new fire alarm system with ADA compliant devices and equipment to meet current requirements should be provided.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The secondary electrical service consists of a main disconnect switch rated at 400 Amperes, 120/208 Volts, 3 Phase, 4 Wire with an interior utility company meter located in the electric room. The service is overhead from a pole mounted transformer.
Rating: 1
- The lighting and power panels are Federal Pacific circuit breaker type and are located throughout the building.
Rating: 1
- Existing lighting consist of surface mounted wraparound fixtures T12 lamps in corridors, and utility rooms. The cafetorium has 2x4 surface prismatic fixtures. The offices have pendant mounted wraparound fluorescent fixtures. Controls are provided with local switch.
Rating: 2
- Exterior lighting consists of HID utility pole mounted flood lights and surface mounted HID under the canopy at the main entrance.
Rating: 1
- The existing emergency lighting system is through self-contained emergency battery units. Exit signs appear not to be LED type.
Rating: 2
- Telephone, CATV, and fiber run overhead from utility pole to the Electric Room.
Rating: 2

- The building is equipped throughout with a conventional automatic fire alarm system manufactured by Gamewell; which consists of horn/strobes, smoke detectors, pull stations, and heat detectors. Coverage is not sufficient for a non-sprinklered building. System does not meet ADA requirements.

Rating: 1

- Paging system consist of an old Rauland console with clocks/speaker and call switch in the classrooms. System no longer works.

Rating: 2

- Existing security system includes motion sensors and door contacts throughout the building.

Rating: 3

Executive Summary - HVAC

The Town Hall equipment is all original to the building from 1958. The HVAC system installed is called a dual duct system. There are two main ducts in the circular crawl space below; one is a hot deck and the other is a cold deck. Each duct is connected to mixing boxes which then supplies tempered air into a room. There is one mixing box per room. This system is a very antiquated system and is not energy efficient. Generally speaking, the system is operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, a continued limited service could be achieved, but the system installed within this building is well past its intended maximum serviceable life.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The building air handler is oil fired and is located within the machine room. The air handler is manufactured by Jackson & Church and appears to be original.

Rating: 1

- There is a linear diffuser in each exterior room along within the cabinetry. Return air is through a floor mounted linear grille.

Rating: 1

- The breeching from the air handler is galvanized ductwork and runs to a masonry chimney.

Rating: 1

- There are two new 660 gallon, No. 2 fuel oil storage tanks installed in the machine room. Fuel oil is distributed to the air handler through the use of threaded black steel pipe which turns into flexible tubing to the unit.

Rating: N/A

- Combustion air is provided through one individual louver installed in the exterior wall.
Rating: 1
- The large meeting room is provided with minimal air from the house dual duct system. Supply air is located high in the space. The return ductwork associated with the air handler is centrally located at floor level.
Rating: 1
- Window mounted air conditioning units are utilized for cooling purposes where required.
Rating: 1
- There was only one ductless split air conditioning unit which was located in the Town room.
Rating: 4
- Make-up air for the individual toilets was through the use of louvers located within the doors.
Rating: 1

Executive Summary - Plumbing

The Wilmington Town Hall was built in 1958. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system and storm drain piping. On-site septic system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The building plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New
 4 – Very Good
 3 – Good
 2 – Fair
 1 – Poor
 0 – Requires repair
 X – Requires immediate
 N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of wall mounted water closets with manual flush valves, wall hung urinals with manual or sensor flush valves, and wall hung lavatories with hot and cold water handles. Original Classroom sinks are vitreous china counter mounted with single temperature gooseneck faucet and bubbler. Electric water coolers are wall mount with vinyl cabinet and stainless steel bowl. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2

- Domestic water service appears to be 2-inch in size and includes a water meter and pressure reducing valve. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition.
Rating – 2
- Domestic water for the building is generated through an electric water heater. The tank capacity of each heater is 30 gallons. Domestic hot water is recirculated. There is no thermostatic mixing valve or expansion tank installed at the water heater. Water piping near the heaters is not insulated.
Rating – 3
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.
Rating – 2

Executive Summary – Fire Protection

The Wilmington Town Hall was constructed in 1958 and is 20,000 square feet. The building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine adequate capacity for Fire Protection requirements.

Rating: N/A

FACILITY PHOTOGRAPHS



MEMORIAL LIBRARY

LOCATION: 175 MIDDLESEX AVENUE

TOTAL # OF STORIES: 2

YEAR CONSTRUCTED: 1968

BUILDING AREA: 14,910 GSF

BUILDING OCCUPANCY: LIBRARY



Description

Constructed in 1968, the two-story building is in good condition due to the original high quality finishes and recent flooring and ceiling replacement. The Library is unique in that it has been assessed and rethought via a study and new project proposal in 2005. This included a space needs study and planning for a new building. The initiative provides fairly recent reference data on the facility. Observations that remain true include: the building systems are in poor condition, much of the stacks and support spaces are not ADA compliant, and the space lacks proper oversight and security. Since the study, however, the new High School has been built and trends in libraries have changed/evolved significantly. The need for significant renovation or potential new construction remains high to meet current needs, trends, and to become ADA compliant.

Observations and Findings

SITE ASSESSMENT

The Wilmington Memorial Library is one of the principal facilities in the historic town center. Pedestrian access to the front door is directly off Middlesex Avenue. Vehicular access is off Middlesex Avenue via one-way drives. There is also contiguous parking areas that connect to Wildwood Street. The Library is identified by a ground mounted sign on Middlesex Avenue and by wall mounted letter signage on the building façade.

BUILDING EXTERIOR

The exterior brick and painted wood trim façade of the library is in good condition. Needed facility improvements are limited to minor repainting of the brick and painting of the exterior wood paneling at the Middlesex Avenue entry.

BUILDING INTERIOR

Recent interior renovations and upgrades include new ACT ceilings and lighting, new carpet, and opening up the interior spaces. The original terrazzo flooring in the stairwell is in very good condition. Areas in need of repair/replacement include the VCT flooring and associated vinyl cove base. Non-renovated interior areas are in fair to poor condition, especially flooring.

STRUCTURE

The structure is cast in place concrete (walls, floor slabs, columns, and beams). All exposed structure appeared to be in good condition.

BUILDING SYSTEMS

The building systems are very old and in poor condition with the exception of recently added ductless split air conditioning units distributed throughout the building. Most interior lighting consists of T8 fluorescent fixtures which do not provide optimal light quality for reading. Building security is difficult due to the two building entry locations and the lack of visual oversight from the back parking lot. Visual oversight of all primary entrances should be attained either with renovation of the building/main desk location, rethinking the building entry sequence, and/or video surveillance. Building security should consider inventory controls, which is noted as a liability in the 2005 study.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Toilet rooms are not ADA compliant. Stair railings are not code compliant to current standards. Fire alarms, horn strobes, pull stations, and smoke detectors do not provide an appropriate amount of coverage for a non-sprinklered building. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

MEMORIAL LIBRARY BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	3
Brick / Masonry	3
Siding / Cladding	2
Windows	3
Doors	3
Canopies / Overhangs	3
Roof	3
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	3
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	3
Base	1
Flooring	2
Ceiling	3
Stairs	3
Handrails	2
Doors	2
Glazing	3
ELECTRICAL	
Service Entrance	2
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler	0
Fuel	0
HVAC	1
PLUMBING	
Toilet Rooms	2
Kitchen	2
Domestic Water	2
STRUCTURE	
Observable Steel	3
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

MEMORIAL LIBRARY

Executive Summary - Electrical

The electrical systems for the Library are functioning but are in fair to poor condition. The building does not have an intrusion system. The emergency lighting and exit signs need upgrading. A new fire alarm system with ADA compliant devices and equipment to meet current requirements should be provided. A new exterior gas generator should replace the existing interior units and include two automatic transfer switches and dedicated emergency electric room.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs underground into the building from a pad mounted transformer with a meter to the Westinghouse switchboard located in the Electric Room. The service is rated at 800 Amperes, 120/208Volt, 3 Phase, 4 Wire. The switchboard consists of a main breaker and distribution section.

Rating: 2

- The lighting and power panels are Westinghouse circuit breaker type and are located through the building. Existing equipment is original to the building and beyond its useful life. The newer Siemens panels are in good condition.

Rating: 1

- The interior lighting consists of 2x4 recessed parabolic fluorescent fixtures controlled with local switches. Surface wraparound fixtures are also located throughout the building.

Rating: 2

- Exterior lighting consists of building mounted HID wall packs and flood lights for parking area and traditional pendant mounted incandescent wall lanterns at the main entrance.

Rating: 2

- The emergency stand-by system consists of an interior rusting gas Kohler generator. One automatic transfer switch is provided in the electric room. There is no separation of life safety equipment and optional stand-by. Exit signs are located through the building.

Rating: 1

- Existing fire alarm system consists of a conventional GE ESL control panel, non ADA complaint horn/strobes, heat detectors, smoke detectors, and pull stations with insufficient coverage for a building without sprinklers.

Rating: 1

- Existing security system includes motion sensors and door contacts throughout the building. System is a magnum alert with a keypad in the Custodian's Office.

Rating: 2

- The telephone & CATV wiring runs overhead between the pole and the building with the terminal boards located in the electric room.

Rating: 2

Executive Summary - HVAC

The Library heating equipment is mostly original to the building from 1968. Generally speaking, most systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, a continued limited service could be achieved, but the heating systems installed within this building are past their intended maximum serviceable life.

A number of ductless split system cooling unit have been installed to air condition the building.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The boiler room is provided with one HB Smith 350 MILLS water tube boiler generating hot water. The boiler is original from 1968. Hot water is circulated throughout the building utilizing two inline circulating pumps for heating purposes. Boiler is provided with a single fuel No. 2 fuel oil burner.

Rating: 0 (replace)

- The breeching from the boiler appears to be welded black steel and is insulated with what appears to be calcium silicate insulation with a canvas jacket. The boiler breeching enters a masonry chimney.

Rating: 0 (replace when boiler replaced)

- No. 2 fuel oil is recirculated from a 2500 gallon underground storage tank. Fuel oil is distributed to the boiler through the use of threaded black steel pipe. Burner has a supply and return pipe associated with it which allows the fuel oil to circulate through the burner.

Rating: N/A

- Domestic water for the building is generated through an electric water heater. The tank capacity of each heater is 30 gallons. Domestic hot water is recirculated. There is no thermostatic mixing valve or expansion tank installed at the water heater. Water piping near the heaters is not insulated.
Rating – 3
- Combustion air is provided through one individual duct which originates at a wall mounted louver and terminates high in the room. The present condition is non-code compliant. Code requires one opening high and one opening low.
Rating: 0 (repair with boiler replacement)
- The automatic temperature control system is of the pneumatic type and is provided with a single storage tank with one compressor and motor. The system is provided with a refrigerated air dryer, as well as, oil and water separators.
Rating: 1
- Each space is provided with a wall mounted unit ventilator located on the exterior wall. The unit ventilators are provided with a hot water coil with a pneumatic control valve. They are also provided with an outside air intake louver, as well as, filters and a supply fan.
Rating: 1
- Wall mounted fin tube with individual thermostatic control valves is provided throughout the building. The exhaust system is minimal and is generally at toilet rooms, janitor closets, etc.
Rating: 1
- Wall mounted ductless split air conditioning units are utilized for cooling purposes throughout the library. Associated condensing units for all the ductless cooling units are scattered outdoors and in the attic. 18 units total.
Rating: 1
- Make-up air for the individual toilets was through the use of louvers located within the doors.
Rating: 1
- Heating of the toilet spaces were through the use of wall mounted fintube radiation which was controlled through the use of a pneumatic thermostat. It was noted that the radiation was damaged and had surface contamination.
Rating: 1

Executive Summary - Plumbing

The Memorial Library Building was built in 1968. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, LP gas piping. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in fair condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of wall mounted water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Kitchenette sinks are stainless steel, counter mounted with gooseneck faucet and hot and cold water handles. Electric water coolers are recessed stainless steel with recessed chiller. Janitor's Sinks are cast iron floor mounted with 3" trap standard. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2
- Domestic water service appears to be 1-1/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves to the building and are in fair condition. The domestic water piping is not insulated or labeled.
Rating – 2
- Domestic water for the building is generated through an electric tank type water heater. The tank capacity of each heater is 50 gallons and has a electrical input of 4500 watts. Domestic hot water is not recirculated. There is a thermostatic mixing valve at the outlet of the water heater. There is no expansion tank installed at the cold water make-up for the water heater. Domestic water piping near the heaters is uninsulated.
Rating – 3
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in poor condition. Smaller pipe sizes appear to be copper. In general, the original cast iron drainage piping should be replaced.
Rating – 1
- A 100 gallon LP gas tank is located outside of Mechanical Room. LP gas is dedicated to serve an emergency generator locate in the Mechanical Room. The natural gas piping is steel with threaded fittings. Overall the gas piping is in good condition.
Rating - 3

Executive Summary – Fire Protection

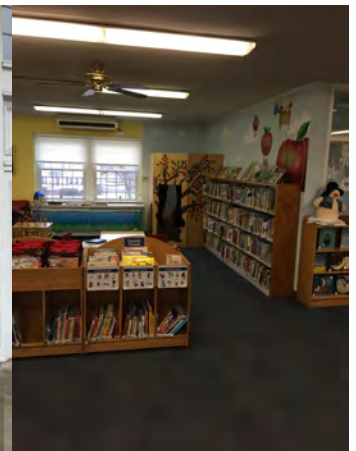
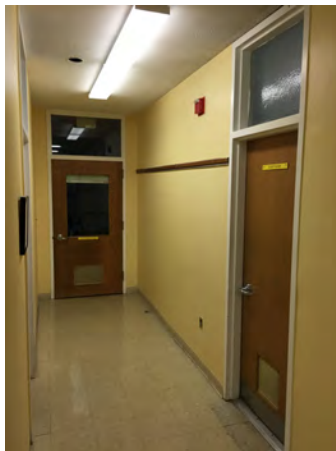
The Wilmington Memorial Library was constructed in 1968 and is 14,910 square feet. The building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine adequate capacity for Fire Protection requirements.

Rating: N/A

FACILITY OBSERVATIONS



PUBLIC SAFETY BUILDING

LOCATION: 1 ADELAIDE STREET

TOTAL # OF STORIES: 3

YEAR CONSTRUCTED: 2001

BUILDING AREA: 36,000 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES
(FIRE & POLICE)



Description

The Wilmington Memorial Public Safety Building provides combined, centralized Police and Fire services for the Town. Constructed in 2001, this facility is one of the newest municipal buildings in Wilmington. The core building is two stories with hip roof and a slab on grade at the ground floor. It houses all Police Functions, Fire Administration, and dispatch. A (5) bay apparatus wing runs perpendicular to the core building which is connected by a two story CMU veneer connector. The connector houses the Fire residential facilities, Firefighter support spaces, and building facility support spaces. HVAC equipment and emergency generator are located on flat roof sections of the building, primarily over the connector.

Observations and Findings

SITE ASSESSMENT

The facility sits at the corner of Church and Adelaide Streets just outside the Church Street Historic District. There is a lack of secure parking for the Police fleet and secure entry/exit from the Sallyport. There is no traffic signal to aid fire trucks entering Church Street. There is no physical separation, screening, or buffer in several areas including: the adjacent residential property, communications tower, or the propane tank that supplies backup fuel for the generator. Landscaping is limited to small clusters of trees along the streets and low growing landscaping at the public parking area.

BUILDING EXTERIOR

Exterior walls are brick and CMU veneer with painted drywall soffits and galvanized metal eave details. Non-masonry and painted surfaces on the building exterior are not holding up well. Painted drywall at the public entry soffit is failing and requires replacement. The material is not suitable for exterior applications. Exterior metal doors all suffer from extensive peeling paint. A coating appropriate to the door material is recommended: assumed non-ferrous for galvanized surfaces. Unfinished attic spaces contain areas where the building envelope performance is compromised.

BUILDING INTERIOR

Although the building is relatively new, the 24/7 operation has worn many of the interior finishes to the point of failure. Carpet finishes in the fitness room on the second floor are worn to the point of failure and require replacement. Interior paint on exposed steel in the apparatus bays require maintenance. The offices on the second floor occupy a cantilevered zone and the occupants complain that the floors are typically very cold. The booking area reportedly has flooding from water coming out of floor drains which is thought to have a connection with the Fire Department's kitchen use.

STRUCTURE

The building is steel frame with composite concrete floor slabs. The hip roof is framed with engineered lumber. The structure appears to be in good condition.

BUILDING SYSTEMS

Building systems are in good to very good condition, are being well maintained, and appear to be functioning as intended. Building security and access control is extremely poor for a critical facility. Doors throughout the facility do not close properly including doors to secure areas such as booking, communications/dispatch, and stairwells. Keypad controls have reportedly proven unreliable. Smart card access controls are reportedly unreliable, preventing officers and staff to access the areas they need to in an efficient and secure manner. These issues are exacerbated by the fact that the Wilmington Police Department is a CALEA certified organization and need to uphold various standards for booking sequences, secure facility separations, and chain of custody for evidence. Video monitoring is piecemeal and cannot be centrally controlled or accessed.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Doors to fire stairs do not close properly. The main electrical room has holes cut in the ceiling and no fire stopping at minor penetrations. This violates the required two hour fire rating of the room.

OTHER COMMENTS

At 15 years of age, this facility is prematurely in need of upgrades and strategies to provide additional space. Fit up of unfinished eave spaces, additions, and /or a new substation facility are considerations that will be reviewed as potential options. In addition to facility upgrades, careful consideration should be made to providing appropriate site security, adequate parking, and signalization on Church Street.

PUBLIC SAFETY BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	3
Brick / Masonry	3
Siding / Cladding	2
Windows	3
Doors	2
Canopies / Overhangs	X
Roof	3
LIFE SAFETY	
Sprinkler Y/N	Y
Fire Alarm / Early Detection	3
Life Safety: Exit Signs	4
Life Safety: Emergency Lighting	N/A
INTERIOR	
Condition of Walls	2
Base	3
Flooring	3
Ceiling	3
Stairs	4
Handrails	4
Doors	2
Glazing	3
ELECTRICAL	
Service Entrance	4
Panel / Distribution	3
LIGHTING	
Lighting	2
Lighting Controls	2

MECHANICAL	
Boiler	4
Fuel	4
HVAC	4
PLUMBING	
Toilet Rooms	4
Kitchen	4
Domestic Water	3
STRUCTURE	
Observable Steel	3
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

PUBLIC SAFETY BUILDING

Executive Summary - Electrical

The electrical systems for the Public Safety Building are functioning but are in fair to good condition with the exception of the service equipment which is relatively new. Separation of emergency life safety and emergency optional standby should be provided with two automatic transfer switches.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs underground to the building from a pad mounted transformer to a GE switchboard located in the electric room. The service is rated at 600Amperes, 277/480Volt, 3Phase, 4Wire. A 600Ampere enclosed main circuit breaker /CT section and distribution section switchboard is located in the electric room.

Rating: 4

- The lighting and power panels are GE circuit breaker type and are located through the building.

Rating: 3

- The interior lighting consists of 2x4 and 2x2 recessed troffers parabolic controlled with local switches. Apparatus bay fixtures are fluorescent high bay controlled by low voltage switches via relay panel.

Rating: 2

- Exterior lighting consists of building mounted HID wall packs and traditional recessed down lights in the exterior overhang around the building. Ground mounted flood lights are provided for the side with pole lights in the parking area.

Rating: 2

- The emergency stand-by system consists of an exterior natural gas roof mounted Kohler generator. One automatic transfer switch is provided in the electric room. There is no separation of life safety equipment and optional stand-by. Exit signs are located through the building. No emergency lights are provided at some exterior doors.

Rating: 3

- The building is equipped throughout with an addressable automatic fire alarm system, manufactured by Simplex. The system consists of horn/strobes, smoke detectors, pull stations, and heat detectors; and appears to meet current requirements.

Rating: 3

- There is an access control system in the building but no security intrusion system.

Rating: N/A

- The telephone & CATV wiring runs underground between the utility pole and the building with the terminal boards located in the electric room.

Rating: 2

Executive Summary - HVAC

The Public Safety Building was built in 2001 and opened in 2003. This building is new and has appropriate systems by today's standards. Generally speaking, systems are operating and maintaining reasonable space temperature control.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- There are three Carrier air handlers installed in the top floor Mechanical room. Air handler AHU-1 serves second floor, AHU-2 serves first floor and AHU-3 serves third floor. All systems are variable air volume (VAV) and have an associated variable frequency Drive (VFD) to modulate the fan speed to save energy.

Rating: 4

- Throughout the building VAV boxes are installed to serve heat/cooling to each zone.

Rating: 4

- The automatic temperature control system utilizes Honeywell Excel 5000 controllers. Controls are being upgraded to JACE controllers but not everything is complete.

Rating: 4

- A 100 Ton air cooled liquid chiller is located out doors on the higher roof adjacent to the apparatus bay. The chiller was replaced last October 2015.

Rating: 5

- In the upper level mechanical room, new chiller water buffer tanks are installed.

Rating: 5

- There are two floor mounted end suction pumps installed in the upper mechanical room circulating chilled water to the three Carrier air handlers.
Rating: 5
- There are two gas fired Weil McLain series 80 boilers installed in the ground floor mechanical room. All piping is a combination of schedule 40 black steel piping and cooper piping, all insulated with jacketed fiberglass insulation.
Rating: 4
- There are two floor mounted end suction pumps, operated by VFD's, circulating heating hot water throughout the building.
Rating: 4
- Lab ventilation appears inadequate. In this area they lift finger prints off items and the fingerprint dust is all over everything.
Rating: 1

Executive Summary - Plumbing

The Public Safety Building was built in 2001. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm system, compressed air and natural gas piping. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in very good condition.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- Plumbing fixtures consist of wall mounted water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Kitchenette sinks are stainless steel, counter mounted with gooseneck faucet and hot and cold water handles. Electric water coolers are surface mounted stainless steel with recessed chiller. Janitor's Sinks are 24" x 24" floor receptors. In the cells, combination water closet/lavatory stainless steel fixtures are installed with remote flush valves. There are emergency eyewash and emergency shower fixtures located in the Apparatus Bay area that are supplied by cold water. Current Code requires water to emergency fixtures to be tepid. In general, the fixtures meet accessibility standards but are not water conserving.
Rating - 4
- A simplex air compressor and vertical tank is provided to service the compressed air outlets and hose reels in Apparatus Bay. This system is in very good condition.
Rating - 4

- Domestic water service appears to be 4-inch in size and includes a water meter and reduced pressure backflow preventer. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original ball valves to the building and are in good condition. The domestic water piping is insulated and labeled.
Rating – 4
- Domestic water for the building is generated through a gas-fired storage type water heater. The tank capacity of each heater is 71 gallons and has a gas input of 120,000 Btus. Domestic hot water is recirculated. There is a hi-low thermostatic mixing valve at the outlet of the water heater and an expansion tank installed at the cold water make-up for the water heater. The low flow mixing valve appears to be showing corrosion and should be replaced. Domestic water piping near the heaters is insulated.
Rating – 3
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in very good condition. Smaller pipe sizes appear to be copper. Horizontal storm drainage piping appears to be insulated. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use. The Staff did mention that the Lower Level drainage gets backed up often. A backwater valve may be required on the main buried drain line before existing the Building. The Apparatus Bay includes floor and trench drains which may be directed to a oil/gas separator.
Rating – 3
- An elevated pressure natural gas service, pressure regulator and gas meter is located outside of Mechanical Room. Natural gas is distributed to HVAC boilers, HVAC rooftop equipment, domestic water heater, and an emergency generator. The larger natural gas piping is steel with welded fittings while the smaller piping has threaded fittings. Overall the gas piping is in very good condition.
Rating - 4

Executive Summary – Fire Protection

The Public Safety Building was constructed in 2001 and is 36,000 square feet. The building is fully protected by automatic sprinkler systems, including all attic spaces.

The building is supplied with an 8" fire service. The Building fire protection system was installed at the time of original construction. The majority of the equipment and systems installed appear to have been well maintained and are generally in very good condition.

Existing Conditions:

- There is an 8" fire water service that enters Building Lower Level Mechanical Room. This service is controlled by an exterior post indicator valve (PIV) and includes a 6" double check valve assembly with 6" wet alarm valve and wall mounted Storz Fire Department connection. The sprinkler main reduces to 4" after the alarm valve. The system provides 100% sprinkler protection to the Building including attic spaces. The Fire Protection system includes zone control valve assemblies to isolate each floor level. Sprinkler heads vary from concealed pendant type, to institutional type, semi-recessed pendant type and exposed upright type sprinkler heads depending on the ceiling construction, location or exposed structure.
Rating: 4

FACILITY PHOTOGRAPHS



PUBLIC BUILDINGS OFFICE

LOCATION: 30 CHURCH STREET

TOTAL # OF STORIES: 2

YEAR CONSTRUCTED: 1954

BUILDING AREA: 6,694 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES
AND GARAGE



Description

The Public Buildings Office is located in the former Wilmington Fire Station. This masonry and wood framed building also currently houses the Town's IT Department. The facility is generally in fair to poor condition, requiring work on the exterior, interior and systems upgrades. Work spaces are not accessible and poorly laid out. Building identification from the street is via a sign affixed to the front of the building.

Observations and Findings

SITE ASSESSMENT

Facing Church Street, the building does not have a walkable route from parking to the front entry door. Visitors have to walk to the sidewalk or cross the landscaped zone to get to the entry door. Staff primarily use the back door for access. The facility is surrounded by pavement on most sides except for southern corner on Church Street where there are a few trees, bushes and bark mulch. There is also a small grass buffer between the parking lot and Olson Street. Parking is not well defined and striping goes directly to the building façade. This presents obstacles to building entries, especially the staff entry at the back. No handicap parking is defined or marked. The ability to park or not park in front of existing bay doors is not clear.

BUILDING EXTERIOR

The brick façade is in fair condition but requires pointing throughout. Substantial pointing is needed at the tower element at the rear of the building and at window openings. The roof was not observed but is reported to be recently replaced with newer flashing observed along the roof edge. Windows in occupied spaces are in fair condition while windows in garage and unoccupied tower locations are in poor condition.

BUILDING INTERIOR

Interior finishes include ACT ceilings, VCT flooring, wood trim and doors, and painted drywall: all of which are in fair to poor condition. The second floor flooring in the kitchen is in very poor condition and requires replacement.

STRUCTURE

Structure appears to be load bearing masonry with wood joists and rafters tying in directly to the brick wall. Steel beams and columns are present in the apparatus bay to pick up roof loads in the open bay area.

BUILDING SYSTEMS

Electrical systems are in fair to poor condition. Upon review a recently failed oil fired steam boiler was being replaced by a new gas fired hot water furnace. Temporary heat was being provided at the time of the facility review. Steam radiators will be replaced by baseboard and new piping. The garage area utilizes unit heaters which are in the process of being converted to Town gas.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Interior spaces in the building contain many internal level changes and are not accessible. The front office area is the only accessible area of the building. Emergency lighting and exit signs need to be updated. Toilet rooms are not ADA compliant even though some toilet fixtures on the first floor are. Stair railings are not code compliant to current standards. Fire alarms, horn strobes, pull stations, and smoke detectors do not provide an appropriate amount of coverage for a non-sprinklered building. If renovations in this building exceed 7,500 square feet, or in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

OTHER COMMENTS

This facility requires significant upgrades for infrastructure, finishes and accessibility. The cost of upgrades may exceed the value of the renovating the building. Options could include combining the program with DPW and Town Hall facilities in lieu of renovation.

PUBLIC BUILDINGS OFFICE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	2
Base	2
Flooring	2
Ceiling	2
Stairs	1
Handrails	1
Doors	2
Glazing	N/A
ELECTRICAL	
Service Entrance	2
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler New boiler to be installed	
Fuel	-
HVAC	-
PLUMBING	
Toilet Rooms	2
Kitchen	1
Domestic Water	2
STRUCTURE	
Observable Steel	2
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

PUBLIC BUILDING DEPARTMENT

Executive Summary - Electrical

The electrical systems for the Public Building Department are functioning but are in fair to poor condition. The building does not have an intrusion system. The emergency lighting and exit signs need upgrading. The existing electric service entrance equipment and distribution panels should be replaced. Non LED interior and exterior lighting should be replaced. A new fire alarm system should be provided to comply with the latest requirements and codes.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The electrical service runs underground into the building from a utility pole to a meter located in the electric room. The service is rated at 200Amperes, 120/240Volt, 1Phase, 3Wire. A 200Ampere enclosed main circuit breaker is located in the electric room.

Rating: 2

- The lighting and power panels are GE circuit breaker type and are located through the building. Existing equipment is original to the building and beyond its useful life.

Rating: 1

- The interior lighting consists of 2x4 recessed troffers with acrylic lens controlled with local switches. The garage area lights consist of strip fluorescent light fixtures.

Rating: 2

- Exterior lighting consists of building mounted HID wall packs for parking area and traditional incandescent wall lanterns at the main entrance.

Rating: 2

- The emergency stand-by system consists of an exterior rusting propane Kohler generator. One automatic transfer switch is provided in the electric room. There is no separation of life safety equipment and optional stand-by. Exit signs are located through the building. No emergency lights are provided at some exterior doors.

Rating: 1

- Existing fire alarm system consists of a conventional FCI control panel, non ADA complaint horn/strobes with insufficient coverage for a building without sprinklers.
Rating: 2
- There is no security intrusion system.
Rating: N/A
- The telephone & CATV wiring runs overhead between the pole and the building with the terminal boards located in the electric room. Appears to be some abandoned wiring that should be removed.
Rating: 2

Executive Summary - HVAC

Concerning HVAC equipment, the Public Buildings Office building is in transition. Existing equipment is being removed and new equipment being installed.

Executive Summary - Plumbing

The Public Building Office Building was built in 1954. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, garage drainage system, storm system, compressed air system and natural gas piping. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in fair condition.

Existing Conditions:

- Plumbing fixtures consist of floor mounted, tank type water closet, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Kitchenette sinks are stainless steel, counter mounted with gooseneck faucet and hot and cold water handles. There were no drinking fountains in the building. Janitor's Sinks are cast iron floor mounted with 3" trap standard. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2
- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves to the building and are in fair condition. The domestic water piping is not insulated or labeled.
Rating – 2
- Domestic water for the building is generated through an electric tank type water heater. The tank capacity of each heater is 20 gallons and has an electrical input of 2500 watts. Domestic hot water is not recirculated. There is no thermostatic mixing valve at the outlet of the water heater. There is no expansion tank installed at the cold water make-up for the water heater. Domestic water piping near the heaters is uninsulated. The water heater appears to have exceeded its life expectancy.
Rating – 2

- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in poor condition. Smaller pipe sizes appear to be copper. There are portions of the sanitary and storm piping system that have recently been repaired. In general, the original cast iron drainage piping should be replaced. The Garage has floor drains which do not appear to be directed to an oil/gas separator.
Rating – 2
- An elevated pressure natural gas service and pressure regulator is located outside of Building. The building is in the process of finalizing a gas conversion from oil. A gas meter has not yet been installed. Natural gas piping is distributed to HVAC equipment and an emergency generator. The larger natural gas piping is steel with welded fittings while the smaller piping has threaded fittings. Overall the gas piping is in very good condition.
Rating - 4
- A simplex air compressor and vertical tank is provided to service the compressed air outlets and hose reels in Garage. This system is in very good condition.
Rating - 4

Executive Summary – Fire Protection

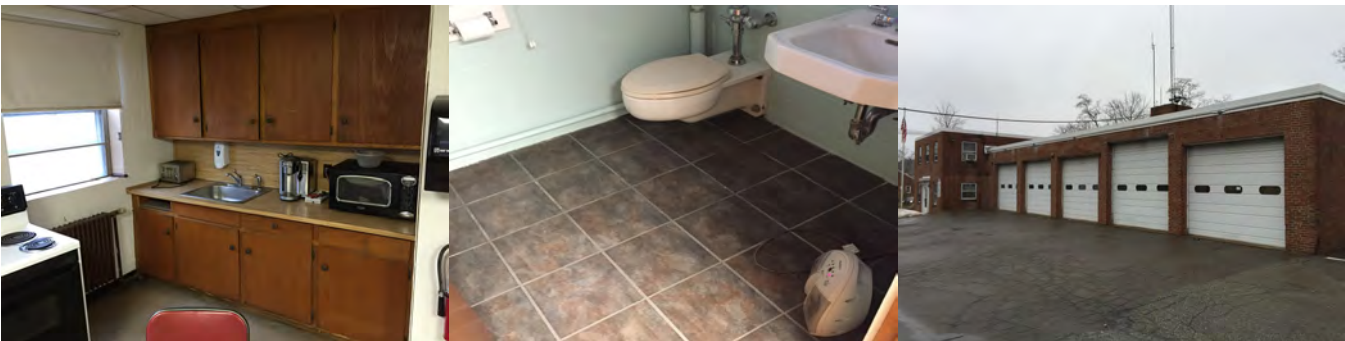
The Wilmington Public Offices Building was constructed in 1954 and is 6,694 square feet. The building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine adequate capacity for Fire Protection requirements.

Rating: N/A

FACILITY PHOTOGRAPHS



BUZZELL SENIOR CENTER

LOCATION: 15 SCHOOL STREET

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1935

BUILDING AREA: 8,308 GSF

BUILDING OCCUPANCY: SENIOR CENTER



Description

Housed in a former wood framed school house, the Buzzell Senior Center overlooks the Town Common in Wilmington's Centre Village Historic District. The facility provides meeting and program spaces for Wilmington's elderly community and is close to the high school and Library which provide additional programming for this group. The location is identified by a sign mounted on the building façade on the approach on School Street from Middlesex Avenue.

Observations and Findings

SITE ASSESSMENT

The historic building prominently faces the Town Common and is set up on a small hill. The main entrance and parking are at the opposite side. There is sidewalk access along School Street from Middlesex Avenue and a paved walkway wraps around the building. Landscaping consists of perimeter trees, a few deciduous trees in front of the building, and foundation plantings (yews). Parking is well marked and vehicular circulation is well defined to allow vans and small busses to approach, drop off, and safely navigate back to School Street. Handicap parking is striped and located directly across from the main entry.

BUILDING EXTERIOR

Wooden clapboard siding and wood trim are heavily painted with minimal to moderate signs of rot and damage. Most exterior elements appear to be original to the building. The asphalt shingle roof appears in good condition as does the cupola. Replacement windows are in fair condition.

BUILDING INTERIOR

Interior finishes consist of painted plaster walls and ceilings, ACT ceilings, wood paneled walls, painted wood trim, and painted doors. Floor finishes range from heavily worn carpet to maple (assumed original), to tile toilet flooring, to VCT in the kitchen. The carpet specifically needs replacement.

STRUCTURE

The building is primarily a wood framed structure with some structural steel supporting the floor framing. Part of the basement, at the boiler room, is completely supported with concrete. The foundation is a combination of fieldstone and board formed concrete. The attic is completely wood framed.

BUILDING SYSTEMS

Electrical service, HVAC, and plumbing systems are in fair to poor condition having exceeded their maximum serviceable life.

Additional notes from the building systems consultants are provided on following pages.

REGULATORY COMPLIANCE

Emergency lighting and exit signs need upgrading. Fire alarms, horn strobes, pull stations, and smoke detectors do not provide an appropriate amount of coverage for a non-sprinklered building and should be upgraded to meet current requirements. If renovations in this building exceed 7,500 square feet, in which major alterations are planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

BUZZELL SENIOR BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	N/A
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	3
Roof	3
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	3
Life Safety: Exit Signs	3
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	2
Base	3
Flooring	2
Ceiling	2
Stairs	1
Handrails	1
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	2
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler	2
Fuel	1
HVAC	1
PLUMBING	
Toilet Rooms	2
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	2
Observable Masonry	2
Headers / Lintels	N/A
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

SENIOR CENTER

Executive Summary - Electrical

The electrical systems for the Senior Center are functioning but are in fair to poor condition. The emergency lighting and exit signs need upgrading. New fire alarm devices and coverage should be provided to meet the current requirements.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs overhead to the building from a utility pole to a meter located in the basement. The service is rated at 200Amperes, 120/240Volt, 1Phase, 3Wire. A 200Ampere Square D enclosed main circuit breaker is located in the basement.

Rating: 2

- The lighting and power panels are circuit breaker type and are located in the basement. Existing original panels have been replaced and are now used as junction boxes.

Rating: 1

- The interior lighting consists of 2x4 recessed parabolic controlled with local switches. Corridor has surface wraparound and incandescent track lights.

Rating: 2

- Exterior lighting consists of building mounted HID wall packs and flood lights around the building surface fixture is provided in the canopy of the main entrance.

Rating: 2

- The existing emergency lighting system is through self-contained emergency battery units. Exit signs appear to be LED type.

Rating: 3

- Existing fire alarm system consists of a Mircom control panel, with ADA complaint horn/strobes, old type heat detectors, pull stations, and insufficient coverage for a building without sprinklers.

Rating: 1

- Existing security system includes motion sensors, and door contacts throughout the building with a keypad at the entrance.
Rating: N/A
- Kitchen receptacles are not GFI protected.
Rating: N/A
- The telephone & CATV wiring runs overhead between the pole and the building with the terminal boards located in the electric room.
Rating: 2

Executive Summary - HVAC

Buzzell Senior Center equipment appears to be mostly original to the building from 1935. An old abandoned boiler sits in the basement and does not operate; a new oil fired boiler was installed and the age was not obtained. Generally speaking, systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, a continued limited service could be achieved, but the systems installed within this building are past their intended maximum serviceable life.

Rating

5 - Brand New
 4 – Very Good
 3 – Good
 2 – Fair
 1 – Poor
 0 – Requires repair
 X – Requires immediate
 N/A – Not applicable

Existing Conditions:

- There were two boilers within the mechanical room. One was abandoned. There was one oil fired Weil McLain steam boiler to service the entire building. Boiler was atmospheric type; Breeching ran to the existing masonry chimney.
Rating: 2
- There are three No. 2 fuel oil storage tanks installed in the basement. Fuel oil is distributed to the boiler through the use of threaded black steel pipe which turns into flexible tubing to the boiler.
Rating: N/A
- Condensate is returned to the boiler room through schedule 80 black steel condensate return system.
Rating: 1
- Low-pressure steam piping appears to be schedule 40 black steel, insulated with what appears to be fiberglass insulation (within mechanical room). Insulation throughout the building is suspect and appears to be asbestos.
Rating: 1

- Each space utilizes wall mounted unit ventilators with an associated outside air louver located on the exterior wall. The unit ventilators are provided with a steam coil. Exhaust air is through an exhaust system for toilet rooms, janitor closets, kitchen, etc.
Rating: 1
- Exhaust fan and associated ductwork is installed up in the attic. A large exhaust duct runs up to the cupola where it discharges.
Rating: 1
- The corridors and entry ways located within the building were provided with wall mounted steam radiators for generalized space heating.
Rating: 1
- There were ductless split air conditioning units located in the office area, the large gathering area, and where required.
Rating: 4
- Make-up air for the individual toilets was through the use of louvers located within the doors.
Rating: 1

Executive Summary - Plumbing

The Buzzell Senior Center was built in 1935. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. Municipal Sewer system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The building plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of wall mounted water closets with manual flush valves, wall hung urinals with manual flush valves, and wall hung lavatories with hot and cold water handles. Kitchen sinks are stainless steel, counter mounted with gooseneck faucet and hot and cold water handles. There are no drinking fountains or janitor's sinks in the building. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2

- Domestic water service appears to be 1-1/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition.
Rating – 2
- Domestic water for the building is generated through an electric water heater. The tank capacity of each heater is 30 gallons. Domestic hot water is not recirculated. There is no thermostatic mixing valve or expansion tank installed at the water heater. Water piping near the heaters is not insulated. The water heater is in good condition.
Rating – 3
- Cast iron is used for sanitary drainage. Where visible, the cast iron pipe appears to be in poor condition. Smaller pipe sizes appear to be copper. There is evidence of portions of the existing sanitary drainage piping that has been replaced recently. In general, the original cast iron drainage piping has exceeded its life expectancy and should be replaced.
Rating – 1

Executive Summary – Fire Protection

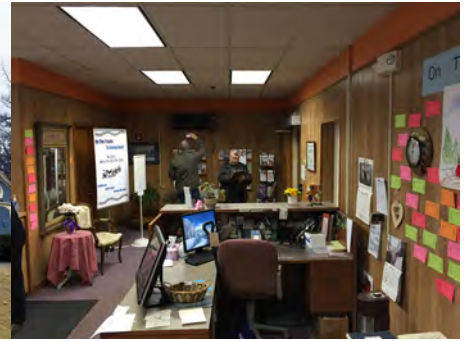
The Buzzell Senior Center Building was constructed in 1935 and is 8,308 square feet. The building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine adequate capacity for Fire Protection requirements.

Rating: N/A

FACILITY PHOTOGRAPHS



DEPARTMENT OF VETERAN SERVICES (WEST SCHOOL)

LOCATION: 141 SHAWSHEEN AVE

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1790

BUILDING AREA: 1,250 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES



Description

This is a small historic wood frame structure which used to serve as Wilmington's West School. It is located within eight feet of Shawsheen Avenue. The building is currently being used as a meeting and administrative space for the Town's Department of Veteran's Services. The building is identified by signs mounted on the front of the building denoting both West School and the Department of Veteran's Services.

Observations and Findings

SITE ASSESSMENT

The building faces Shawsheen Avenue with two original front entrances located very close to the street. There is no yard associated with this facility. There is a wood framed handicap access ramp connecting to a door at the rear of the building which requires additional railing support. A wooded area is immediately behind the building and presumed to be wetland. Basement access is via a small door under the ramp platform. Parking is paved on either side of the building with striped handicap parking on the side with the ramp access.

BUILDING EXTERIOR

Exposed brick foundation walls and brick chimney are in need of pointing. Painted wood siding and trim are in fair condition. Replacement of broken and rotted siding and trim, especially near the foundation wall, should be done. The asphalt shingle roof appears to be in good condition with minimal signs of damage or peeling.

BUILDING INTERIOR

The building is one large central space with smaller entry vestibules at the front and kitchen and bath spaces in the rear. The toilet room is fully accessible. Interior walls are plaster finish with cracking observed in several locations. Flooring is recently added Pergo flooring in good condition.

STRUCTURE

Exposed structural framing is limited to floor joists in the basement. Floor framing sits in pier on a dirt crawl space.

BUILDING SYSTEMS

Electrical, HVAC, and Plumbing systems all appear to be in good working condition having been upgraded when the facility was renovated for the Veteran's Services program.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

VETERANS SERVICES BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	0
Brick / Masonry	0
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	3
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	3
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	3
Base	3
Flooring	3
Ceiling	3
Stairs	2
Handrails	2
Doors	2
Glazing	N/A
ELECTRICAL	
Service Entrance	4
Panel / Distribution	4
LIGHTING	
Lighting	4
Lighting Controls	N/A

MECHANICAL	
Boiler	5
Fuel	1
HVAC	5
PLUMBING	
Toilet Rooms	3
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	2
Observable Masonry	0
Headers / Lintels	0
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

DEPARTMENT OF VETERANS' AFFAIRS

Executive Summary - Electrical

The electrical systems for the Veterans' Affairs building were installed during the 2009 renovation and are generally in good condition.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs overhead between the utility pole and the utility meter mounted on the exterior of the building. The service is rated at 100 Amperes, 120/240 Volt, 1 Phase, 3 Wire. A 100A/2P main circuit breaker GE load center is located in the vestibule. Wiring method consists of Romex.

Rating: 4



Main Panel in Vestibule

- The interior lighting consists of pendant luminous bowls with three compact fluorescent lamps in the main hall controlled with local switches. 1x4 surface wraparound acrylic lensed fixtures with T8 lamps exist in the kitchen and toilet rooms. Toilet room fixture and exhaust fan are controlled with one common switch. Crawl space has porcelain sockets.

Rating: 4



Main Hall Lighting

- The exterior lighting consist of building mounted HID wall sconces for the parking areas. Wall sconce lantern fixtures with screw-in compact florescent lamps exist at front door. Exterior lights are timeclock controlled.

Rating: 4



HID Wall Sconce

- There is no emergency lighting or exit signs in interior or at exterior doors.

Rating: N/A

- The fire alarm system consists of a Fire-Lite MS-5024, 5 zones control panel located in the vestibule with a digital dialer. Smoke detectors exist in each space. Heats exist in kitchen, crawl space and attic. Pull stations exist at exterior doors. Notification consists of horn/strobes. A 5 zone LED annunciator and strobe are located on exterior front. The wiring method consists of low energy cable.

Rating: 4



FACP & Security Panel

- Cable TV and telephone run overhead into building.
Rating: 3
- The intrusion system consists of a Magnum alert 1000 series, 5 zone control panel with passive infrared sensors. A keypad is located at the kitchen exterior door.
Rating: 4
- Temporary lighting strings were abandoned in the crawl space. These should be removed as permanent lighting exists.
Rating: 0

Executive Summary - HVAC

The Heating system was renovated in 2015. Generally speaking, most systems are operating and maintaining space temperature control. The equipment appeared on overall good to very good condition and will likely be suitable for the next 20 years or so.

Rating

5 - Brand New
4 - Very Good
3 - Good
2 - Fair
1 - Poor
0 - Requires repair
X - Requires immediate
N/A - Not applicable

Existing Conditions:

- Heating- The heating system of the building was converted last summer from oil to natural gas. The gas fired furnace is located toward the back of the building and ducted to supply floor grilles throughout the space. A single filtered return grille is located close to the furnace. There is no ducted outside air to the furnace but operable windows provide natural ventilation to the space. The gas furnace was manufactured by Johnson Controls Unitary products and has a gas input of 80 CFH and an output of 76 MBH.
Rating: 5

- The new gas fired furnace is sealed combustion condensing style burner. Combustion air and boiler venting penetrate the exterior of the building.
Rating: 5
- The gas fired furnace is controlled by a wall mounted programmable thermostat with occupied and unoccupied modes.
Rating: 4
- Air conditioning for the space is provided by a wall mounted indoor evaporator manufactured by Mitsubishi. The indoor evaporator is connected to an air cooled condensing unit located outside. The indoor unit is controlled by a wall mounted thermostat.
Rating: 3
- The oil tank from the former heating system was abandoned in place in the basement. We recommend the following: Ensure that the abandoned oil tank in the basement was properly drained and remove the tank from the basement.
Rating: 1
- The office space is also served by ceiling mounted paddle fans.
Rating: 3
- Existing kitchen has a residential combination range hood/microwave over a residential stove or oven under it. The equipment appears fairly new and in good condition.
Rating: 3
- The bathroom has a ceiling mounted exhaust fan interlocked with the light switch. There did not appear to be a wall cap or roof cap discharge on the building for the fan therefore it likely discharges into the attic space above the toilet room. We recommend the following: The toilet room exhaust fan should be directly ducted outdoors with a wall cap or roof cap. The cap should have an integral backdraft damper.
Rating: 1

Executive Summary - Plumbing

The Department of Veteran's Services Building was built in 1970. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and natural gas piping. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems have been recently updated. Overall, the Plumbing systems are in good condition.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- Plumbing fixtures consist of floor mounted, tank type water closet and wall hung lavatories with hot and cold water handles. Kitchenette sinks are stainless steel, counter mounted with gooseneck faucet and hot and cold water handles. There were no drinking fountains or Janitor's sinks in the building. In general, the fixtures do meet accessibility standards but are not water conserving.
Rating - 3
- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be ball valves and are in good condition. The domestic water piping does not appear to be insulated or labeled.
Rating - 3
- Domestic water for the building is generated through an electric point-of-use water heater located under the Kitchen sink. The tank capacity of each heater is 2.5 gallons and has an electrical input of 2500 watts. Domestic water piping is uninsulated. The water heater appears to be nearing its life expectancy.
Rating - 1
- Cast iron and PVC is used for sanitary drainage. Where visible, the cast iron pipe appears to be in fair condition, with the PVC being in good condition. In general, the original cast iron drainage piping can be re-used for a renovation project. PVC is not compliant for a commercial building.
Rating - 2
- An elevated pressure natural gas service and pressure regulator and meter is located outside of Building. Natural gas piping is distributed to HVAC equipment. The gas piping is steel with threaded fittings. Overall the gas piping is in very good condition.
Rating - 4

Executive Summary – Fire Protection

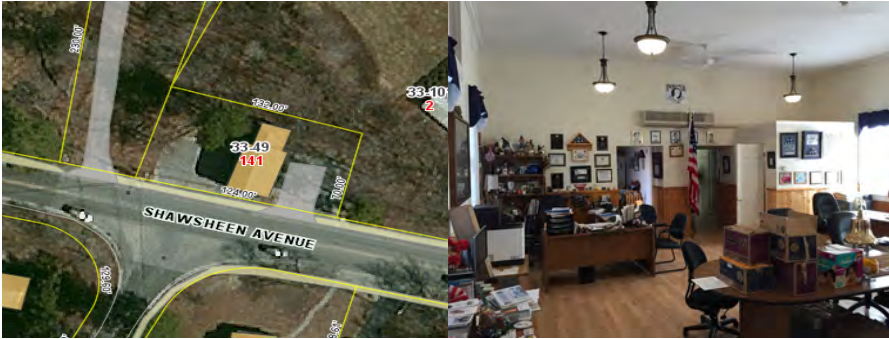
The Department of Veterans' Services Building was constructed in 1790 and is 1,250 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



SCHOOL SUPERINTENDENTS OFFICE ROMAN HOUSE

LOCATION: 161 CHURCH STREET

TOTAL # OF STORIES: 3

YEAR CONSTRUCTED: 1900

BUILDING AREA: 4,498 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES



Description

This is a signature Queen Anne style wood frame structure located at the edge of the Town Common. It is within the Wilmington Center Village Historic District. The building is currently used as administrative offices for Wilmington Public Schools. It is identified by a sign hung from the porch of the building which is difficult to see from Church Street.

Observations and Findings

SITE ASSESSMENT

The building faces Church Street and the Town Common and is set back from the street and sidewalk with a small front yard. The front yard includes a lawn and foundation plantings (yews). There is a concrete walk connecting the front door to the sidewalk, but building access is via a side covered entry which is not original to the building. No handicap access into any part of the building is provided. The building is surrounded by a lawn which slopes away from the foundation in every direction. Parking is provided in an adjacent lot, which is signed for specific non-visitor uses. Visitors park in the opposite side of the building in the high school visitor spaces. There is no clear or easy pedestrian route from visitor parking to the main entry. There is one striped and signed handicap space adjacent to the building but from there, no access is possible into the building except for stairs. There is exterior door access into the basement along the parking lot edge and a ramp with railings that leads to a back door. This ramp does not meet current accessibility requirements. The Roman House is backdropped by the new High School which gives the small building an isolated siting effect, set between streets, parking, Town Common, and large High School building.

BUILDING EXTERIOR

Exposed foundation wall elements are principally of granite block and newer construction is CMU. Both appear to be in good condition. Painted wood siding and trim are in poor to fair condition with the poorest condition. There is a significant need for replacement and restoration of broken and rotted siding and trim throughout the building. The asphalt shingle roof appears to be in fair condition but is likely to require replacement in the near future. Some basement windows were missing or broken letting outside air flow into the basement area.

BUILDING INTERIOR

The building interior is well preserved featuring the original main staircase, first floor parlor and sitting rooms, original doors and wood trim, and other original detailing throughout. All appear to be in good condition. Interior walls are painted plaster with signs of cracking and settling from the second floor down at the main stair location.

STRUCTURE

Exposed structural framing included wood floor joists in the basement which span longer than are typically seen which may contribute to the settling and cracking of plaster walls above. Lally columns have been introduced in a few areas. The mortared fieldstone foundation wall appears to be in good condition. Exposed wood roof rafters appeared to be in fair condition but water staining was observed on many rafter surfaces.

The brick chimney was built out of plumb to allow its location to shift as it penetrates the roof. Although unusual, no signs of significant deterioration were observed.

BUILDING SYSTEMS

Electrical systems are well past their useful life including active knob and tube in some attic and basement locations. Hot water boilers are in good working condition but distribution piping was observed to be in poor condition. Toilet rooms lack exhaust fans which are required by code. Plumbing systems generally appeared to be in fair to good condition. Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

The building does not meet current accessibility standards due to lack of building access other than the stairs. Given the historic nature and architectural character of this building, careful consideration should be made for designing accessibility upgrades. Emergency lighting and exit signs do not exist and are required. There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

ROMAN HOUSE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	1
Siding / Cladding	0
Windows	3
Doors	2
Canopies / Overhangs	2
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	3
Life Safety: Exit Signs	N/A
Life Safety: Emergency Lighting	N/A
INTERIOR	
Condition of Walls	2
Base	3
Flooring	3
Ceiling	2
Stairs	2
Handrails	1
Doors	2
Glazing	N/A
ELECTRICAL	
Service Entrance	2
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler	5
Fuel	N/A
HVAC	2
PLUMBING	
Toilet Rooms	3
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	2
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

ROMAN HOUSE

Executive Summary - Electrical

The electrical systems for the Roman House are functioning but are in fair to poor condition. The emergency lighting and exit signs need upgrading. The existing cloth insulated wiring and knob and tube wiring in the basement and attic needs to be replaced and removed. Kitchen outlets need to be replaced with GFI type. Incandescent fixtures should be replaced with LED type. The existing electric service entrance equipment and distribution panels should be replaced.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The electrical service runs overhead into the building from a utility pole to an exterior building mounted meter. The service is rated at 200Amperes, 120/240Volt, 1Phase, 3Wire. A 200Ampere enclosed main circuit breaker is located in the basement.
Rating: 2
- The lighting and power panels are Murray circuit breaker type and located in the basement. Existing equipment is original to the building and beyond its useful life.
Rating: 1
- The interior lighting consists of 2x4 recessed troffers with acrylic lens and surface mounted 2’x4’ fixtures controlled with local switches. The basement and attic lights consist of porcelain sockets with incandescent lamps. The toilet room has a wall mounted incandescent fixtures.
Rating: 2
- Exterior lighting consists of a surface mounted traditional lantern at the front porch.
Rating: 1
- No emergency lights or exit signs are provided in the building.
Rating: N/A
- Existing fire alarm system consists of a conventional Mircom control panel, with horn/strobes, smoke detectors, and pull stations throughout the building.
Rating: 3

- Kitchen receptacles are not GFI protected. Existing non GFI receptacles should be replaced with new GFI type.
Rating: 0
- The general wiring method is Romex with some AC cable. Knob and tube wiring was found in the basement and attic. Some cloth insulated wiring was also found in the basement and attic.
Rating: 1
- The telephone & CATV wiring runs overhead between the pole and the building with the termination in the basement.
Rating: 2

Executive Summary - HVAC

The Roman House was constructed in 1900. The main heating plant was recently replaced throughout the building, HVAC equipment is minimal. Generally speaking, systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, continued service will be achieved.

Rating

5 - Brand New
 4 – Very Good
 3 – Good
 2 – Fair
 1 – Poor
 0 – Requires repair
 X – Requires immediate
 N/A – Not applicable

Existing Conditions:

- There are two gas fired Weil McLain hot water boilers to service the entire building. Boilers are sealed combustion high efficiency condensing boilers. Boilers and associated appurtenances were replaced recently. There is one inline pump for the building.
Boilers are vented utilizing 4” PVC piping.
Rating: 5
- Hot water piping appears to be mainly schedule 40 black steel with some copper piping. We did not notice any insulation on any of the piping installed in the building.
Rating: 1
- Each space utilizes a wall mounted radiator installed on the exterior wall.
Rating: 2
- There were window air conditioning units located basement. The units will get installed where needed during the summer months
Rating: 3
- Toilet rooms do not have any exhaust systems.
Rating: 0

Executive Summary - Plumbing

The School Superintendents Building was built in 1900. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and natural gas piping. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems have exceeded their life expectancy. Overall, the Plumbing systems are in fair condition.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- Plumbing fixtures consist of floor mounted, tank type water closet and wall hung or countertop lavatories with hot and cold water handles. Kitchenette sinks are stainless steel, double bowl, counter mounted with gooseneck faucet and hot and cold water handles and vegetable spray. There were no drinking fountains or Janitor's sinks in the building. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating - 3
- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves and are in fair condition. The domestic water piping does not appear to be insulated or labeled.
Rating - 2
- Domestic water for the building is generated through an electric tank type water heater. The tank capacity of each heater is 20 gallons and has an electrical input of 2500 watts. Domestic water piping is uninsulated. The water heater appears to be nearing its life expectancy.
Rating - 2
- Cast iron is used for sanitary drainage where galvanized steel was utilized for sanitary vent piping. Where visible, the cast iron pipe appears to be in poor condition. Drum traps are installed for some plumbing fixtures, which are non-compliant. In general, the original cast iron drainage piping should be replaced.
Rating - 1
- An elevated pressure natural gas service and pressure regulator and meter is located outside of Building. Natural gas piping is distributed to HVAC equipment. The gas piping is steel with threaded fittings. Overall the gas piping is in good condition.
Rating - 3

Executive Summary – Fire Protection

The School Superintendents Office Building was constructed in 1900 and is 4,498 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



FOOD PANTRY FORMER SOUTH SCHOOL

LOCATION: 142 CHESTNUT STREET

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1800

BUILDING AREA: 1,250 GSF

BUILDING OCCUPANCY: LEASED FOR FOOD PANTRY



Description

This is a small historic wood frame structure which used to serve as Wilmington's South School. It is located in a residential setting set back from Chestnut Street. The building is currently being used as a storage and distribution space for the Town's Food Pantry. The building is identified by signs mounted on the front of the building denoting both South School and the WCF Food Pantry.

Observations and Findings

SITE ASSESSMENT

The building faces Chestnut Street with one original front entrance located on the right side of the building. A shed roof bump out housing the toilet room has been added to the back of the building at some point. There is no yard associated with this facility. There is a wood framed handicap access ramp connecting to the main entry. A wooded area is immediately behind the building and there is a metal storage container located behind the building. Basement access is via a small door on the side of the building. Parking is gravel at the front and side of the building with no striping.

BUILDING EXTERIOR

Exposed stone foundation walls are in fair condition. The brick chimney is in need of pointing. The bump out has a CMU frost wall. Painted wood siding and trim are in fair to poor condition. Replacement of broken and rotted siding and trim, especially near the foundation wall, should be done. The asphalt shingle roof appears to be recently replaced and is in good condition. Water infiltration was observed in the basement at the exterior door sill.

BUILDING INTERIOR

The building is one large central space with a kitchen in the front and a toilet room in the rear. There is a tiled Marine Corp logo in the floor near the toilet room indicating a previous use of the building. Interior walls are troweled plaster finish except for toilet room which has tiled wet walls. Flooring is clear finished maple and is in fair condition.

STRUCTURE

Exposed structural framing is limited to floor joists in the basement which appear to be in good condition. Fieldstone and rubble foundation wall also appeared to be in good condition.

BUILDING SYSTEMS

Electrical systems are in poor to fair condition. Kitchen outlets are not GFI protected. HVAC is in good condition and Plumbing systems all appear to be in fair working condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

FOOD PANTRY BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	0
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	2
Roof	3
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	N/A
Life Safety: Exit Signs	0
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	3
Base	3
Flooring	2
Ceiling	2
Stairs	2
Handrails	2
Doors	2
Glazing	N/A
ELECTRICAL	
Service Entrance	2
Panel / Distribution	2
LIGHTING	
Lighting	1
Lighting Controls	N/A

MECHANICAL	
Boiler	3
Fuel	4
HVAC	2
PLUMBING	
Toilet Rooms	3
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	N/A
Observable Masonry	N/A
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

FOOD PANTRY – BUILDING 16 (Former South School)

Executive Summary - Electrical

The electrical systems for the food pantry are functioning and are in fair to poor condition. The building does not have a fire alarm or intrusion system. The emergency lighting and exit signs need upgrading.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The electrical service runs overhead into the building from a pole mounted transformer via a building mounted meter. The service is rated at 200Amperes, 120/240Volt, 1Phase, 3Wire. A 200Ampere main circuit breaker load center is located in the basement. The panel has two spaces for future breakers.

Image 1 - Load Center in Basement

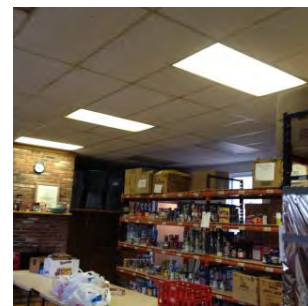
Rating: 2



- The interior lighting consists of 2x4 recessed troffers with acrylic lens in the main hall controlled with local switches. The basement lights consist of porcelain sockets with incandescent lamps. The toilet room has a combination fan/light unit on one switch.

Image 2 – Main Hall Lighting

Rating: 1



- Exterior lighting consists of building mounted mini-floods for parking area and twin par lamp holders with LED lamps on each corner of building. An HID wall sconce with open bottom is located at front.

Image 3 – Front Light

Rating: 1

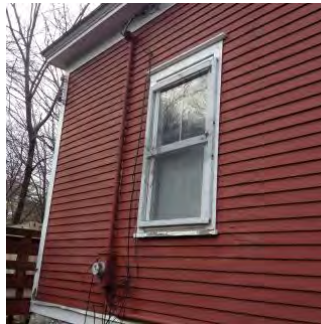
- The emergency stand-by system consists of a self-contained battery unit. Exit sign at rear door is not functional, non at front door. No emergency lighting at exterior doors.

Rating: 0



- There is no fire alarm system or security intrusion system.
Rating: N/A
- Kitchen receptacles are not GFI protected.
Rating: 0
- The general wiring method is Romex with some MC cable.
Rating: 2
- The telephone & CATV wiring runs overhead between the pole and the building. The CATV wiring is dead ended near the electric meter.
Image 4 – Exterior Meter and CATV Wiring

Rating: 0



Executive Summary - HVAC

The majority of the South School HVAC equipment was renovated in approximately in 2006. Generally speaking, most systems are operating and maintaining reasonable space temperature control. Based on the limited usage of the building and the condition of the equipment observed during our site visit, the equipment appeared in overall good condition and would be anticipated to last for approximately 15 more years or so.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The Food Pantry is heated and air conditioned by a split system air handling unit and air cooled condensing unit. The indoor air furnace is located in the basement and the air cooled condensing unit is located outside the building. The furnace and air cooled condensing unit are manufactured by Bryant. The Bryant indoor unit appears to be in better condition showing minimal signs of age while the air cooled condensing unit condition has been exposed to the weather. The Bryant furnace is equipped with a Beckett oil burner. The indoor furnace has ducted supply grilles located in the floor of the pantry and a central return grill located in the front of the building half concealed by a desk. 2. We recommend the following: Relocate the existing desk in the main room that obstructs the return grille. This will help improve air flow in the space.
Rating: 3
- The breeching from the Furnace single wall with barometric relief pitched up and enters a masonry chimney.
Rating: 3
- No. 2 fuel oil is stored in a 275 gallon oil storage tank also located in the basement. The tank was manufactured in 2006 and appears in good condition. The oil tank is piped to the furnace in an encased sleeve run under concrete to protect the line. The oil tank and line show no visible signs of aging and appear in very good condition.
Rating: 4
- Ductwork in the basement is uninsulated. Return ductwork is a sheet metal using to joists and the underside of the floor for as a plenum.
Rating: 2
- Combustion air for the furnace is atmospheric pulled from the basement.
Rating: 2

- The Furnace is controlled by a wall mounted dial type thermostat. The thermostat is non programmable and reacts to space temperature based the mode it is set to heating, cooling or fan. We recommend the following: Replace the thermostat with a 7 day or a 5 day/2 day programmable Thermostat. This would improve energy efficiency, reduce fuel usage and allow for the space to be at desired temperatures during occupied hours.

Rating: 2

- Existing kitchen has a Nutone range hood but there is no stove or oven under it. The hood appears to be recirculating type as no discharge to outdoors was observed. Based on our understanding of the usage of the building and no other cooking equipment installed in the kitchen the range hood has likely been abandoned in place. We recommend the following: The abandoned kitchen exhaust hood would be recommended to be removed.

Rating: 1

- The bathroom has a ceiling mounted exhaust fan interlocked with the light switch. There did not appear to be a wall cap or roof cap discharge on the building for the fan therefore it likely discharges into the attic space above the toilet room. We recommend the follow: The toilet room exhaust fan should be directly ducted outdoors with a wall cap or roof cap. The cap should have an integral backdraft damper.

Rating: 1

Executive Summary - Plumbing

The Food Pantry Building was built in 1800. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are nearing their life expectancy. Overall, the Plumbing systems are in fair condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of floor mounted, tank type water closet and wall hung lavatories with hot and cold water handles. Kitchenette sinks are stainless steel, double bowl, counter mounted with gooseneck faucet and hot and cold water handles and vegetable spray. There were no drinking fountains or Janitor's sinks in the building. In general, the fixtures do not meet accessibility standards and are not water conserving.

Rating – 3

- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves and are in fair condition. The domestic water piping does not appear to be insulated or labeled.
Rating – 2
- Domestic water for the building is generated through an electric tank type water heater. The tank capacity of each heater is 40 gallons and has an electrical input of 4500 watts. Domestic water piping is uninsulated. The water heater appears to have exceeded its life expectancy.
Rating – 2
- Cast iron is used for sanitary drainage where PVC was utilized for waste in certain locations. Where visible, the cast iron pipe appears to be in poor condition. PVC piping is non-compliant for commercial buildings. In general, the original cast iron drainage piping should be replaced.
Rating – 1

Executive Summary – Fire Protection

The Food Pantry Building was constructed in 1800 and is 1,250 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



DPW HIGHWAY GARAGE

LOCATION: 135 ANDOVER STREET

TOTAL # OF STORIES: 2

YEAR CONSTRUCTED: 1960

BUILDING AREA: 13,629 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES
AND GARAGE



Description

The DPW Garage facility is comprised of three conjoined buildings that include administrative offices, staff break area, vehicle maintenance, fueling, and storage. The buildings are generally in fair to poor condition with a significant list of code violations, safety concerns and deferred maintenance. Program appears to have been added as needed over the years which has created a compromised layout and circulation conditions.

Observations and Findings

SITE ASSESSMENT

The DPW Garage facility is located on a residential section of Andover Road. Commercial and industrial site uses are located on Andover Road to the north. It is set back from the street and a direct view of the facility is obscured. The siting is a concern given the noise and disruption associated with the 24/7 nature of responding to weather events by plow crews. The site is largely paved providing large vehicle circulation, vehicle storage, and equipment storage. Administrative office location provides good visual oversight, especially at the entry and fuel island.

BUILDING EXTERIOR

The building exterior is comprised of CMU, is industrial in nature, and appears to be in fair condition.

BUILDING INTERIOR

Building interiors are industrial in the work areas. Administrative areas include carpet, VCT, and sheet vinyl flooring; most of which are worn and need to be replaced. Walls are finished in a panelized wood look and ceilings are ACT; both of which are in fair condition.

STRUCTURE

Building structure is masonry (CMU) with floor slab on grade. Vehicle bays are built with cast concrete. Roof framing is steel with principle wide flange beams and open web joist infill. Beams are supported internally by steel columns. Overall, the building structure appears to be in fair condition. The one significant concern is the bridge crane which is supported by open web joists. This condition should be more closely evaluated to ensure it is structurally stable and determine if it poses a safety concern to occupants. If it is not stable, structural upgrades should be installed as soon as possible.

BUILDING SYSTEMS

Gas fired unit heaters were recently added in the garage areas

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Stairs to the break area are wood framed, have pipe rail railings, and do not have appropriate height clearances. The stairs need to meet current codes as it is a means of egress. The second floor landing off the break room is a safety hazard and requires a railing, or the door to it needs to be permanently closed. Toilet rooms are not ADA compliant. If renovations in this building exceed 7,500 square feet, or in which major alterations are

planned, a full sprinkler fire protection system must be provided as long as there is sufficient water pressure. A hydrant flow test is required to determine adequate capacity for fire protection.

OTHER COMMENTS

This facility requires significant upgrades for infrastructure, finishes and accessibility. The cost of upgrades may exceed the value of renovating the building. In addition, there may be a more advantageous site for this facility that is in a more central and commercial location.

HIGHWAY GARAGE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	2
Windows	1
Doors	2
Canopies / Overhangs	2
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	3
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	1
Base	2
Flooring	1
Ceiling	2
Stairs	X
Handrails	X
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	N/A
Panel / Distribution	N/A
LIGHTING	
Lighting	N/A
Lighting Controls	N/A

MECHANICAL	
Boiler	4
Fuel	N/A
HVAC	0
PLUMBING	
Toilet Rooms	N/A
Kitchen	N/A
Domestic Water	N/A
STRUCTURE	
Observable Steel	X
Observable Masonry	1
Headers / Lintels	1
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

HIGHWAY GARAGE

Executive Summary - HVAC

The HVAC system serving the Highway garage is gas fired unit heaters in the garage portion and terminal electric heat in the office areas. The gas fired unit heaters were added to the Garage areas approximately within the last two years when the boiler plant serving the building was decommissioned.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The Reznor gas fired unit heaters are sealed combustion. Combustion air and vent piping penetrate the building with concentric vent/intake kits.
Rating: 4
- The existing hydronic heaters that formally served the Garage were abandoned in place and serve no purpose.
Rating: N/A
- The existing electric fin tube radiation in the toilet rooms appears to be in fair to poor condition. Electric fin tube in the office area is installed directly under electrical power outlets which is a code violation. We recommend the following: Electric fin tube in the office should be removed from under the electric power outlets and replaced with electric heat in different locations. Electric fin tube in toilet rooms should be replaced with unit heater higher on the wall where it will not be as susceptible to damage.
Rating: 0
- The exhaust system does not appear to be operational and would be recommended to be replaced. We recommend that the exhaust system serving the garage should be replaced with a code compliant exhaust system for garage type buildings.
Rating: 0
- The office areas have through wall air conditions to provide air conditioning to the spaces.
Rating: 2

HIGHWAY GARAGE

Executive Summary – Fire Protection

The Highway Garage Building was constructed in 1960 and is 13,629 square feet. The building does not contain an automatic sprinkler system.

Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all existing buildings in which renovations will exceed 7,500 square feet in area or in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire suppression system if sufficient water flow and pressure is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure does not exist are exempt, however, it is assumed that sufficient flow.

A hydrant flow test will be required to determine adequate capacity for Fire Protection requirements.

Rating: N/A

DPW GARAGE

Executive Summary – Fire Protection

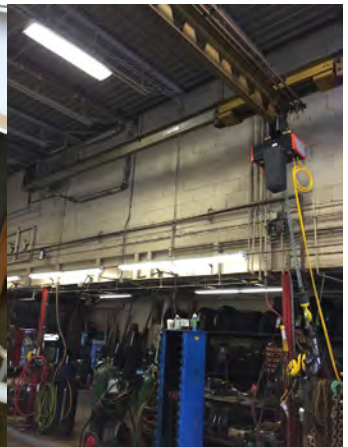
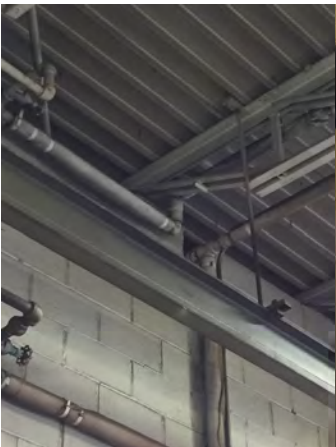
The DPW Garage Building was constructed in 1969 and is 3,475 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



WATER DEPARTMENT GARAGE

LOCATION: 115 ANDOVER STREET

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1969

BUILDING AREA: 3,475 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES
AND GARAGE



Description

The Water Department Garage is a small, masonry building that shares a site with the Department of Public Works and Water Department Main Office building and a prefabricated metal storage building. The brick building is well detailed on the exterior but has fallen into disrepair both inside and out.

Observations and Findings

SITE ASSESSMENT

The building is located on the southern edge of the improved site with dense woods defining the southern side. There is vehicular access from Andover Street that breaks to the right of the main circulation loop. Pavement runs up to the façade and garage bays in most locations.

BUILDING EXTERIOR

The building exterior is brick with precast concrete detailing. One of the precast pieces has come loose and presents a potential hazard to those walking underneath it. Overall, the brick requires pointing throughout. The roof was reported to be new and a new roof flashing was observed.

BUILDING INTERIOR

The building interior is an industrial work area and there are limited finishes. Concrete flooring is heavily cracked and spalled, and is in need of repair. Wood trim, especially at doorways, is damaged and in need of repair.

STRUCTURE

Building structure is masonry (brick) with steel beams bearing on the brick and wood rafters supporting wood roof decking. The structure is in fair condition but additions and modifications appear to have been made without appropriate structural design planning.

BUILDING SYSTEMS

All building systems are older and are in poor to fair condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

WATER DEPARTMENT BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	1
Brick / Masonry	1
Siding / Cladding	1
Windows	2
Doors	1
Canopies / Overhangs	N/A
Roof	4
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	N/A
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	1
Base	N/A
Flooring	1
Ceiling	N/A
Stairs	N/A
Handrails	N/A
Doors	N/A
Glazing	N/A
ELECTRICAL	
Service Entrance	N/A
Panel / Distribution	N/A
LIGHTING	
Lighting	N/A
Lighting Controls	N/A

MECHANICAL	
Boiler	2
Fuel	N/A
HVAC	N/A
PLUMBING	
Toilet Rooms	1
Kitchen	N/A
Domestic Water	1
STRUCTURE	
Observable Steel	2
Observable Masonry	1
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

WATER GARAGE

Executive Summary - HVAC

The HVAC system serving the DPW main office is gas fired unit heaters. The heating system that serves the building appears in fair condition and would be anticipated to serve the building for the next 10-15 years.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The building is heated by gas fired unit heaters.
Rating: 2
- The breeching from the furnace appears to be single wall through the roof.
Rating: 2
- The exhaust system does not appear to be operational and would be recommended to be replaced. We recommend the exhaust system serving the garage should be replaced with a code compliant exhaust system for garage type buildings.
Rating: 0

Executive Summary - Plumbing

The Water Garage Building was built in 1969. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, garage waste system, storm system, compressed air system and natural gas piping. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in fair condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of floor mounted, tank type water closet and a countertop lavatory with hot and cold water handles. A Kitchenette sink is stainless steel, counter mounted with gooseneck faucet and hot and cold water handles with vegetable spray. There are no drinking fountains or Janitor's sinks in the building. In general, the fixtures are in poor condition and do not meet accessibility standards and are not water conserving.

Rating – 1

- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves to the building and are in poor condition. The domestic water piping is not insulated or labeled.

Rating – 1

- Domestic water for the building is generated through an electric storage tank type water heater. The tank capacity of each heater is 20 gallons and has an electrical input of 2500 watts. Domestic hot water is not recirculated. There is no thermostatic mixing valve at the outlet of the water heater. There is no expansion tank installed at the cold water make-up for the water heater. Domestic water piping near the heater is uninsulated. The water heater appears to be in fair condition.

Rating – 2

- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in poor condition. Smaller pipe sizes appear to be copper. There are portions of the sanitary and storm piping system that have recently been repaired. In general, the original cast iron drainage piping should be replaced. The horizontal storm drainage piping does not appear to be insulated. The Garage has floor drains which do not appear to be directed to an oil/gas separator.

Rating – 1

- An elevated pressure natural gas service, pressure regulator and gas meter is located outside of Building. Natural gas piping is distributed to HVAC equipment. The natural gas piping is steel with threaded fittings. Overall the gas piping is in good condition.

Rating - 3

- A simplex air compressor and vertical tank is provided to service the compressed air outlets and hose reels in Garage. This system is in fair condition.

Rating - 2

FACILITY PHOTOGRAPHS



CEMETERY OFFICE

LOCATION: 233 MIDDLESEX AVENUE
TOTAL # OF STORIES: 1
YEAR CONSTRUCTED: 1938
BUILDING AREA: 960 GSF
BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES
AND GARAGE



Description

This is a small historic masonry structure serving the Wildwood Cemetery. The combined office and garage building is a Works Progress Administration (WPA) project.

Observations and Findings

SITE ASSESSMENT

The building is sited among a grove of trees which obscures it from view of the rest of the cemetery and from Middlesex Avenue. The stone exterior further meshes the building into its natural setting. There is a concrete drip edge along the perimeter of the building to catch rain falling from the eaves. The Cemetery Office is otherwise surrounded by grass and trees. Paving extends to the two garage doors and the front door for vehicular and pedestrian access. A paved walkway connects the back door, at the office, directly to the other side of the cemetery.

BUILDING EXTERIOR

The building façade is made up of large round stones with painted wood trim. Wood trim is rotten at sill and eave conditions, and should be replaced. Windows appeared to be original single pane double hung. Asphalt roof shingles appear to be in fair condition.

BUILDING INTERIOR

Flooring is a combination of exposed concrete and VCT: both typically in poor condition. Exterior walls are parge coat brick. Interior walls appear to be wood panels with wood trim: all painted. Sill conditions were in poor condition. Ceilings were coffered and a similar composition to the walls.

STRUCTURE

Walls are load bearing masonry (brick) with a wood framed roof.

BUILDING SYSTEMS

Electrical and plumbing systems in the building are in poor condition. Heating systems consist of a furnace and unit heater for the garage.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Exit signs are unlit. There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

CEMETERY OFFICE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	0
Windows	1
Doors	1
Canopies / Overhangs	1
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	2
Base	2
Flooring	1
Ceiling	2
Stairs	N/A
Handrails	N/A
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	1
Panel / Distribution	1
LIGHTING	
Lighting	1
Lighting Controls	N/A

MECHANICAL	
Boiler	3
Fuel	2
HVAC	1
PLUMBING	
Toilet Rooms	1
Kitchen	N/A
Domestic Water	3
STRUCTURE	
Observable Steel	N/A
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

CEMETERY OFFICE BUILDING

Executive Summary - Electrical

The electrical systems for the Garage are original to the building and are in poor condition and have outlived their intended useful life. The electrical systems should be replaced under a renovation program.

Rating

5 - Brand New
4 - Very Good
3 - Good
2 - Fair
1 - Poor
0 - Requires repair
X - Requires immediate
N/A - Not applicable

Existing Conditions:

- The electrical service runs overhead between the utility pole and the building mounted meter. The electrical service is rated at 100 amperes, 120/240 volts, 1 phase, 3 wire. A fusible disconnect switch and load center and sub-load center is located high in the garage wall.

Rating: 1



Utility Meter on Building



Fusible Load Center

- The interior lighting consists of a pendant school light in the hallway, porcelain sockets in the garage, toilet room and attic, controlled with local switches. The office has a surface 2x4 wraparound with acrylic lens and T8 lamps.

Rating: 1

- Exterior lighting consists of one twin par holder with halogen lamps at front, controlled with an interior hall switch. No other exterior lights were noted.

Rating: 1



Front Exterior Lights

- The emergency lighting consist of one self-contained battery unit with a plug-in cord located in the office. No other emergency lights noted. Exist signs consist of unlit signs.

Rating: 1



Unlit Exit Sign

- The fire alarm system consists of a one zone Repco control panel located in the hall. Heat detectors are located in each space. There are no horn/strobes.

Rating: 1



Fire Alarm & Security Panels in the Hallway

- The intrusion system consists of a Repco control panel with a keypad in the hallway. A passive infrared sensor exists in the office. The exterior doors have magnetic contacts.
Rating: 1
- Garage overhead doors are not powered.
Rating: 1
- The garage receptacles are not GFI protected.
Rating: 0
- The telephone & CATV service cables run overhead into the building.
Rating: 4

Executive Summary - HVAC

The HVAC system serving the Cemetery Office Building appears to be in fair condition to serve the building. While the boiler has been recently replaced, other HVAC equipment in the building appears to be very dated and would be recommended to be replaced.

Rating

5 - Brand New
 4 – Very Good
 3 – Good
 2 – Fair
 1 – Poor
 0 – Requires repair
 X – Requires immediate
 N/A – Not applicable

Existing Conditions:

- The building is heated by an oil fired boiler that heats the entire building. The boiler is manufactured by Weil McLain Boiler providing heating hot water supply to the building loop at approximately 180 degrees.
Rating: 3

- The breeching is from the Boiler single wall with barometric relief into the chimney.
Rating: 3
- No. 2 fuel oil is stored in an oil storage tank located in the garage. The date tank manufacturer was not verified; however, it appears in fair condition. The oil tank is piped to the furnace. The oil lines are double wall but are not encased in concrete. We recommend the following: Fuel oil lines shall be encased in concrete for added protection. Test exiting oil tanks to determine if replacement is required.
Rating: 2
- The exhaust fan in the toilet room is very dated and would be recommended to be replaced. There did not appear to be dedicated exhaust for the garage. We recommend the following: 1. Replace the exhaust fan with a new unit to serve the toilet room.
Rating: 1
- The cast iron radiators and boiler are controlled by a wall mounted dial type thermostat. The thermostat is non-programmable and reacts to space temperature on a call for heat.
Rating: 2
- We recommend the following: Provide a general exhaust system sized in accordance with current code for garage applications.

Executive Summary - Plumbing

The Cemetery Office Building was built in 1938. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. Municipal Sewer system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The building plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- Plumbing fixtures consist of a floor mounted, tank type water closet and a countertop stainless steel lavatory with hot and cold water handles. There are no kitchen sinks, drinking fountains or janitor's sinks in the building. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating - 1

- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in poor condition.
Rating – 1
- Domestic water for the building is generated through an oil fired boiler used for heating and domestic hot water. Domestic hot water is not recirculated. An expansion tank installed at the boiler. Domestic water piping is not insulated. The boiler is in good condition.
Rating – 3
- Cast iron is used for sanitary drainage. Where visible, the cast iron pipe appears to be in poor condition. Smaller pipe sizes appear to be copper. There is evidence of portions of the existing sanitary drainage piping that has been replaced recently. In general, the original cast iron drainage piping has exceeded its life expectancy and should be replaced.
Rating – 1

Executive Summary – Fire Protection

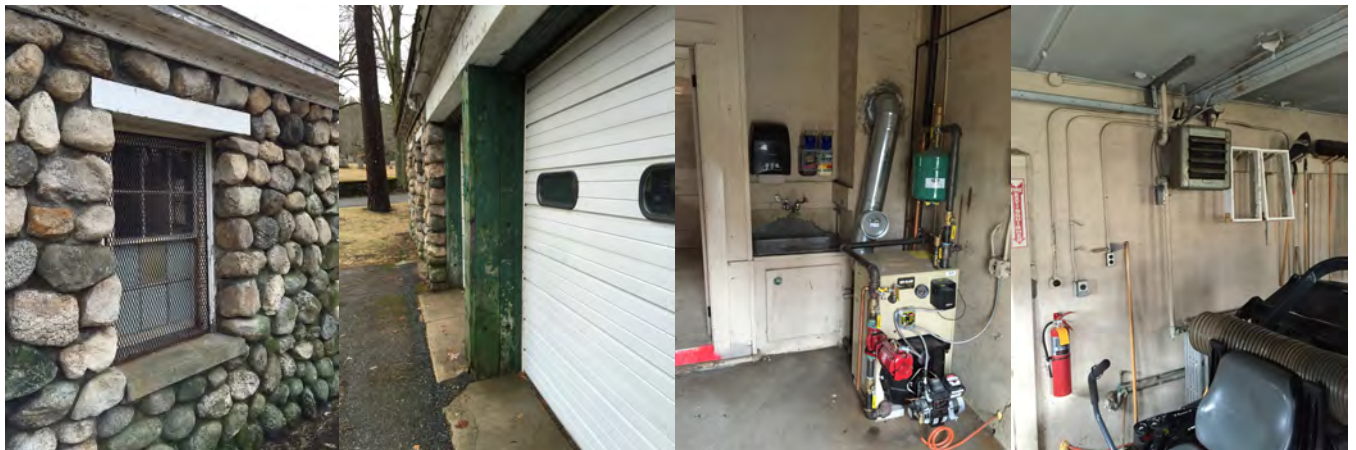
The Cemetery Office Building was constructed in 1938 and is 960 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



CEMETERY GARAGE

LOCATION: 60 WILDWOOD STREET

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1970

BUILDING AREA: 1,800 GSF

BUILDING OCCUPANCY: ADMINISTRATIVE OFFICES
AND GARAGE



Description

The Cemetery Garage facility is a masonry building that houses maintenance and storage program for the Wildwood Cemetery. The building is generally in fair to poor condition with a significant list of safety concerns and deferred maintenance. Typical with utility buildings, it has been used heavily and is need of upgrades and repair.

Observations and Findings

SITE ASSESSMENT

The facility is located in the Wildwood Cemetery. The area around the building is paved, providing vehicle circulation and access to yard storage bins located against the rear of the building. There is no landscaping immediately surrounding the building nor is there any type of vegetative screening between the garage and the adjacent cemetery plots.

BUILDING EXTERIOR

The building exterior is comprised of CMU, is industrial in nature, and appears to be in fair condition with the exception of windows and doors which are in poor condition. The roof is a wood framed gable. Asphalt shingle roofing is missing in several locations and requires repair in the near future. Exterior CMU has a painted finish which has peeled away from the CMU below exterior window sills. It is recommended that a more compatible coating be used for repainting the CMU.

BUILDING INTERIOR

Building interiors are not finished except for masonite boards that create a ceiling which is fastened to the bottom chord of the roof trusses. Concrete slab is chipped and has areas of exposed rebar showing. Patching is required in the chipped areas to prevent further deterioration.

STRUCTURE

Building structure is masonry (CMU) with floor slab on grade. Vehicle bays are built with cast concrete. Roof framing consists of wood trusses which appear to be field fabricated. Overall, the building structure appeared to be in fair condition. Decking in the attic is not installed in a permanent way and gives under foot. In addition to items stored in the attic, it is concerning that an occupant might fall through the decking.

BUILDING SYSTEMS

Electrical systems are in poor condition. Oil fired furnace provides forced hot air heating. Oil tanks do not meet current codes. There is no dedicated exhaust system serving the garage. Plumbing systems are in fair condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Stairs to the attic area are wood framed, have no railings, and do not have appropriate height clearances. The stairs do not meet current codes for the two latter reasons. Exit signs are unlit and exit lighting, alarms, and horn strobes are not adequate for this type of facility. Overhead doors do not have safety switches. There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

CEMETERY GARAGE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	2
Windows	1
Doors	1
Canopies / Overhangs	N/A
Roof	0
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	1
Base	N/A
Flooring	1
Ceiling	1
Stairs	0
Handrails	0
Doors	N/A
Glazing	N/A
ELECTRICAL	
Service Entrance	1
Panel / Distribution	1
LIGHTING	
Lighting	1
Lighting Controls	N/A

MECHANICAL	
Boiler	2
Fuel	0
HVAC	2
PLUMBING	
Toilet Rooms	N/A
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	N/A
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

CEMETERY GARAGE

Executive Summary - Electrical

The electrical systems for the Garage are original to the building and are in poor condition and have outlived their intended useful life. The electrical systems should be replaced under a renovation program.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service and telephone service run overhead between the utility pole and the building. The electrical service is rated at 100 amperes, 120/240 volts, 1 phase, 3 wire. A 100 ampere, 120/240 volt, 1 phase, 3 wire main breaker, 20 pole panelboard, half full is located in the garage. The wiring method is generally pipe and wire in the garage and Romex in the attic

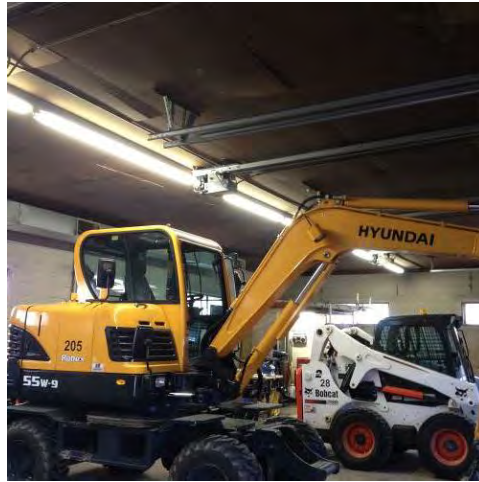
Rating: 1



Panelboard

- The interior lighting consists of a single row of 8' strips with T12 lamps controlled with a local switch. Garage is poorly lit. Attic has porcelain sockets on a local switch.

Rating: 1



Interior Lighting

- The exit signs are unlit. There is no internally lit exit signs or emergency lighting.
Rating: N/A
- The exterior lighting consist of par holders without lamps at each corner of the building. There are no lights over the garage doors.
Rating: 1
- The fire alarm system consists of a Napco one zone control panel with old style heat detectors in the garage and attic. The form of transmission is via the same dialer as the security panel.
Rating: 1



Fire Alarm Control Panel

- The intrusion system consists of a Napco control panel with passive infrared sensors and magnetic contacts at the entry door.

Rating: 1

- Overhead doors do not have safety switches.
Rating: 0
- Receptacles are sparsely located and are not GFI protected.
Rating: 0

Executive Summary - HVAC

The HVAC system serving the Cemetery Garage appears to be dated and likely past its anticipated life expectancy. Although the equipment appears operational, replacement should be considered within the next five years.

Rating

5 - Brand New
4 – Very Good
3 – Good
2 – Fair
1 – Poor
0 – Requires repair
X – Requires immediate
N/A – Not applicable

Existing Conditions:

- The garage is heated by an oil fired furnace that serves the entire garage. The unit has ducted supply grilles providing forced hot air to the building. Return air is pulled from the gooseneck located at the furnace. The furnace is manufactured by Oneida Heater Co. and the furnace has a Beckett oil burner. We recommend the following: Replace the furnace with a new unit to serve the garage.
Rating: 2
- The breeching runs from the Furnace single wall with barometric relief up through the roof.
Rating: 2
- No. 2 fuel oil is stored in a (2) 330 gallon oil storage tanks also located in the garage. The tank was manufactured in 1995 and appears in fair condition. The oil tanks are piped to the furnace. The oil lines are not double wall and do not meet current code, the oil lines would be recommended to be replaced at the time of the tank or furnace replacement. We recommend the following: Replace fuel oil lines with new double wall lines run under concrete floor to the new furnace. Test exiting oil tanks to determine if replacement is required.
Rating: 0
- There does not appear to be any dedicated exhaust system to serve the garage. We recommend the following: Provide a general exhaust system sized in accordance with current code for garage applications.
- The Furnace is controlled by a wall mounted dial type thermostat. The thermostat is non programmable and reacts to space temperature on a call for heat.
Rating: 2

Executive Summary - Plumbing

The Cemetery Garage Building was built in 1970. Presently, the Plumbing Systems serving the building garage waste system and compressed air system. Municipal sewer services the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in fair condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Cast iron is used for sanitary drainage and vent piping. Where visible, the cast iron pipe appears to be in poor condition. In general, the original cast iron drainage piping should be replaced. The Garage has a trench drain which has been covered. The associated drainage piping does not appear to be directed to an oil/gas separator.
Rating – 2
- A simplex air compressor and vertical tank is provided to service the compressed air outlets in Garage. This system is in fair condition.
Rating - 2

Executive Summary – Fire Protection

The Cemetery Garage Building was constructed in 1970 and is 1,800 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



DEPARTMENT OF PUBLIC WORKS MAIN OFFICE

LOCATION: 115 ANDOVER STREET

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1927

BUILDING AREA: 2,380 GSF

BUILDING OCCUPANCY: OFFICE AND PUMP STATION



Description

The Department of Public Works and Water Department Main Offices Building is a small, historic masonry building that shares a site with the Water Department Garage building and a prefabricated metal storage building. The brick building is well detailed and has been maintained to stay in good condition.

Observations and Findings

SITE ASSESSMENT

The building is located to the north of the Water Department Garage and faces Andover/Woburn Street. It sits at the head of the main circulation loop. The building is buffered from paving by grass on all sides with foundation plantings along the front facade.

BUILDING EXTERIOR

The building exterior is brick with painted wood trim and is in good condition. The slate shingle roof and associated flashing appear to be in good condition.

BUILDING INTERIOR

Building interior is divided into two sections: the office area and the pump room.

STRUCTURE

Building structure is masonry (brick) walls with heavy timber and steel trusses supporting wood roof decking. The observable structure is in good condition.

BUILDING SYSTEMS

HVAC systems are in fair to poor condition. Gas fired unit heaters serves the utility spaces and a gas fired furnace serves the office spaces. Changes to locations of fin tube radiation are recommended. The enclosure for the air conditioner compressor unit is limiting the compressor's performance and it is recommended that the enclosure be moved. Plumbing systems are in fair condition overall.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

The building is fully protected by automatic sprinkler systems.

BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	3
Brick / Masonry	3
Siding / Cladding	3
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	3
LIFE SAFETY	
Sprinkler Y/N	Y
Fire Alarm / Early Detection	3
Life Safety: Exit Signs	3
Life Safety: Emergency Lighting	3
INTERIOR	
Condition of Walls	3
Base	3
Flooring	3
Ceiling	3
Stairs	3
Handrails	N/A
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	N/A
Panel / Distribution	N/A
LIGHTING	
Lighting	3
Lighting Controls	N/A

MECHANICAL	
Boiler	N/A
Fuel	N/A
HVAC	1
PLUMBING	
Toilet Rooms	2
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	3
Observable Masonry	3
Headers / Lintels	3
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

DPW MAIN OFFICES

Executive Summary - HVAC

The HVAC system serving the DPW main office is a gas fired heating system with terminal electric heat as a supplemental heat source. The HVAC system does not appear to provide space comfort for the occupants of the building.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The building is heated by a gas fired unit heaters, a gas fired furnace and terminal electric heat. The gas fired unit heaters serve the utility type spaces of the building such as the water pump room. The gas furnace serves the office areas which also have supplemental electric heat.

Rating: 1

- The breeching from the furnace appears to be single wall through the roof.

Rating: 2

- Air conditioning is provided to the office spaces from the air cooled condensing unit located at grade outside the building connected to the indoor gas furnace. An enclosure has been installed above the air cooled condensing unit that will reduce the performance of the unit. The outdoor unit rejects heat from the fan at the top of the unit, but with the enclosed cover that has been added it will restrict the amount of heat the condenser can reject and prevent the unit from working properly.

Rating: 0

- There is a wide range of standalone thermostats for unit heaters, the gas furnace and the electric fin tube. The thermostats for the air handling unit serving the office space has a primary stat to control the unit and a sub thermostat for the additional office space. The sub stat can only operate if the primary thermostat is energized. We recommend the following: Office space thermostats should be replaced with programmable thermostats with 2 stages of heating control the first stage can be the air handling unit and the second stage could be a either the electric heat. There are many space heaters that have been added at work areas to compensate for the lack of heat to provide personal comfort that could be replaced with a more permanent solution.

Rating: 1

- Some of the electric fin tube was noted that it was installed directly over a wall electrical outlet which is a code violation. We recommend the following: Electric baseboard installed under electrical outlets should be removed and electric heat could be installed in a different area of the space.

Rating: 0

Executive Summary - Plumbing

The DPW Office Building was built in 1927. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system and natural gas piping. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in fair condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of a floor mounted, tank type water closet and a wall hung lavatory with hot and cold water handles. The Kitchenette sink is stainless steel, counter mounted with gooseneck faucet and hot and cold water handles. There is a surface mounted electric water cooler in the building. Janitor's Sinks are cast iron floor mounted with 3" trap standard. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 2

- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves to the building and are in poor condition. The domestic water piping is not insulated or labeled.
Rating – 2

- Domestic water for the building is generated through an electric storage tank type water heater. The tank capacity of each heater is 6 gallons and has an electrical input of 1650 watts. Domestic hot water is not recirculated. There is no thermostatic mixing valve at the outlet of the water heater. There is no expansion tank installed at the cold water make-up for the water heater. Domestic water piping near the heater is uninsulated. The water heater appears to have exceeded its life expectancy.
Rating – 1

- Cast iron is used for sanitary drainage. Where visible, the cast iron pipe appears to be in poor condition. Smaller pipe sizes appear to be copper. There are portions of the sanitary system that have recently been repaired. In general, the original cast iron drainage piping should be replaced.
Rating – 1
- An elevated pressure natural gas service and pressure regulator is located outside of Building. Natural gas piping is distributed to HVAC equipment, domestic water heater and an emergency generator. The natural gas piping is steel with threaded fittings. Overall the gas piping is in good condition.
Rating - 3

Executive Summary – Fire Protection

The Department of Public Works Building was constructed in 1927 and is 2,380 square feet. The building is fully protected by automatic sprinkler systems, including all attic spaces.

The building is supplied with a 4" fire service. The sprinkler system appears to have been installed relatively recent. The majority of the equipment and systems installed appear to have been well maintained and are generally in good condition.

Rating

5 - Brand New
 4 – Very Good
 3 – Good
 2 – Fair
 1 – Poor
 0 – Requires repair
 X – Requires immediate
 N/A – Not applicable

Existing Conditions:

- There is a 4" fire water service that connects to a municipal water line in a tunnel in the Basement Mechanical Room. This service is controlled by an interior OS&Y gate valve and includes a 6" double check valve assembly with 4" riser check valve and wall mounted Storz Fire Department connection. The sprinkler main distributes as a 4" after the alarm valve. The system provides 100% sprinkler protection to the Building, including attic spaces. The Fire Protection system includes zone control valve assemblies to isolate each floor level. Sprinkler heads vary from concealed pendant type, to semi-recessed pendant type and exposed upright type sprinkler heads depending on the ceiling construction, location, or exposed structure.
Rating: 3

FACILITY PHOTOGRAPHS



HARDEN TAVERN

LOCATION: 430 SALEM STREET

TOTAL # OF STORIES: 2

YEAR CONSTRUCTED: 1800

BUILDING AREA: 3,388 GSF

BUILDING OCCUPANCY: TOWN MUSEUM AND OFFICES



Description

Harnden Tavern is a small, historic wood framed building that shares a site with the Harnden Carriage House and Minuteman Headquarters. The facilities are currently being used as the Wilmington Town Museum. The building dates back to colonial times and is a National Register historical site. It is built in the Georgian style with a hip roof on the main house volume and a gable roof on the back house portion. The Carriage House contains display areas with historic Town artifacts. Minuteman Headquarters was only briefly assessed on the exterior since it was not on the list of Town buildings but has historic significance. It is a small wood framed gable roof building used for meetings by the Wilmington Minutemen.

Observations and Findings

SITE ASSESSMENT

The building is located on the corner of Salem and Woburn streets. There are a few mature trees lining the street and small foundation plantings. Ledge outcroppings are present between the Tavern building and the driveway closest to Minuteman Headquarters. Parking is dirt with no markings which is difficult for patron navigation. The principal parking area is facing the Carriage House.

BUILDING EXTERIOR

Exposed stone foundation all appeared to be in good condition. The building exterior for all buildings is painted clapboard siding. Siding on the Carriage House is in fair to poor condition and may require replacement or restoration, especially at eave and foundation sill locations. Roofing on the Tavern is primarily wooden shingle; there is also EPDM on the low sloping back porch roof. The Carriage House has asphalt shingle roofing which appears to be in fair condition. The Minuteman Headquarters has asphalt shingle roofing which appears to be in good condition. The Tavern has multiple brick chimneys: some of which require steel bracing for support.

BUILDING INTERIOR

The interior of the Tavern is well preserved with original wood flooring, painted wood wainscoting, plaster walls, picture rails, crown molding, plaster ceilings, and wood hearth surrounds. Pergo flooring has been installed in the kitchen area of the Tavern and is in fair condition. The Carriage House interior is unfinished.

STRUCTURE

The Tavern is timber framed on a stone foundation. The observable structure is in good condition. The Carriage House is timber framed on stone rubble footings. The roof is stick built indicating it was replaced at some point in the early 20th century. The Minuteman Headquarters interior was not observed but is presumably timber framed given the age of the building.

BUILDING SYSTEMS

An oil fueled hot water heating system is present in the Tavern only and is in fair condition. Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

There is no emergency lighting or exit signs do not exist in these facilities. There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

HARNDEN TAVERN BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	0
Brick / Masonry	0
Siding / Cladding	2
Windows	1
Doors	2
Canopies / Overhangs	2
Roof	3
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	2
Base	2
Flooring	2
Ceiling	1
Stairs	2
Handrails	1
Doors	2
Glazing	N/A
ELECTRICAL	
Service Entrance	0
Panel / Distribution	0
LIGHTING	
Lighting	0
Lighting Controls	N/A

MECHANICAL	
Boiler	2
Fuel	1
HVAC	2
PLUMBING	
Toilet Rooms	2
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	N/A
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

CARRIAGE HOUSE BUILDING RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	1
Siding / Cladding	1
Windows	2
Doors	1
Canopies / Overhangs	1
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	2
Base	N/A
Flooring	1
Ceiling	N/A
Stairs	1
Handrails	1
Doors	1
Glazing	N/A
ELECTRICAL	
Service Entrance	N/A
Panel / Distribution	0
LIGHTING	
Lighting	0
Lighting Controls	N/A

MECHANICAL	
Boiler	2
Fuel	1
HVAC	2
PLUMBING	
Toilet Rooms	2
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	N/A
Observable Masonry	N/A
Headers / Lintels	2
COMMENTS	

MINUTEMAN BUILDING RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	N/A
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	3
LIFE SAFETY	
Sprinkler Y/N	N/A
Fire Alarm / Early Detection	N/A
Life Safety: Exit Signs	N/A
Life Safety: Emergency Lighting	N/A
INTERIOR	
Condition of Walls	N/A
Base	N/A
Flooring	N/A
Ceiling	N/A
Stairs	N/A
Handrails	N/A
Doors	N/A
Glazing	N/A
ELECTRICAL	
Service Entrance	N/A
Panel / Distribution	N/A
LIGHTING	
Lighting	N/A
Lighting Controls	N/A

MECHANICAL	
Boiler	N/A
Fuel	N/A
HVAC	N/A
PLUMBING	
Toilet Rooms	N/A
Kitchen	N/A
Domestic Water	N/A
STRUCTURE	
Observable Steel	N/A
Observable Masonry	N/A
Headers / Lintels	N/A
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

HARDEN TAVERN

Executive Summary - Electrical

The electrical systems for the Harnden Tavern (Town Museum), although functioning, are generally in fair to poor condition. The emergency lighting, exit signs, and fire alarm should be upgraded. The electric service is marginally sized and does not have the capacity for added loads.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

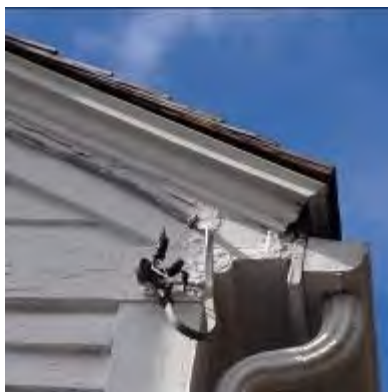
X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs overhead between the utility pole and an electric meter on the building. The service is rated at 100 amperes, 120/240 volt, 1 phase, 3 wire. A 100A, main circuit breaker, 20 pole load center is located in the basement. The load center, manufactured by Murray, is full and in fair condition. The load center feeds an electric range and electric water heater. The electric service is marginally sized for the facility. The service also sub-feeds the adjacent Carriage House with open spliced cables on the exterior.

Rating: 2



Sub-feeder to the Carriage House



Load Center in Basement

- The wiring method is generally Romex with some MC cable. Knob and tube wiring was noted in the basement. Some Romex is not properly supported. Knob and tube wiring should be replaced or removed if abandoned.

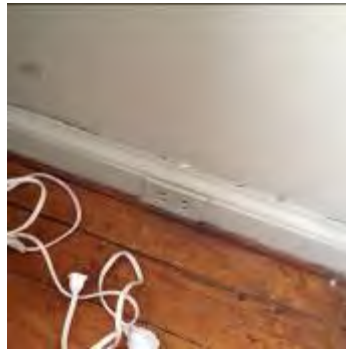
Rating: 1



Knob and Tube Wiring

- Receptacle coverage is minimal. Receptacles on wooden baseboard are of the two-prong, non-grounding type.

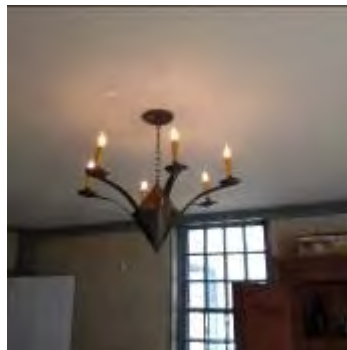
Rating: 1



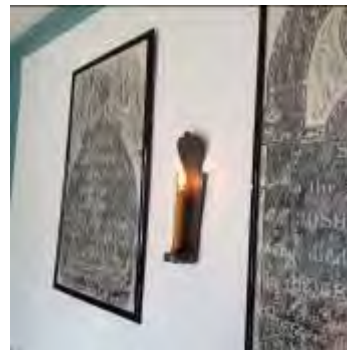
Non-Grounding Receptacles

- The interior lighting consists of decorative pendant fixtures and matching wall sconces with candelabra lamps. Other utility fixtures with incandescent lamps are located throughout. The basement has porcelain sockets and wraparound fixtures with acrylic lens. The attic does not have lights.

Rating: 2



Pendant Fixture



Wall Sconce

- The exterior lighting consists of twin par lamp holders with halogen lamps with motion sensor for parking area. Wall sconce lanterns with incandescent lamps exist at exterior doors controlled with interior switches.

Rating: 1



Par Lamps



Wall Lanterns

- There are no internally lit exit signs or battery operated emergency lighting.

Rating: N/A

- The fire alarm system and intrusion system appear to share a Magnum Alert 1000 series common panel located in the basement. Smoke detectors exist in hallways and stairs. Heat detectors exist in the basement, attic, and kitchen. The facility does not have full coverage of detection and does not have horn/strobes. A knox box is located at the rear door.

Rating: 1



Heat in Kitchen

- The intrusion system consists of passive infrared sensors and magnetic door contacts. A low temperature sensor also exists.

Executive Summary - HVAC

The HVAC system serving the Harnden Tavern is a hot water heating system. There is no HVAC in the separated Carriage House building. The heating system that serves the Harnden Tavern appears in fair condition and would be anticipated to serve the building for the next 10-15 years.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The building is heated by an oil fired boiler that heats the entire building. The boiler is manufactured by Utica Boilers providing heating hot water supply to the building loop at approximately 180 degrees.

Rating: 2

- The breeching is from the Boiler single wall with barometric relief into the chimney.

Rating: 2

- No. 2 fuel oil is stored in an oil storage tank located in the basement. The date tank manufacturer was not verified; however, it appears in fair condition. The oil tank is piped to the boiler. The oil lines are double wall but are encased in concrete. The tank oil fill and vent piping are right above grade level on the outside of the building and would be recommended to be extended. We recommend the following: Fuel oil tank fill and vent piping would be recommended to be extended higher above grade than currently installed. The current location appears to be within snowfall levels that would impede on service and may allow for water to be able to enter the tank. Test exiting oil tanks to determine if replacement is required.

Rating: 1

- The cast iron radiators and boiler are controlled by a wall mounted dial type thermostat. The thermostat is non programmable and reacts to space temperature on a call for heat. We recommend the following: Replace the dial type wall mounted thermostats with programmable thermostats. Programmable thermostats would provide energy and fuel savings, however due to the historical nature of the building this this may not be acceptable to fit the building environment.

Rating: 2

- A window mounted air conditioning unit serves the office on the second floor.

Rating: 2

- Wall mounted dial type non-programmable thermostats are located throughout the building and noted to not set the stat below certain temperatures for freeze protection.

Rating: 2

- Wall mounted dial type non-programmable thermostats are located throughout the building and noted to not set the stat below certain temperatures for freeze protection.

Rating: 2

- Cleanouts of existing chimneys appeared to be missing or open, these should be properly sealed.

HARDEN TAVERN AND CARRIAGE HOUSE

Executive Summary - Plumbing

The Harden Tavern and Carriage House was built in 1800. Presently, the Plumbing Systems serving the building are cold water, hot water and sanitary, waste and vent system. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems have exceeded their life expectancy. Overall, the Plumbing systems are in fair condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of floor mounted, tank type water closet and wall hung or countertop lavatories with hot and cold water handles. Kitchenette sinks are stainless steel, counter mounted with gooseneck faucet and hot and cold water handles and vegetable spray. A cast iron claw foot tub existing in the Bathroom with hot and cold water tub spout. There were no drinking fountains or Janitor's sinks in the building. In general the fixtures do not meet accessibility standards and are not water conserving.

Rating – 2

- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves and are in fair condition. The domestic water piping does not appear to be insulated or labeled.

Rating – 2

- Domestic water for the building is generated through an electric tank type water heater. The tank capacity of each heater is 30 gallons and has an electrical input of 4500 watts. Domestic water piping is uninsulated. The water heater appears to be nearing its life expectancy.

Rating – 2

- Cast iron is used for sanitary drainage piping. Where visible, the cast iron pipe appears to be in poor condition. In general, the original cast iron drainage piping should be replaced.

Rating – 1

HARNDEN TAVERN AND CARRIAGE HOUSE

Executive Summary – Fire Protection

The Harnden Tavern and Carriage House Building was constructed in 1800 and is 3,388 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



SCALEKEEPER'S OFFICE

LOCATION: 240 MIDDLESEX AVENUE

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1840

BUILDING AREA: 120 GSF

BUILDING OCCUPANCY: STORAGE



Description

This is a very small, historic wood framed building that shares a site with the Moth House and Town Pound. The facilities are currently being used as an antique showpiece and provides a historic bookend at the northern edge of the Wilmington Center Village Historic District. The Scalekeepers Office was only briefly assessed on the exterior due to the fact that it is an unoccupied building of historic significance.

Observations and Findings

SITE ASSESSMENT

The building is located on Middlesex Avenue across from the Wildwood Cemetery and next to the Congregational Church of Wilmington. The building is accessed by a paved arced driveway off Middlesex Ave.

BUILDING EXTERIOR

Exposed granite slab foundation appears to be in good condition. The exterior is painted clapboard siding which appears to be in good condition. The building has asphalt shingle roofing which appears to be in good condition.

BUILDING INTERIOR

The interior consists of wide board flooring, painted wood walls and exposed wood roof framing.

STRUCTURE

The building is timber framed on stone foundation. The observable structure appeared to be in good condition.

BUILDING SYSTEMS

The building has electricity running from the Moth House. It is in poor condition and should be replaced. The building has no HVAC or Plumbing systems.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

SCALEKEEPER BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	N/A
Life Safety: Exit Signs	N/A
Life Safety: Emergency Lighting	N/A
INTERIOR	
Condition of Walls	N/A
Base	N/A
Flooring	N/A
Ceiling	N/A
Stairs	N/A
Handrails	N/A
Doors	N/A
Glazing	N/A
ELECTRICAL	
Service Entrance	1
Panel / Distribution	N/A
LIGHTING	
Lighting	N/A
Lighting Controls	N/A

MECHANICAL	
Boiler	N/A
Fuel	N/A
HVAC	N/A
PLUMBING	
Toilet Rooms	N/A
Kitchen	N/A
Domestic Water	N/A
STRUCTURE	
Observable Steel	N/A
Observable Masonry	N/A
Headers / Lintels	N/A
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

SCALE KEEPER'S OFFICE

Executive Summary - Electrical

The electrical systems for the Scale Keeper's Office are functioning but are in fair to poor condition. All existing electrical items should be replaced.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs underground into the building from the adjacent Moth House. The service is a 120 volt circuit to a junction box on the outside of the building.
Rating: 1
- No lighting and power panel is provided.
Rating: N/A
- The interior lighting consists of surface mounted incandescent fixtures controlled with local switches.
Rating: 1
- Exterior lighting is not provided.
Rating: N/A
- No emergency lights or exit signs are provided in the building.
Rating: N/A
- No fire alarm system is provided in the building.
Rating: N/A
- The general wiring method is Romex throughout the building. One outlet is provided in the office.
Rating: 2

Executive Summary - HVAC

There is no HVAC system in the ScaleKeeper's Office.

HEARSE BARN

Executive Summary - HVAC

There is no HVAC system in Hearse Barn.

Executive Summary - Plumbing

The Scalekeeper's Office Building was built in 1400 and is 120 square feet in gross area. Presently, there are no Plumbing Systems serving the building.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

Rating – N/A

Executive Summary – Fire Protection

The Scalekeeper's Office Building was constructed in 1840 and is 120 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



ART COUNCIL

LOCATION: 219 MIDDLESEX AVENUE
TOTAL # OF STORIES: 2
YEAR CONSTRUCTED: 1860
BUILDING AREA: 2,755 GSF
BUILDING OCCUPANCY: ARTS PROGRAMS
AND STORAGE



Description

This is a wood frame structure located within the Wilmington Center Village Historic District. The building was formerly used as the Town Hall. It is currently used as a gallery, arts program space, offices, and Town storage in the basement. The building is identified from the street by a ground mounted sign and on the façade of the Art Center.

Observations and Findings

SITE ASSESSMENT

The building faces Middlesex Avenue and is set back from the street and surrounded by pavement. An arc shaped grass landscape buffer separates the paved parking lot from the street. Landscaping includes two deciduous trees and small pruned hedges. There are raised foundation plantings at the front of the building. Wildwood Cemetery defines the north and east edges of the site.

Parking is located on the south side of the building although vehicles can circulate around the entire facility.

BUILDING EXTERIOR

Painted wood siding and trim are in fair condition. The asphalt shingle roof appears to be in fair to good condition. Exterior windows and doors appear to be original and are in fair condition.

BUILDING INTERIOR

The building consists of one large interior space with office and toilet occupying the addition at the north side. Finishes include ACT ceilings, VCT flooring, and carpet. Picture rails run along the length of the large open gallery to protect the plaster walls. An entry vestibule has been added which is finished in drywall. Flooring is in poor condition and should be replaced. Offices have panelized wood look finishes on the walls.

STRUCTURE

Exposed structural framing is limited to floor joists in the basement. These appeared to be in fair condition. Foundation is granite block and fieldstone and appears to be in good condition.

BUILDING SYSTEMS

Toilet room electrical outlets are not GFI-protected. Electrical systems were noted to be in poor condition. HVAC includes a relatively new boiler. Plumbing was noted to be in good condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

Toilet rooms are not ADA compliant. Emergency lighting and exit sign require updating.

There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

ART COUNCIL BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	1
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	2
INTERIOR	
Condition of Walls	2
Base	1
Flooring	0
Ceiling	2
Stairs	1
Handrails	1
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	1
Panel / Distribution	2
LIGHTING	
Lighting	3
Lighting Controls	N/A

MECHANICAL	
Boiler	3
Fuel	N/A
HVAC	1
PLUMBING	
Toilet Rooms	3
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	2
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

ART CENTER

Executive Summary - Electrical

The electrical systems for the Art Center are functioning but are in fair to poor condition. The emergency lighting and exit signs need upgrading. The existing cloth insulated wiring in the basement needs to be replaced and removed. Non LED type light fixtures should be replaced. Existing electric service and panel should be replaced.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs overhead to the building from a utility pole to an exterior building mounted meter. The service is rated at 200 Amperes, 120/240Volt, 1 Phase, 3 Wire. A 200 Ampere Square D disconnect switch is located in the basement.

Rating: 1

- The lighting and power panels are Murray circuit breaker type and located in the basement. Existing equipment is original to the building and beyond its useful life.

Rating: 2

- The interior lighting consists of pendant mounted fluorescent with parabolic lens and 2'x4' recessed fixtures controlled with local switches. Track lights with incandescent lamp and dimmer control are provided in the gallery area. The basement lights consist of porcelain sockets with incandescent lamps.

Rating: 3

- Exterior lighting consists of a wall mounted traditional lantern at the main entrance. HID flood lights and wall packs are provided on the building. Incandescent flood lights are provided over the side entrance.

Rating: 1

- The existing emergency lighting system is through self-contained emergency battery units. Exit signs were non-illuminated type.

Rating: 2

- Existing fire alarm system consists of a conventional Napco control panel, with smoke detectors, throughout the building. No horn/strobes or pull stations were found. New fire alarm system should be provided to meet current requirements.
Rating: 1
- Existing security system includes motion sensors and door contacts throughout the building.
Rating: 2
- The general wiring method is Romex with some AC cable. Some cloth insulated wiring was also found in the basement.
Rating: 1
- The telephone & CATV wiring runs overhead between the pole and the building with the termination in the basement.
Rating: 2

Executive Summary - HVAC

Art Center building was constructed in 1860. The main heating plant was replaced about ten years ago. Throughout the building HVAC equipment is minimal. Generally speaking, systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, continued service will be achieved.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- There is one oil fired Weil McLain hot water boiler to service the building. Boiler appears to be about 10 years old and is atmospheric type; Breeching ran to the existing masonry chimney.
Rating: 3
- There is one No. 2 fuel oil storage tank installed in the basement. Fuel oil is distributed to the boiler through the use of flexible tubing from tank to boiler.
Rating: N/A
- There are five zones associated with the heating system.
Rating: 1
- Hot water piping appears to be mainly schedule 40 black steel with some copper piping. We did not notice any insulation on any of the piping installed in the building.
Rating: 1

- Each space utilizes wall mounted baseboard radiation installed on the exterior wall.
Rating: 1
- The corridors and entry ways located within the building were provided with wall mounted steam radiators for generalized space heating.
Rating: 1
- There were through wall air conditioning units located in the large gathering area.
Rating: 4
- Toilet rooms do not have any exhaust systems.
Rating: N/A

Executive Summary - Plumbing

The Art Council Building was built in 1860. Presently, the Plumbing Systems serving the building are cold water, hot water and sanitary, waste and vent system. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in good condition.

Rating

5 - Brand New
 4 – Very Good
 3 – Good
 2 – Fair
 1 – Poor
 0 – Requires repair
 X – Requires immediate
 N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of a floor mounted tank type water closets and counter mounted lavatories with hot and cold water handles. There are no Kitchen Sinks, Janitor's sinks or drinking fountains in the Building. In general, the fixtures do not meet accessibility standards and are not water conserving.
Rating –3
- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves to the building and are in fair condition. The domestic water piping is not insulated or labeled.
Rating – 2
- Domestic water for the building is generated through an oil fired boiler used for heating and domestic hot water. Domestic hot water is not recirculated. An expansion tank installed at the boiler. Domestic water piping is not insulated. The boiler is in good condition.
Rating – 3

- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the original cast iron drainage piping can be re-used for a renovation project.
Rating – 2

Executive Summary – Fire Protection

The Art Council Building was constructed in 1860 and is 2,755 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



FOURTH OF JULY HEADQUARTERS

LOCATION: 150 MIDDLESEX AVENUE

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1840

BUILDING AREA: 1,488 GSF

BUILDING OCCUPANCY: ARTS PROGRAMS
AND STORAGE



Description

This is a small wood frame structure located at the edge of the Town Common. It is within the Wilmington Center Village Historic District. The building was formerly used as the Town Library. Most recently it was used as a meeting space and organizing area for the Town's Fourth of July celebrations; a sign on the building façade identifies its use. The building is not currently in use for this purpose, but is being used as a miscellaneous storage space.

Observations and Findings

SITE ASSESSMENT

The building faces Middlesex Avenue and is set back from the street and sidewalk with a small front yard. The front yard includes cedar post and rail fencing, a lawn and foundation plantings (yews). There is a concrete walk and ramp connecting the front door to the adjacent parking lot, which leads to the sidewalk. The entry ramp and landings at the top and bottom of the ramp do not appear to meet accessibility requirements due to lack of railings. The transition between the sidewalk, parking lot and front ramp is unlikely to meet accessibility standards because it crosses a curb cut that is wider than necessary. Parking is provided in an adjacent Town lot, which is primarily used for high school parking. The parking lot paving extends to the foundation of the building and there are no wheel stops on the parking spaces. The spaces adjacent to the building are handicap-accessible spaces, and the signs for these spaces is mounted on the building wall. There is a bulkhead into the basement along the parking lot edge and a ramp with railings that leads to a back door. This ramp does not meet current accessibility requirements. There is a small side yard and back yard. The plantings require some maintenance including removal of weeds and volunteer plants.

BUILDING EXTERIOR

Painted wood siding and trim are in fair condition with the poorest condition on the southeast corner of the building. Replacement of broken and rotted siding and trim, especially near the foundation wall, should be done. The asphalt shingle roof appears to be in fair condition with minimal signs of damage or peeling.

BUILDING INTERIOR

The building is broken into two large interior spaces. The front has a low ACT ceiling and the rear has open, cathedral ceilings. There are two toilet rooms located within the rear space against the back exterior wall. Toilet room ceilings are framed and finished with drywall that is free standing within the open space. Interior walls in the front have a wood paneled wainscot with wallpaper above. The walls and ceiling in the rear are troweled plaster finish, trim and doors are stained wood. Flooring is carpet in the public spaces and sheet vinyl in the toilet rooms. All interior finishes were observed to be in fair to good condition. There is a large, exposed stainless steel boiler flue running between the two toilet rooms just in front of the toilet room walls.

STRUCTURE

Exposed structural framing is limited to floor joists in the basement. They appear to be in fair condition. Foundation is fieldstone and appears in fair condition.

BUILDING SYSTEMS

Interior lighting is surface mounted T8. There is a ceiling fan in the rear portion of the building. Toilet room electrical outlets are not GFI protected. An oil fired hot air furnace is in good condition with floor based ductwork distribution to occupied spaces. There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

Additional notes from the building systems consultants are provided on following pages.

REGULATORY COMPLIANCE

The building entrance walks and ramps do not meet current accessibility standards due to lack of railings and top landing that is not deep enough. One of the toilet rooms includes grab bars, clearances and ADA fixtures but does not comply with door swing clearance or approach clearance requirements. Emergency lighting and exit sign require updating.

FOURTH OF JULY BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	N/A
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	N/A
Life Safety: Exit Signs	N/A
Life Safety: Emergency Lighting	N/A
INTERIOR	
Condition of Walls	2
Base	2
Flooring	2
Ceiling	2
Stairs	N/A
Handrails	N/A
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	1
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler	3
Fuel	N/A
HVAC	2
PLUMBING	
Toilet Rooms	3
Kitchen	N/A
Domestic Water	3
STRUCTURE	
Observable Steel	N/A
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

4th OF JULY HEADQUARTERS

Executive Summary - Electrical

The electrical systems for the 4th of July Headquarters are functioning but are in fair to poor condition. The emergency lighting and exit signs need upgrading. Non LED type light fixtures should be replaced. Existing service panel should be replaced.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electrical service runs overhead into the building from a utility pole to an exterior building mounted meter. The service is rated at 100 Amperes, 120/240Volt, 1Phase, 3Wire. A 100 Ampere main circuit breaker is located in the panel.
Rating: 1
- The lighting and power panels are ITE circuit breaker type and located in the basement. Existing equipment is original to the building and beyond its useful life.
Rating: 1
- The interior lighting consists of 2x4 recessed troffers with acrylic lens and surface mounted wraparound fixtures controlled with local switches.
Rating: 3
- Exterior lighting consists of incandescent flood lights, HID wall packs and HID flood lights.
Rating: 2
- No emergency lights or exit signs are provided in the building.
Rating: N/A
- No fire alarm system is provided in the building.
Rating: N/A
- Toilet Room receptacles are not GFI protected. Existing receptacles should be replaced with a GFI type.
Rating: 0

- The general wiring method is Romex throughout the building.

Rating: 2

- The telephone wiring runs overhead between the pole and the building with the termination in the basement.

Rating: 2

Executive Summary - HVAC

The Fourth of July Headquarters building was constructed in 1840. HVAC equipment is minimal. Generally speaking, system is operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, continued service will be achieved.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- There is one oil fired hot air furnace to service the entire building. The furnace is vented utilizing B-Vent and rises up exposed within the occupied space above, near the toilet rooms.

Rating: 3

- Ductwork distribution is all installed in the half basement area and air is supplied via floor grilles. There is one duct that rises up to the attic space and feeds only one diffuser in the large gathering area.

Rating: 2

- There are wall air conditioning units installed in the large gathering area.

Rating: 3

- Toilet rooms have individual exhaust fans that operate with the light switch.

Rating: 3

Executive Summary - Plumbing

The Fourth of July Headquarters Building was built in 1840. Presently, the Plumbing Systems serving the building are cold water, hot water and sanitary, waste and vent system. Municipal sewer and municipal water service the Building.

The majority of the plumbing systems are original to the building. Overall, the Plumbing systems are in good condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of a floor mounted tank type water closets and wall mounted or counter mounted lavatories with hot and cold water handles. There are no Kitchen Sinks, Janitor's sinks or drinking fountains in the Building. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating –3
- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original gate valves to the building and are in fair condition. The domestic water piping is not insulated or labeled.
Rating – 2
- Domestic water for the building is generated through an electric storage tank type water heater. The storage capacity of the water heater is 20 gallons and it has an electrical input of 2,500 watts. Domestic hot water is not recirculated. An expansion tank installed at the boiler. Domestic water piping is not insulated. The water heater is in good condition.
Rating – 3
- Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the original cast iron drainage piping can be re-used for a renovation project.
Rating – 2

Executive Summary – Fire Protection

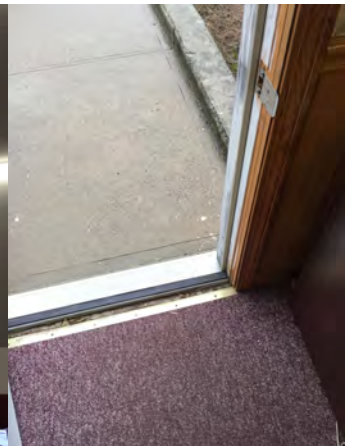
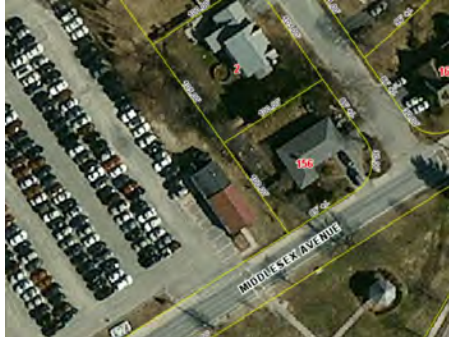
The Fourth of July Headquarters Building was constructed in 1840 and is 1,488 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



BOOK STORE NEXT DOOR

LOCATION: 183 MIDDLESEX AVENUE

TOTAL # OF STORIES: 2

YEAR CONSTRUCTED: 1900

BUILDING AREA: 1,248 GSF

BUILDING OCCUPANCY: BOOKSTORE



Description

This is a small wood framed building located next to the library. The former single family residence has been repurposed into a bookstore that supports the Memorial Library program.

Observations and Findings

SITE ASSESSMENT

The Book Store is sited next to the Library and shares a parking lot in the back. Access to the house from the Middlesex Avenue sidewalk is possible but no handicap ramp exists to allow universal access to patrons. Landscaping consists of foundation plantings around the perimeter of the building.

BUILDING EXTERIOR

The building has a fieldstone foundation with painted wood clapboards and trim. The gabled roofs have asphalt shingles which are in poor to fair condition. Brick chimneys require pointing, especially at the back of the house.

BUILDING INTERIOR

Flooring and ceilings are in poor condition which consist of sheet vinyl and 12x12 ACT, presumably glued to a plaster ceiling.

STRUCTURE

The wood frame structure was not intended to carry weight loads such as book shelves in the middle of rooms. Structural analysis should be done to ensure current building use is not having a detrimental effect on the floor structure.

BUILDING SYSTEMS

Electrical systems are in poor condition. HVAC is limited and generally in fair to good condition except for the boiler venting which is not code compliant and needs to be replaced. Plumbing systems are noted to be in fair to good condition but are beyond their intended serviceable life.

Additional notes from the building systems consultants are provided on following pages.

REGULATORY COMPLIANCE

The building is lacking in emergency lighting, exit signs, horn strobes, and alarms.

There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

BOOK STORE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	2
Roof	2
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	2
Base	2
Flooring	2
Ceiling	2
Stairs	2
Handrails	1
Doors	2
Glazing	2
ELECTRICAL	
Service Entrance	N/A
Panel / Distribution	N/A
LIGHTING	
Lighting	N/A
Lighting Controls	N/A

MECHANICAL	
Boiler	N/A
Fuel	N/A
HVAC	N/A
PLUMBING	
Toilet Rooms	3
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	N/A
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

BOOK STORE

Executive Summary - Electrical

The electrical systems for the Book Store are functioning but are in fair to poor condition. Emergency lighting and exit signs should be provided. Existing fuse type panel and service equipment should be replaced with new circuit breaker type. Incandescent light fixtures should be replaced with energy efficient type. A fire alarm system should be provided.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The electrical service runs overhead into the building from a utility pole to an exterior building mounted meter. The service is rated at 60 Amperes, 120/240Volt, 1Phase, 3Wire. A 60 Ampere main pull out fuse holder is located in the panel.
Rating: 1
- The lighting and power panel is Wandsworth Fuse type located in the basement. Existing equipment is original to the building and beyond its useful life.
Rating: 1
- The interior lighting consists of surface mounted incandescent fixtures controlled with local switches. Basement has porcelain sockets and fluorescent strip lights with T2 lamps.
Rating: 2
- Exterior lighting consists of incandescent wall mounted lantern fixture at the main entrance.
Rating: 2
- No emergency lights or exit signs are provided in the building.
Rating: N/A
- No automatic fire alarm system is provided in the building. Local battery type smoke detectors are provided in some areas.
Rating: N/A

- Toilet Room receptacles are not GFI protected.
Rating: 0
- The general wiring method is Romex throughout the building.
Rating: 2
- The telephone wiring runs overhead between the pole and the building with the termination in the basement.
Rating: 2

Executive Summary - HVAC

The Book Store Next Door was constructed in 1900. The main heating plant was recently replaced. Throughout the building HVAC equipment is minimal. Generally speaking, systems are operating and maintaining reasonable space temperature control. With overall maintenance, cleaning and calibrating of the system, continued service will be achieved.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- There is one oil fired Weil McLain hot water boiler to service the building. Boiler is atmospheric type. Boiler and associated appurtenances were replaced recently. There is one inline pump for the building.
Boiler is vented using rigid flex duct which is not code compliant.
Rating: 5 for the boiler. Venting should be repaired.
- There is one No. 2 fuel oil storage tank installed in the basement. Fuel oil is distributed to the boiler through the use of copper tubing from tank to boiler.
Rating: N/A
- Hot water piping appears to be mainly schedule 40 black steel with some copper piping. We did not notice any insulation on any of the piping installed in the building.
Rating: 2
- Each space utilizes wall mounted radiators installed on the exterior wall.
Rating: 2
- The corridors and entry ways located within the building were provided with wall mounted radiators for generalized space heating.
Rating: 2

Executive Summary - Plumbing

The Book Store Next Door Building was built in 1900. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. Municipal Sewer system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The building plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- Plumbing fixtures consist of a floor mounted, tank type water closet and a countertop vitreous china lavatory with hot and cold water handles. There is a kitchen sink with hot and cold water faucet and vegetable spray. There are no drinking fountains or janitor's sinks in the building. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating – 3
- Domestic water service appears to be 3/4-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in fair condition.
Rating – 2
- Domestic water for the building is generated through an oil fired boiler used for heating and domestic hot water. Domestic hot water is not recirculated. An expansion tank installed at the boiler. Domestic water piping is not insulated. The boiler is in good condition.
Rating – 3
- Cast iron is used for sanitary drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. There is evidence of portions of the existing sanitary drainage piping that has been replaced recently. In general, the original cast iron drainage piping has exceeded its life expectancy and should be replaced.
Rating – 2

BOOK STORE NEXT DOOR

Executive Summary – Fire Protection

The Book Store Next Door Building was constructed in 1900 and is 1,248 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



BATH HOUSE

LOCATION: 5 BURNAP STREET
TOTAL # OF STORIES: 1
YEAR CONSTRUCTED: 1964
BUILDING AREA: 1,800 GSF
BUILDING OCCUPANCY: RECREATION



Description

This is a small masonry building located on Silver Lake that provides seasonal changing, shower, toilet, and first aid program to the lake's beach area.

Observations and Findings

SITE ASSESSMENT

The Bath House is located on at the upland edge of the Silver Lake beach adjacent to the Town parking lot. Patrons filter from the parking lot through their respective changing areas and out onto the beach. Landscape consists of foundation plantings on the parking lot side which extend into a hedgerow along a fence line.

BUILDING EXTERIOR

The building is slab on grade with painted CMU walls and painted wood gable roof volume protected by asphalt roof shingles: all of which appear to be in fair to good condition. There is a concrete slab apron extending roughly six feet past the building on the lake side to protect from sand infiltration inside the building.

BUILDING INTERIOR

Flooring and ceilings are in poor condition with the epoxy painted concrete floor in the most need of new paint. Painted CMU walls and interior doors are in fair condition.

STRUCTURE

The CMU bearing walls and wood framed roof structure are in fair condition.

BUILDING SYSTEMS

Electrical systems are in poor condition. There is no HVAC System in this building. Plumbing systems are noted to be in good condition but are beyond their intended serviceable life.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

The building is lacking in emergency lighting, exit signs, horn strobes, and alarms. There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

BATH HOUSE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	3
Windows	1
Doors	2
Canopies / Overhangs	3
Roof	3
LIFE SAFETY	
Sprinkler Y/N	N
Fire Alarm / Early Detection	1
Life Safety: Exit Signs	1
Life Safety: Emergency Lighting	1
INTERIOR	
Condition of Walls	2
Base	N/A
Flooring	1
Ceiling	1
Stairs	N/A
Handrails	N/A
Doors	2
Glazing	N/A
ELECTRICAL	
Service Entrance	1
Panel / Distribution	1
LIGHTING	
Lighting	2
Lighting Controls	N/A

MECHANICAL	
Boiler	5
Fuel	N/A
HVAC	2
PLUMBING	
Toilet Rooms	3
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	N/A
Observable Masonry	2
Headers / Lintels	2
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

BATH HOUSE

Executive Summary - Electrical

The electrical systems for this facility are in poor condition and lack emergency lighting, exit signs, and fire alarm. The systems should be upgraded during a renovation.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- The electric service runs overhead between the utility pole and the building to a building mounted electric meter. The service is rated at 100 amperes, 120/240 volt, 1 phase, 3wire. A 100A, 12 pole, main circuit breaker panel is located in the first aid room. The panel is in poor condition. Could not locate service grounding jumper around water meter.

Rating: 1



12 Pole Panel

- The interior lighting consists of 2x4 recessed troffers with acrylic lens and T8 lamps. Fixtures are breaker controlled from an interior first aid room.

Rating: 1

- The exterior lighting consists of a couple of building mounted LED mini-flood fixtures with integral motion sensors. The parking areas do not have pole lighting.

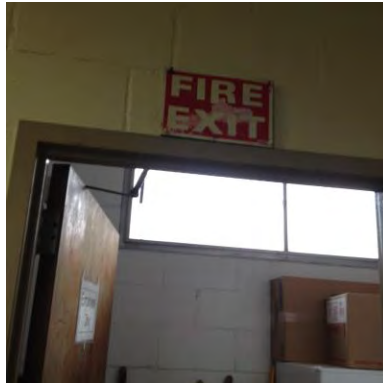
Rating: 1



LED Mini-Floods with PIR Sensor

- The Exit signs consist of unlit signs. There are no battery units for emergency lighting.

Rating: N/A



Unlit Exit Sign

- There is no fire alarm system.

Rating: N/A

- A manual pull station is located on exterior to summon E911. The Ademco control panel is located in the first aid room. A key repository box is located on exterior of the building.

Rating: 2

Executive Summary - HVAC

There is no HVAC system serving the Bath House. Natural ventilation is provided when the Bath House is in use by the operable windows high on the walls providing a cross-breeze through the structure.

We recommend the following: Heat in the building is likely not required due to limited seasonal usage. Water in the building is turned off in the off season to prevent freezing. Dedicated exhaust should be provided to serve all areas including gang toilets, family toilet room and locker room and storage areas.

Rating: N/A

Executive Summary - Plumbing

The Bath House Building was built in 1964. Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. Municipal Sewer system and municipal water service the Building.

The majority of the plumbing systems are original to the building. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, have served their useful life. The building plumbing systems could continue to be used with maintenance and replacement of failed components however other non-dependent decisions may likely force the plumbing upgrade. Since the building has seasonal operation, the domestic water has been drained down and the water meter has been temporarily removed. The flush valve diaphragms have all been disassembled temporarily.

Rating

5 - Brand New

4 - Very Good

3 - Good

2 - Fair

1 - Poor

0 - Requires repair

X - Requires immediate

N/A - Not applicable

Existing Conditions:

- Plumbing fixtures consist of a wall mounted, flush valve water closets, wall mounted flush valve urinals and a wall hung stainless steel lavatories with hot and cold water handles. There are no kitchen sinks, drinking fountains or janitor's sinks in the building. In general the fixtures do not meet accessibility standards and are not water conserving.
Rating - 3
- Domestic water service appears to be 2-inch in size and includes a water meter. Water piping is copper tubing with sweat joints. Many shutoff valves appear to be original to the building and are in good condition.
Rating - 3
- Domestic water for the building is generated through an electric storage type water heater. The storage capacity is 20 gallons and has an electrical input of 4500 watts. Domestic hot water is not recirculated. An expansion tank installed at the boiler. The visible domestic water piping is not insulated. The water heater is in good condition.
Rating - 3
- Cast iron is used for sanitary drainage. Where visible, the cast iron pipe appears to be in good condition. Smaller pipe sizes appear to be copper. There is evidence of portions of the existing sanitary drainage piping that has been replaced recently. In general, the original cast iron drainage piping is in good condition and can be re-used for a renovation project.
Rating - 3

Executive Summary – Fire Protection

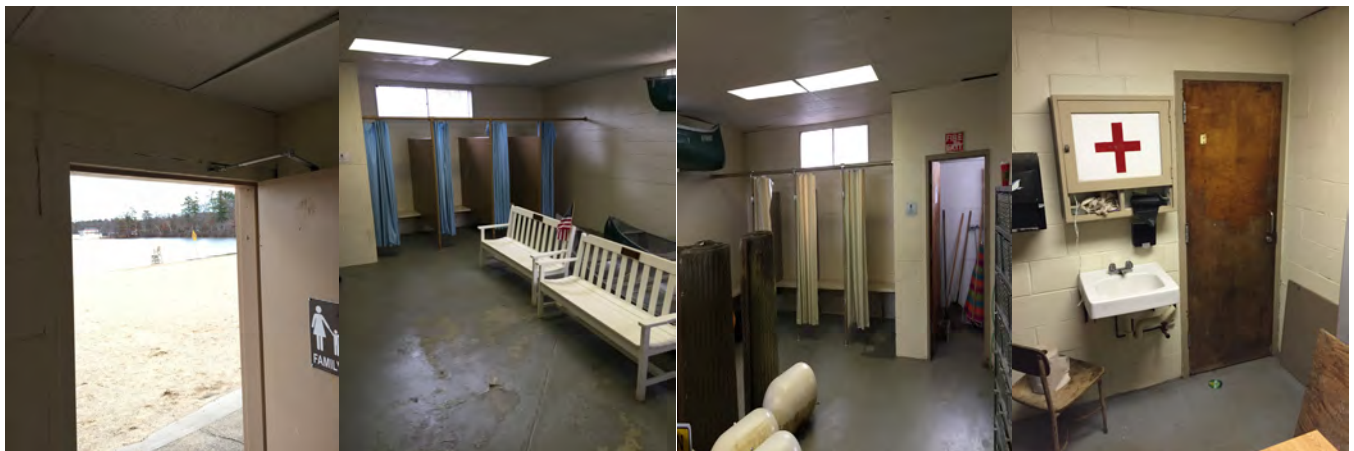
The Bath House Building was constructed in 1964 and is 1,800 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS



MOTH HOUSE

LOCATION: 240 MIDDLESEX AVENUE

TOTAL # OF STORIES: 1

YEAR CONSTRUCTED: 1920

BUILDING AREA: XX

BUILDING OCCUPANCY: STORAGE



Description

This is a small, historic wood framed building that shares a site with the Scalekeepers Office and Town Pound. The Moth House, also referred to as the Morse Barn, is currently being used for storage and provides a historic bookend at the northern edge of the Wilmington Center Village Historic District. The Moth House was only briefly assessed on the exterior due to the fact it is an unoccupied building of historic significance.

Observations and Findings

SITE ASSESSMENT

The building is located on Middlesex Avenue across from the Wildwood Cemetery and next to the Scalekeepers Office and Town Pound. The building is accessed by a paved arced driveway off Middlesex Ave.

BUILDING EXTERIOR

The exterior is painted clapboard siding which has many areas with rot or damage and requires repair. The building has asphalt shingle roofing which was not observed.

BUILDING INTERIOR

The interior was not observed.

STRUCTURE

The building structure was not observed.

BUILDING SYSTEMS

The building has electricity which is in poor condition and should be replaced. The building has no HVAC. Plumbing is limited to domestic piping which appears to be in fair condition.

Additional notes from the building systems consultants are provided in the following pages.

REGULATORY COMPLIANCE

There is no automatic sprinkler system in the building, which is not required for this building given its limited area.

MOTH HOUSE BUILDING SUMMARY RATING

0: Requires Repair 1: Poor 2: Fair 3: Good 4: Very Good 5: Brand New X: Immediate Repair N/A: Not Applicable

BUILDING EXTERIOR	
Exposed Foundation	2
Brick / Masonry	2
Siding / Cladding	2
Windows	2
Doors	2
Canopies / Overhangs	N/A
Roof	4
LIFE SAFETY	
Sprinkler Y/N	N/A
Fire Alarm / Early Detection	N/A
Life Safety: Exit Signs	N/A
Life Safety: Emergency Lighting	N/A
INTERIOR	
Condition of Walls	N/A
Base	N/A
Flooring	N/A
Ceiling	N/A
Stairs	N/A
Handrails	N/A
Doors	N/A
Glazing	N/A
ELECTRICAL	
Service Entrance	1
Panel / Distribution	1
LIGHTING	
Lighting	1
Lighting Controls	N/A

MECHANICAL	
Boiler	N/A
Fuel	N/A
HVAC	N/A
PLUMBING	
Toilet Rooms	N/A
Kitchen	N/A
Domestic Water	2
STRUCTURE	
Observable Steel	N/A
Observable Masonry	N/A
Headers / Lintels	N/A
COMMENTS	

BUILDING SYSTEMS REVIEW

The following additional notes have been prepared for the mechanical, electrical, and plumbing systems for this building by Garcia Galuska Desousa Consulting Engineers.

MOTH HOUSE

Executive Summary - Electrical

The electrical systems for the Moth House are functioning but are in fair to poor condition. All existing electrical items should be replaced.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- The electrical service runs overhead into the building from a utility pole to an exterior building mounted meter. The service is rated at 60 Amperes, 120/240Volt, 1Phase, 3Wire. A 60 Ampere main disconnect is located in the panel.

Rating: 1

- The lighting and power panel is circuit breaker type. Existing equipment is original to the building and beyond its useful life.

Rating: 1

- The interior lighting consists of surface mounted incandescent fixtures controlled with local switches.

Rating: 1

- Exterior lighting consists of incandescent flood lights.

Rating: 1

- No emergency lights or exit signs are provided in the building.

Rating: N/A

- No fire alarm system is provided in the building.

Rating: N/A

- The general wiring method is Romex throughout the building.

Rating: 2

Executive Summary - Plumbing

The Moth House Building was built in 1920. Presently, the Plumbing Systems serving the building domestic water. Municipal water services the Building.

The domestic water appears original to the building and is in fair condition.

Rating

5 - Brand New

4 – Very Good

3 – Good

2 – Fair

1 – Poor

0 – Requires repair

X – Requires immediate

N/A – Not applicable

Existing Conditions:

- A ¾-inch domestic water service enters the building and is distributed to wall hydrants and internal hose bibbs. The domestic water piping is uninsulated or labeled. The isolation valves are original gate valves. There are no vacuum breakers on the wall hydrants and hose bibbs which makes them non-compliant. Overall, the domestic water is in fair condition.

Rating – 2

Executive Summary – Fire Protection

The Moth House Building was constructed in 1920 and is 1,800 square feet. The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.418, s.26G requires that any new building or existing building over 7,500 square feet that undergoes major alterations or building additional must be sprinklered.

An automatic sprinkler system is not required for this building.

Rating: N/A

FACILITY PHOTOGRAPHS

