ARROWSTREET

DEDHAM TOWN WIDE FACILITIES ASSESSMENT AND MASTER PLAN

VOLUME 1 - FACILITIES ASSESSMENT

DEDHAM, MASSACHUSETTS

DRAFT 14 SEPTEMBER 2026

PREPARED FOR

TOWN OF DEDHAM

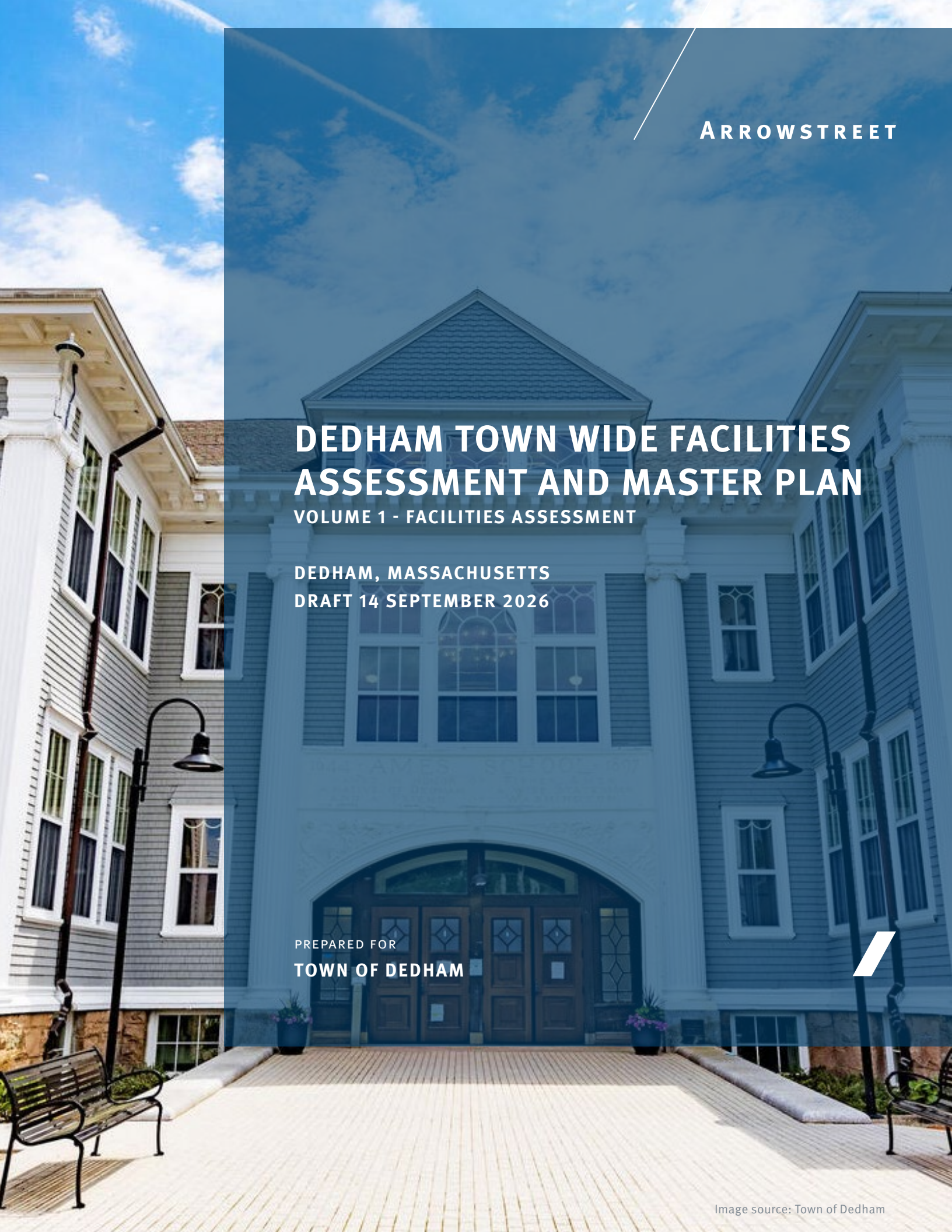


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DEDHAM

Dedham Town Wide Facilities Assessment and Master Plan
03 September 2026

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Image source: Here Comes the Guide

I. OVERVIEW

This study acknowledges the dedication of all participants as well as the residents of the Town of Dedham, including:

SCHOOL COMMITTEE
Laurie Twomey, Chair
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Chris Polito
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Mike Emery, Finance and Warrant Committee
Justin Humphreys. School Building Rehabilitation Committee
Brian Murphy, Building, Planning, and Construction Committee
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Dr. Ian Kelly, Deputy Superintendent of School Finance and Operations
Nan Murphy, Superintendent of Schools
Brady Winsten, Director of Finance
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STUDY CONSULTANT TEAM
Arrowstreet Inc. Architecture, Planning and Community Engagement
GGD Consulting Engineers Mechanical, Electrical, Plumbing, and Fire Protection Engineering
RSE Associates Structural Engineers
Code Red Building and Life Safety Code
Terraink Landscape Architects
Green International Affiliates, inc Civil Engineers
PM&C Cost Estimator
Universal Environmental Consultants Hazardous Materials Consultant

During the planning process, the team referenced many preceding studies and reports that were provided to the consultant team. These previously conducted research and background resources were a springboard for this Town Wide Facilities Master Plan.

The following preceding relevant documents were reviewed as part of this study:

2026— Town of Dedham 5 Incinerator Road - Phase II Environmental Site Assessment
BETA Inc
2026— Dolan Center & Fairbanks Park- Conceptual Designs
Activitas
2025— Climate Leaders Municipal Decarbonization Roadmap
PowerOptions
2024 — Town of Dedham 5 Incinerator Road Study
BSC Group
2024— Town of Dedham Master Plan - Designing Dedham 2035
Town of Dedham & Metropolitan Area Planning Council (MAPC)



Dedham's newest Public Safety building is a model for future municipal development.

2020— Dedham Public Schools Facilities Master Plan
SMMA
2019 —Town of Dedham Open Space & recreation Plan
Open Space and Recreation Committee w/ Horsley Witten Group
2016 —Existing Conditions Assessments - School Buildings
EMG
2012 —Dedham Fire Department - Analysis of Data for Fire Department Activities
Municipal Resources Inc
2009 —Dedham Fire Department HQ Feasibility Study
Maguire Group Inc

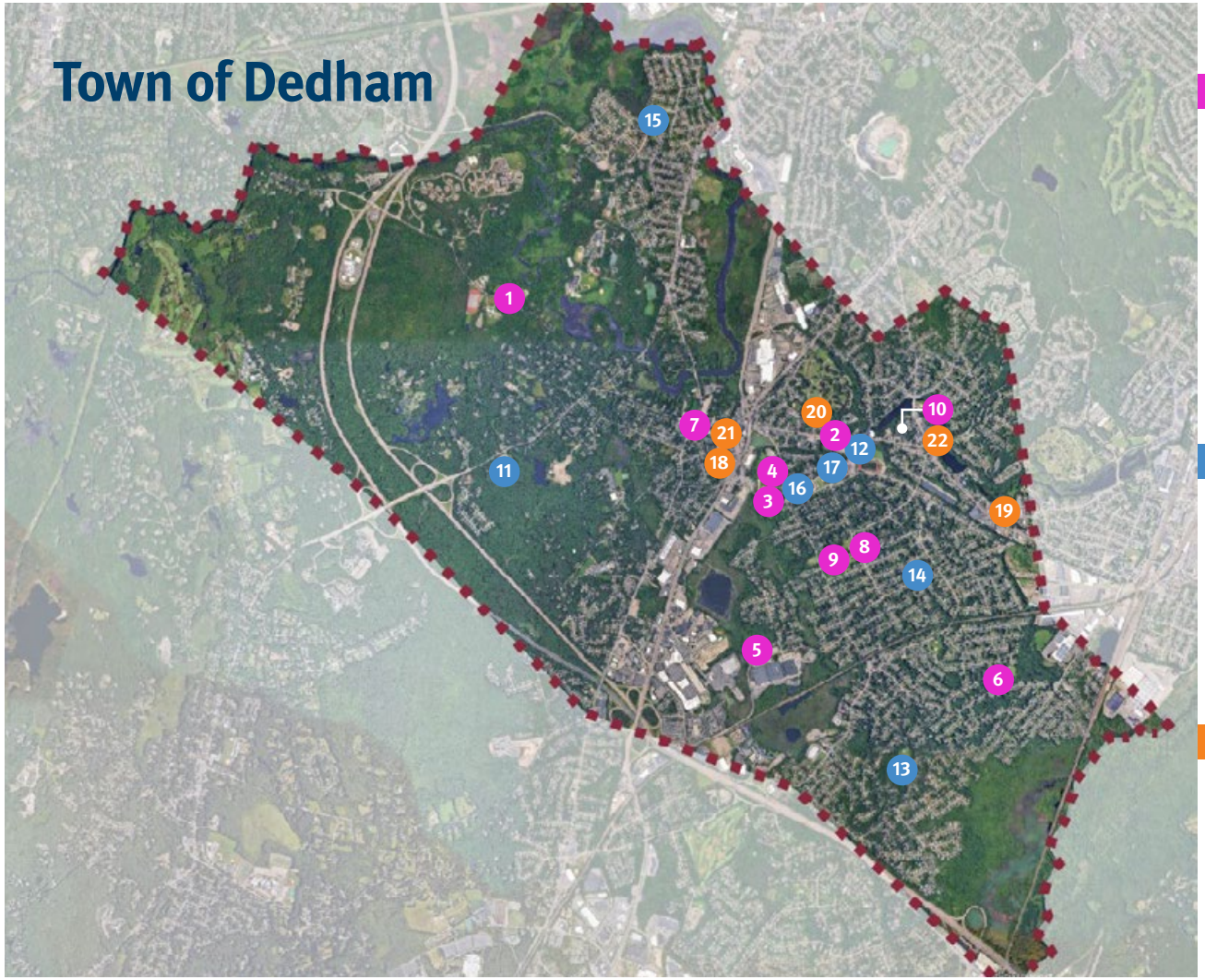
The following studies are in also in progress, concurrent with this study:

Main Library - Space Utilization Study

The central vision expressed throughout these documents is that Dedham will continue to be valued and increasingly recognized as a high-quality, affordable place to live, work, and visit. Dedham residents value and protect the town's historic character, open space, and public services. The Town of Dedham and its committees have placed central emphasis on communication and feedback from residents.

This planning study was jointly managed by the Town of Dedham Facilities Masterplanning Committee, Town of Dedham Facilities Department, and Town of Dedham Schools department. The planning process this study includes input, ideas, and feedback gathered from many residents, town, and school administration staff that participated in visioning sessions, site visits, participated in informal discussions, provided input during meetings, and offered data that shaped the findings.

TOWN WIDE BUILDING & SITE INVENTORY



COMMUNITY AMENITIES

1. Sugrue Field (former Rec. Center)
2. Mucciaccio Dedham Pool
3. Barnes Memorial Park
4. Gonzalez Field
5. Rustcroft Field
6. Parks & Rec. Offices (former Capen School)
7. Public Library (Main)
8. Public Library (Endicott)
9. Endicott Estate
10. Mother Brook Arts Center (former Avery)

PUBLIC SCHOOLS

11. Early Childhood Ed Center
12. Avery Elementary School
13. Greenlodge Elementary School
14. Oakdale Elementary School
15. Riverdale Elementary School
16. Dedham Middle School
17. Dedham High School

TOWN SERVICES

18. Ames Building (Town Hall & Senior Center)
19. Public Works Dept.
20. Brookdale DPW Facility
21. Public Safety Building
22. East Dedham Fire Station

Facilities Masterplan Guiding Principals

The following list of principals have been developed by the committee to guide the masterplanning process:

- Transparent & inclusive process
- Town-wide, integrated perspective — recognizing and planning for Town–School interdependence, including how facilities, operations, and finances overlap and influence one another
- Data-driven & future-focused
- Clear, accessible communication
- Comprehensive & fiscally responsible planning
- Sustainable & equitable outcomes
- Collaborative, consensus-driven decisions that prioritize the best overall outcome for the full municipal and school system, not siloed approaches

This town wide Master Planning study is intended to understand the Town of Dedham's current town and school building inventory, its projected capitol needs, and develop recommendations for a Master Plan to address facility improvements and long term visions to serve the residents of Dedham and offer all dimensions of a 21st century school district to its students.

The study is divided into two phases which is documented in the following two Volumes:

FACILITY REPORT AND MASTER PLAN

Volume	Phase
1	**Phase I—Facilities Assessment**
2	**Phase II—Planning and Recommendations**

The Town of Dedham included 24 municipal facilities, encompassing approximately 900,000 gross square feet of building area into this building assessment. The facilities studied are listed below:

TOWN BUILDING INVENTORY & USE

Facility	Primary Use
Ames Town Hall & Senior Center	Town Admin & Senior Center
Avery Elementary School	School
Barnes Memorial Park Concession Stand and Restrooms	Sports Field
Brookdale Cemetery Office	DPW
Dedham High School	School
Dedham Middle School	School
Anthony P. Mucciacco Pool (Juju's Place)	Indoor Pool
Dedham Public Library - Endicott Branch Library	Public Library
Dedham Public Library - Main Library	Public Library
Dolan Center	Vacant
Department of Public Works and Outbuildings	DPW
Early Childhood Education Center	School
East Dedham Fire Station	Fire Sub-station
Endicott Estate and Outbuildings	Function Space, Greenhouse
Frmr Transfer Station	DPW Overflow
Gonzalez Field Concession Stand and Restrooms	Sports Field
Greenlodge Elementary School	School
Mother Brook Arts and Community Center	Public Arts Center & Art Studios
Oakdale Elementary School	School
Parks and Recreation Building	Public Recreation and Office
Public Safety Building	Main Fire & Police Station
Rustcraft Field Concession Stand and Restrooms	Sports Field
St Mary's Lot	DPW Overflow

Assessments were conducted between late 2025 and May 2026 by a team of consultants including Arrowstreet (architecture, site, master planning, and overall conditions), GGD Consulting Engineers (MEP existing conditions for all 24 facilities), Code Red Consultants (fire protection, life safety, and accessibility code review for ten buildings), and RSE (Structural).

The School Facility Study and Master Plan team visited each of the town buildings with the purpose to:

- Understand the common trends observed in facilities throughout the district
- Determine the conditions of the existing facility inventory.
- Assess the conformance of each building to support is current program.
- Identify and prioritize areas of potential improvement within the building infrastructure.

The following outline explains the process of collecting and understanding the current facility status:

The team began by collecting, compiling, and organizing a variety of background data for the Town of Dedham and Dedham Public Schools. Information, community zones, and facility maintenance information. The collected data was interpreted, evaluated, and analyzed to discover themes and patterns observed throughout the school district.

The team visited each facility to observe and evaluate the physical condition. A through building review report was used to evaluated Life Safety Code, physical condition of each building, ADA/ MAAB compliance, site conditions, building configuration, security, and building system observations. The grading scale used in the report ranked the conditions from 'Excellent' to 'Critical'.

The findings collectively reflect a portfolio at a critical inflection point: a small number of recently constructed or renovated facilities are in excellent condition, while a substantial portion of the portfolio — particularly the older school buildings and several town facilities — carries deferred maintenance, life safety deficiencies, and capital needs that have accumulated over decades of constrained investment.

Portfolio Age and Condition

The Town's facilities portfolio is heavily weighted toward older buildings. The majority of school buildings were constructed between 1902 and 1959, with only the Middle School (2005), Avery Elementary (2011), and the ECEC (2019) built within the last 25 years.

Among town buildings, the recently completed Public Safety Building (2023) and the renovated Ames Town Hall (2020) represent the two facilities in the best condition. Most remaining town buildings date from the early-to-mid twentieth century, with the Main Library (1886), the Endicott Estate (1905), and the Endicott Library (1920) representing the oldest in the municipal portfolio.

This age profile is directly reflected in condition findings. Newer facilities — the Public Safety Building, Ames Town Hall, ECEC, Avery Elementary, and Dedham Middle School — are in good to excellent condition across all or most building systems. The three oldest elementary schools (Oakdale, Riverdale, and Greenlodge) carry the most severe deferred maintenance in the portfolio. Dedham High School, the largest building in the portfolio, has the largest absolute volume of documented capital need of any single facility. Among town facilities, the Endicott Estate presents the most urgent life safety concerns, and the DPW facility, East Dedham Fire Station, and Main Library each carry significant deferred maintenance across mechanical, electrical, and code compliance systems.

Score Range	Rating	Definition
1.0 – 1.3	Excellent	In new or like-new condition, with no visual evidence of wear, soiling, or other deficiencies.
1.4 – 1.8	Good	In well-maintained condition, with little visual evidence of wear, soiling, or other deficiencies.
1.9 – 2.4	Fair	Subjected to wear and soiling but still in a serviceable and functioning condition.
2.5 – 3.2	Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
3.3 – 4.0	Critical	Has reached the end of its useful or serviceable life. Renewal is now necessary.

TOWN BUILDING INVENTORY & CONDITION

Facility	Overall FCI	Condition
Ames Town Hall & Senior Center	1.28	Excellent
Avery Elementary School	1.41	Good
Barnes Memorial Park Concession Stand and Restrooms	1.47	Good
Brookdale Cemetery Office		Fair
Dedham High School	2.85	Poor
Dedham Middle School	1.61	Good
Anthony P. Mucciacco Pool (Juju's Place)	2.95	Poor
Dedham Public Library - Endicott Branch Library	2.11	Fair
Dedham Public Library - Main Library	2.62	Poor
Dolan Center	3.48	Critical
Department of Public Works and Outbuildings	2.88	Poor
Early Childhood Education Center	1.19	Excellent
East Dedham Fire Station	3.23	Poor
Endicott Estate and Outbuildings	2.62	Poor
Frmr Transfer Station	n/a	Vacant Lot
Gonzalez Field Concession Stand and Restrooms	1.00	Excellent (under renovation)
Greenlodge Elementary School	2.75	Poor
Mother Brook Arts and Community Center	2.48	Fair
Oakdale Elementary School	3.01	Poor
Parks and Recreation Building (Frmr Capen School)	2.96	Poor
Public Safety Building	1.05	Excellent
Rustcraft Field Concession Stand and Restrooms	1.75	Good
St Mary's Lot	N/A	Vacant Lot

The table above sumarizes the condition ranking that each facility in the portfolio recieved duirng our evaluation. A more detailed evaulation of each facility can be found in Section II - Town Wide Facilites Assessment. The Facilities Condition Index is a single composite score representing the overall physical condition of a building. It is calculated as the unweighted average of all applicable individual field scores across four assessment categories: Architecture (including structural), MEP and Fire Protection (mechanical, electrical, plumbing, fire protection as a combined group), Life Safety and Code Compliance, and Site Conditions. The resulting value falls on the 1-to-4 scale and is mapped to one of five condition tiers as defined in the Methodology sheet of the database.

Analysis was also being conducted on the programmatic sufficincy of the buildings for their purpose. For school buildings, a composite Educational Adequacy Index (EAI) was developed.

The Educational Adequacy Index is a separate composite score that evaluates the degree to which each school building supports contemporary educational programming and student outcomes. It is applied only to the seven school facilities. The EAI criteria are based on the 2025 Massachusetts School Building Authority (MSBA) School Survey Report, ensuring alignment with the state's framework for evaluating school facility adequacy — the same framework used when buildings are considered for MSBA funding. The EAI score is interpreted using the same 1-to-4 rating tiers as the FCI, with lower scores indicating greater adequacy and scores approaching 4.0 indicating buildings that are severely deficient for educational use.

Town facillites were also evaluated under a Facilites Adequacy Index (FAI) and given a composite score. The FAI score is interpreted using the same 1-to-4 rating tiers as the FCI, with lower scores indicating greater adequacy and scores approaching 4.0 indicating buildings that are severely deficient for their intended use.

(Note: Town Facility usage is still in progress at time of draft)

The combination of a Poor or Critical FCI with a Poor or Critical EAI/FAI — as is the case for Oakdale, Riverdale, and Greenlodge Elementary Schools — provides the strongest quantitative case for replacement rather than renovation, as neither the physical plant nor the program spaces meet current needs.

Portfolio Findings

Several themes developed during the compilation of findings accross the protfolio. The findings across the 24-facility portfolio support three near-term priority areas for Town action.

Address active life safety deficiencies. The non-operational sprinkler system at the Endicott Estate, the absence of fire suppression at Dedham High School, and the lack of CO sensing in the East Dedham Fire Station apparatus bay each represent conditions that should be resolved before any other capital decisions are made at those facilities. These are not deferred maintenance items — they are code compliance and occupant safety obligations.

Advance replacement decisions for the oldest buildings. Oakdale and Riverdale Elementary Schools cannot be maintained to an acceptable educational or physical standard through continued incremental investment. The Town's active pursuit of MSBA funding and SBRC replacement programming reflects the correct strategic direction, and continued clarity and momentum on those decisions will reduce the risk of further deferred maintenance accumulation in the interim. The DPW and East Dedham Fire Station represent seriously deficient facilites which are critical functions to the town when responding to emergency and disaster.

DEDHAM PORTFOLIO FINDINGS

Theme	Key Finding	Status
Life Safety	Multiple buildings have active fire protection deficiencies, including sprinkler system at the Endicott Estate, absence of comprehensive fire suppression at Dedham High School, and no CO or exhaust sensing in the East Dedham Fire Station apparatus bay.	Critical
Code Compliance	Non-illuminated exit signs, noncompliant handrail arrangements, and ADA accessibility deficiencies were identified at a majority of the buildings reviewed. Several buildings have unresolved NEC electrical panel clearance violations.	Poor
Accessibility	ADA deficiencies are present across multiple facilities of varying ages, including the Endicott Estate, the Dedham Pool, Main Library, and several school buildings. Older facilities generally have the most significant ADA gaps.	Poor
Mechanical Systems	A significant share of the portfolio's heating, ventilation, and plumbing systems are at or beyond their anticipated service life. The DPW facility experienced an emergency boiler failure in early 2026. The East Dedham Fire Station, Endicott Estate, and multiple school buildings have heating equipment beyond serviceable life.	Poor
Electrical Systems	Several buildings have electrical service at or near capacity, limiting future flexibility. Obsolete panels, missing panel covers, and legacy fire alarm control panels were identified at the Main Library, Mother Brook Arts Center, and Endicott Library, among others.	Fair
School Facilities	Three elementary schools — Oakdale, Riverdale, and Greenlodge — are the highest capital priorities in the district, but Dedham High School has significant deficiencies. Community feedback signals that new construction, not continued renovation, is the appropriate long-term strategy for these buildings, but any solution must encompase the entire district.	Poor
Decarbonization	The portfolio generates approximately 3,530 MT CO_2e annually, with Dedham High School (968 MT), the Middle School (538 MT), and Oakdale Elementary (363 MT) accounting for nearly half of total emissions. Most fossil fuel systems are natural gas or fuel oil and are candidates for electrification as they reach end of life.	Fair



Image source: Homes.com

II. TOWN WIDE FACILITIES ASSESSMENT

TOWN FACILITIES

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Introduction & Methodology

The Dedham Facilities Master Plan documents the existing physical conditions of all 24 Town-owned facilities in the study portfolio. Its purpose is to establish a current, evidence-based understanding of building age, physical condition, life safety compliance, and deferred maintenance across the study portfolio and to provide the factual foundation from which strategic recommendations for investment, renovation, replacement, and disposition are developed. The findings presented here draw on field assessments and information provided by the town, such as engineering reports, code reviews, existing drawings, and capital budget records compiled specifically for this master plan study.

The study encompasses 24 facilities totaling approximately 900,000 gross square feet, ranging from the 84,000 SF Public Safety Building completed in 2023 to small seasonal concession stands and a vacant parking lot. Buildings are organized into five categories for the purposes of this study: school facilities (S-1 through S-8), town administrative and civic buildings (T-1 through T-5), Department of Public Works and operations buildings (D-1 through D-4), public safety facilities (PS-1 and PS-2), and parks and recreation facilities (PR-1 through PR-5). Within each category, buildings are presented in individual four page summaries that follow this introduction. Existing conditions were evaluated by a team of four consultants, each providing a distinct and complementary discipline.

Building code fire, life safety, and accessibility review was conducted following Massachusetts codes and standards, which govern existing buildings undergoing repair, alteration, or change of occupancy:

780 CMR — Massachusetts State Building Code, 10th Edition	An amended version of the 2021 International Building Code (IBC), governing building construction and alteration.
780 CMR 34.00 — Massachusetts Existing Building Code (MEBC)	An amended version of the 2021 International Existing Building Code (IEBC), governing work in existing buildings and defining Levels 1, 2, and 3 Alteration, Addition, and Change of Occupancy.
527 CMR 1.00 — Massachusetts Comprehensive Fire Safety Code	An amended version of the 2021 NFPA 1 Uniform Fire Code, governing fire protection systems, sprinklers, and fire alarm requirements.
521 CMR — Massachusetts Architectural Access Board (MAAB) Rules	The state accessibility code governing accessible design in existing buildings, including cost thresholds above which full building accessibility compliance is triggered.
NFPA 72 - National Fire Alarm and Signaling Code	Governing fire alarm system design, installation, and maintenance.
NFPA 13 - Standard for the Installation of Sprinkler Systems	Governing automatic fire sprinkler systems.

The assessments are based on visual observation of accessible areas conducted during a single site visit to each facility. They do not constitute destructive investigation, full structural engineering, full Accessibility compliance surveys, environmental sampling, or code compliance certifications. Conditions in areas that were inaccessible or not observed at the time of survey are not reflected.

METHODOLOGY

The Dedham Facilities Master Plan consolidates physical condition, educational adequacy, and sustainability data for all 24 Town-owned facilities. It provides a common, quantifiable framework for comparing buildings across the portfolio, identifying capital priorities, and communicating findings to Town leadership and the public.

Two primary scoring indices are used: the Facilities Condition Index (FCI), applied to all buildings, and the Educational Adequacy Index (EAI), applied to the eight school facilities only. Both indices use a consistent 1-to-4 numerical rating scale so that scores are directly comparable within and across categories. All individual data fields in the database are scored on a 1-to-4 integer scale, where 1 represents the best possible condition and 4 represents the worst. Input responsibilities are assigned by discipline: architectural fields are assessed by Arrowstreet, structural fields are assessed by RSE, MEP fields by GGD Consulting Engineers, and fire/life safety and accessibility fields by Code Red Consultants.

The Facilities Condition Index is a single composite score representing the overall physical condition of a building. It is calculated as the unweighted average of all applicable individual field scores across four assessment categories: Architecture (including structural), MEP and Fire Protection (mechanical, electrical, plumbing, fire protection as a combined group), Life Safety and Code Compliance, and Site Conditions.

Score Range	Rating	Definition
1.0 – 1.3	Excellent	In new or like-new condition, with no visual evidence of wear, soiling, or other deficiencies.
1.4 – 1.8	Good	In well-maintained condition, with little visual evidence of wear, soiling, or other deficiencies.
1.9 – 2.4	Fair	Subjected to wear and soiling but still in a serviceable and functioning condition.
2.5 – 3.2	Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
3.3 – 4.0	Critical	Has reached the end of its useful or serviceable life. Renewal is now necessary.

The FCI draws on scores from the following eight assessment categories, each of which produces its own category average score in addition to contributing to the building-level composite.

Assessed Categories:

- Architecture (Roof, exterior walls, windows, doors, interior walls, stairs, floors, ceilings, environment, air quality, finishes, furnishings, kitchen)
- Structural (General structure, seismic resistance, foundation)
- Electrical (Lighting, emergency lighting, fire alarm, communications, emergency generator, solar, building management system (BMS))
- Mechanical (Heating generation, heat distribution, cooling generation, cooling distribution, HVAC controls)
- Plumbing (Piping distribution, water heating)
- Fire Protection (Sprinkler system, standpipe system)
- Life Safety & Code (Fire-rated separations, egress paths, exit doors, exit markings, elevator, stairs & ramps, toilet rooms, door clearances, site access)
- Site Conditions (Overall site, parking, walkways, playgrounds, play fields, site lighting, stormwater, water supply, town sewer, hazardous materials)

EDUCATIONAL ADEQUACY INDEX (EAI) - SCHOOLS ONLY

The Educational Adequacy Index is a separate composite score that evaluates the degree to which each school building supports contemporary educational programming and student outcomes. It is applied only to the seven school facilities (S-1 through S-7) and is not calculated for town or parks and recreation buildings. The EAI criteria are based on the 2025 Massachusetts School Building Authority (MSBA) School Survey Report, ensuring alignment with the state's framework for evaluating school facility adequacy — the same framework used when buildings are considered for MSBA funding.

Like the FCI, each EAI criterion is scored on the 1-to-4 scale and the index is expressed as the average of applicable sub-criteria scores across six Educational Performance Indicators (EPIs). The EAI score is interpreted using the same 1-to-4 rating tiers as the FCI, with lower scores indicating greater adequacy and scores approaching 4.0 indicating buildings that are severely deficient for educational use. The combination of a Poor or Critical FCI with a Poor or Critical EAI — as is the case for Oakdale, Riverdale, and Greenlodge Elementary Schools — provides the strongest quantitative case for replacement rather than renovation, as neither the physical plant nor the educational program spaces meet contemporary standards.

EPI-1	Learning Environment
Quality of the physical learning environment, including access to natural light, appropriate room size and shape, acoustic performance, and access to restrooms.	1.1 Daylight & ventilation · 1.2 Access to restrooms · 1.3 Classroom size & shape · 1.4 Acoustic performance
EPI-2	Academic Sufficiency
Adequacy of classroom capacity relative to current enrollment, including the presence of modular classrooms and the ability to accommodate future growth and programmatic flexibility.	2.1 Capacity vs. enrollment · 2.2 Classroom utilization rates · 2.3 Modular classrooms · 2.4 Future growth · 2.5 Flexibility for reconfiguration
EPI-3	Program Sufficiency
Presence and quality of specialized and core program spaces, including arts, music, science labs, vocational areas, library, gymnasium, cafeteria, and auditorium.	3.1 Special education space · 3.2 Arts & music rooms · 3.3 Lab & vocational space · 3.4 Cafeteria · 3.5 Gymnasium
EPI-4	Universal Accessibility
Accessibility of the site, building entrances, vertical circulation, and restrooms for both ambulatory and non-ambulatory users, consistent with 521 CMR and accessibility requirements.	4.1 Site accessibility · 4.2 Playground condition & accessibility · 4.3 Accessible bathrooms · 4.4 Accessible circulation · 4.5 Special education access & spaces
EPI-5	Building Safety
School security infrastructure and fire/life safety systems, including surveillance, alarm systems, controlled entry procedures, site safety, fire alarm, and fire suppression.	5.1 Security cameras & system · 5.2 Emergency training & posted procedures · 5.3 Entry security procedures · 5.4 Site safety (lighting, visual approach, bollards)
EPI-6	Instructional Technology
Adequacy of technology infrastructure for teaching and learning, including internet access, wireless coverage, power infrastructure, and classroom display technology.	6.1 Technology access for teaching · 6.2 Power infrastructure · 6.3 Technology access for staff · 6.4 Building-wide IT infrastructure

The FCI and EAI are designed to be read together for school buildings. A building may have a poor physical condition (high FCI) but remain adequately sized and configured for its educational program — suggesting that targeted renovation may be appropriate. Conversely, a building may have a relatively manageable physical condition score but be fundamentally inadequate in program configuration, capacity, or accessibility — suggesting that renovation alone cannot resolve the building's deficiencies. Where both scores are elevated, the case for comprehensive renovation or replacement is strongest, and this dual-index approach is intended to inform and support the School Building Rehabilitation Committee's prioritization work and any future MSBA applications.

FACILITY ADEQUACY INDEX (FAI) - TOWN FACILITIES

(section under development)

Terms & Industry Background

The following is a list of terms and acronyms used in the report. It is provided to give a background on commonly used terms used in the building and facility industry.

Project Acronym Glossary

Project & Planning	
DFMP	Dedham Facilities Master Plan — the overarching planning document covering all 24 municipal facilities.
CIP	Capital Improvement Plan — multi-year schedule of capital projects with estimated costs and priority sequencing.
FMP	Facilities Master Plan — broader synonym for DFMP.
GIS	Geographic Information System — spatial data platform used for parcel mapping and site screening.
MassGIS	Massachusetts Geographic Information System — the state's authoritative GIS data repository.
MEP	Mechanical, Electrical, and Plumbing — building systems disciplines; covered by GGD Consulting Engineers in the DFMP.
RFP	Request for Proposals — procurement document used to engage consultants.
O&M	Operations and Maintenance — ongoing costs of running a facility, as distinct from capital repair or replacement costs.
Facility Condition & Assessment	
FCA	Facility Condition Assessment — systematic evaluation of a building's physical condition across all major systems.
FCI	Facility Condition Index — ratio of deferred maintenance cost to current replacement value; higher FCI = poorer condition. Often expressed as a 1-year or 10-year figure.
CRV	Current Replacement Value — estimated cost to replace a facility in kind at today's construction costs.
DM	Deferred Maintenance — accumulated backlog of repairs postponed beyond their recommended service life.
RS Means	RS Means — industry-standard construction cost database used to estimate repair, renovation, and replacement costs.
Building Code & Regulatory	
AHJ	Authority Having Jurisdiction — the official body (typically the local Building Commissioner) responsible for interpreting and enforcing the building code.
IBC	International Building Code — model code adopted by Massachusetts; §3411 governs existing building compliance requirements including the 30% rule.

CMR 780	Code of Massachusetts Regulations, 780 CMR — the Massachusetts State Building Code, which adopts and amends the IBC.
MAAB	Massachusetts Architectural Access Board — state body that sets accessibility standards (521 CMR); requirements are more stringent than federal ADA in some respects.
ADA	Americans with Disabilities Act — federal civil rights law requiring accessible facilities; enforced alongside MAAB in Massachusetts.
NFPA 13	National Fire Protection Association Standard 13 — standard for the design and installation of automatic sprinkler systems.
ASCE 7	American Society of Civil Engineers Standard 7 — Minimum Design Loads for Buildings and Other Structures; governs seismic and wind design.
IECC	International Energy Conservation Code — model energy code; the basis for the Massachusetts Stretch Energy Code.
CMR 521	Code of Massachusetts Regulations, 521 CMR — the Massachusetts Architectural Access Board rules governing accessibility in public buildings.
Schools & Education	
MSBA	Massachusetts School Building Authority — state agency that co-funds eligible school building projects; Dedham must reapply to the MSBA Core program.
Sustainability & Climate	
CLR	Climate Leaders Roadmap — Dedham's 2025 sustainability plan; source for energy use intensity, GHG emissions, electrification targets, and solar potential data.
GHG	Greenhouse Gas — emissions (primarily CO_2 and methane) tracked as part of Dedham's climate commitments.
EUI	Energy Use Intensity — energy consumption per square foot per year (kBtu/sf/yr); key metric for benchmarking building efficiency.
Art. 97	Article 97 — Massachusetts constitutional provision protecting publicly funded open space from being repurposed without a 2/3 legislative vote.
OSRP	Open Space and Recreation Plan — Dedham's 2019 plan governing parkland, conservation areas, and recreation facilities.
Finance & Municipal	
Prop 2½	Proposition 2½ — Massachusetts law limiting annual property tax levy increases to 2.5%; capital projects exceeding the cap require an override or debt exclusion vote by residents.
DPW	Department of Public Works — Dedham's municipal infrastructure agency; existing facility is in poor condition and a new site is under active evaluation.
CPA	Community Preservation Act — Massachusetts program allowing municipalities to fund open space, historic preservation, housing, and recreation through a local surcharge.
ESCO	Energy Services Company — firm that implements energy efficiency upgrades under a performance contract, with repayment funded by guaranteed energy savings.

Facility Planning & Code Compliance

The '30% rule' is frequently referenced in master planning and facilities studies and relates to when renovation scope would trigger comprehensive complance with building codes in older buildings. Generally, current conditions are allowed to remain so long as they do not present an imminent danger to occupants.

The 30% threshold is a guide for early-stage cost modeling, not a fixed legal formula. The AHJ (Dedham Building Department) interprets trigger conditions and may require upgrades below the threshold for change of occupancy, additions, or unsafe condition findings. Several buildings in the Dedham portfolio carry assessed values that are low relative to documented deficiency costs, meaning any significant repair project is likely to cross this threshold and trigger the full upgrade stack. Early pre-application consultation with the Building Commissioner is strongly recommended before finalizing any project scope that approaches or exceeds this level.

In facility planning, this can often make the difference in a decision between a renovation scenario or constructing a new facility.

How the threshold is calculated	Likely triggers in Dedham's portfolio
› The total cost of proposed work is compared to the assessed value of the structure (building only — land excluded).	› Roof replacement or window replacement on a lower-assessed building.
› This is a cumulative test: separate permits within a rolling 12-month window can combine to cross the threshold.	› Full HVAC or MEP system overhaul affecting the whole facility.
› The Building Commissioner (AHJ) makes the final interpretation of what scope counts toward the total.	› Interior renovation touching corridors, restrooms, or egress paths.
› Change of occupancy, additions, or unsafe conditions may trigger upgrades regardless of the 30% threshold.	› Structural repairs on buildings with low assessed values relative to documented deficiency costs — a compounding risk for several facilities in the Dedham portfolio.

Category	What it Means	Typical Scope of Work
Accessibility (ADA / MAAB)	Full accessible path of travel from public way to work area, including all amenities along that path.	Accessible parking, ramp approaches, entry doors, elevator, restroom upgrades, drinking fountain, signage.
Sprinklers (NFPA 13)	Automatic fire suppression required throughout the building for most occupancy groups common in municipal facilities.	New suppression system or full building retrofit; hydraulic calculations, coordination with water service capacity.
Structural (ASCE 7 / Seismic)	Bring lateral force resistance and gravity load path up to current code for the scope and affected areas.	Connections, diaphragm strengthening, shear walls, foundation tie-downs per ASCE 7 seismic design category.
Egress (CMR 780 / IBC)	Means of egress must meet current code: enclosed stairs, exit lighting, emergency power, compliant hardware.	Stair enclosures, exit signs, emergency lighting, panic hardware, corridor widths, travel distance compliance.
Energy Code (Stretch / IECC)	Dedham is a Green Community — the MA Stretch Energy Code applies to renovated portions of the building. Larger projects require full compliance.	Insulation levels, window performance, HVAC efficiency ratings, lighting power density, air sealing.

Ames Building (Town Hall & Senior Center)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: T-1 | Ames Building (Town Hall & Senior Center)

SELECT BUILDING: T-1 | Ames Building (Town Hall & Senior Center)

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	T-1	**Flood Zone:**	None
Address:	450 Washington Street	**Wetlands:**	No
Year Built:	1897	**Historic:**	Listed – National Register
Last Renovated:	2019	**Lot Size (ac):**	2.04
Gross Sq Ft (GSF):	53,000	**Building Use:**	Municipal / Civic / Adaptive Reuse
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Wood Frame	**Assessed Value:**	$8,545,300
Roof Year:	2019	**Deferred Maint. ($):**	tbd
Window Year:	2019	**Est. Renovation Cost:**	tbd
No. of Floors:	3.5	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas / Electric (mixed)	**Energy Use Intensity (EUI):**	~13
Electrification Potential:	2043 – VRF	**GHG Emissions:**	69
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	1.28	Excellent

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.5	• Good
Structure (Avg):	1.0	• Excellent
MEP / FP (Avg):	1.6	• Good
Life Safety / Code:	1.0	• Excellent

KEY COMPONENT SCORES

Roof:	2.5	Electrical:	1.5
HVAC – Heat:	2.5	HVAC – Cooling:	1.5
Fire Prot.:	1.5	Plumbing:	1.5

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Rear entry (lower level) into Senior Center.

Comprehensively renovated in 2020, the Ames Building houses town offices and Dedham's Senior Center and is in excellent condition. It represents one of the best-maintained facility in the Town's portfolio.

The Ames Building is a four-story, 53,000 SF Colonial Revival structure built in 1897 as a school and listed on the National Register of Historic Places in 1983. The Town repurchased the building in 2014 after it had been used as an office building for several decades, and completed a comprehensive renovation in 2020 that now houses Town Hall offices and Dedham's Senior Center. The building's systems are recently updated and in excellent overall condition.

The Ames building is organized around a central stair, with town offices and service counters accessed off the central hallway. The Town Hall consolidates multiple town functions on the first, second, and third levels with the senior center occupying the lower floor, accessed from the rear.

The 2020 renovation installed a high-efficiency Variable Refrigerant Flow (VRF) fan coil system for heating and cooling, a CO_2 demand-controlled rooftop Air Handler Unit (AHU) serving VAV boxes throughout, and a high-efficiency Lochinvar condensing boiler serving unit heaters. Circulation pumps are in excellent condition and expected to last 15+ years. All mechanical equipment from the renovation is in excellent condition. Plumbing systems were updated in the 2020 renovation and are in good condition. Wall-mounted waterless urinals, sensor-operated fixtures, and a 100-gallon gas-fired water heater with recirculation loop are all in good condition. The kitchen 3-pot sink does lack a grease interceptor as required by code. Electrical service was upgraded, including 2000A 3-phase service, a fully updated Edwards EST3 addressable fire alarm, 150 kW diesel emergency generator, LED lighting with Eaton occupancy-sensor controls, comprehensive CCTV and card-access security system are all in good condition. The building also has level 2 EV charging at the front and rear of the building.

Building Structure & Exterior

The Ames Building is a four-story, 53,000 SF Colonial Revival structure built in 1897 as a school and listed on the National Register of Historic Places in 1983. The building is a wood framed structure which is installed on a stone-masonry foundation. During the 20202 renovation, steel seismic reinforcing was installed at roof structure in the upper level. No structural concerns were observed or reported.

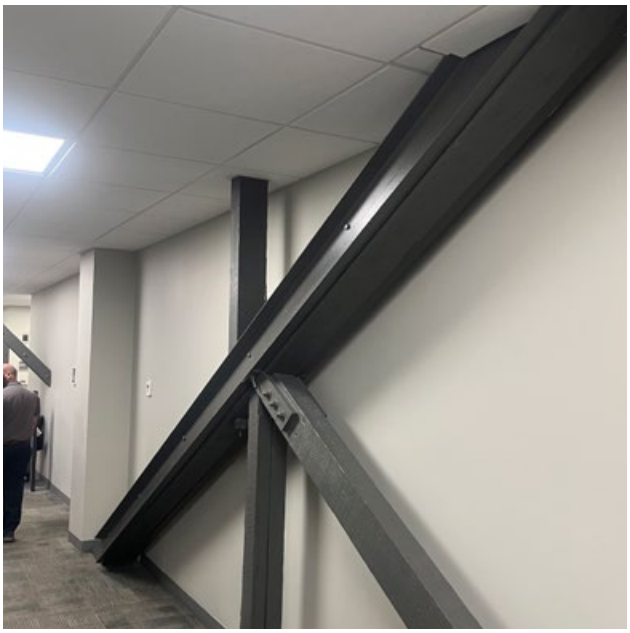
The exterior of the building is predominantly painted wood shingle with ornate wood trim with an stone masonry 'watertable' base. There is a large ornate two-story entry along Washington Street. Punched openings are double hung windows, generally with a 6 over 2 pattern and were replaced during the renovation. The roof is pitches, with asphalt shingles, except at small mechanical areas, which have flat, commercial grade sheet roofing. The exterior is in good condition.

Interior Environment

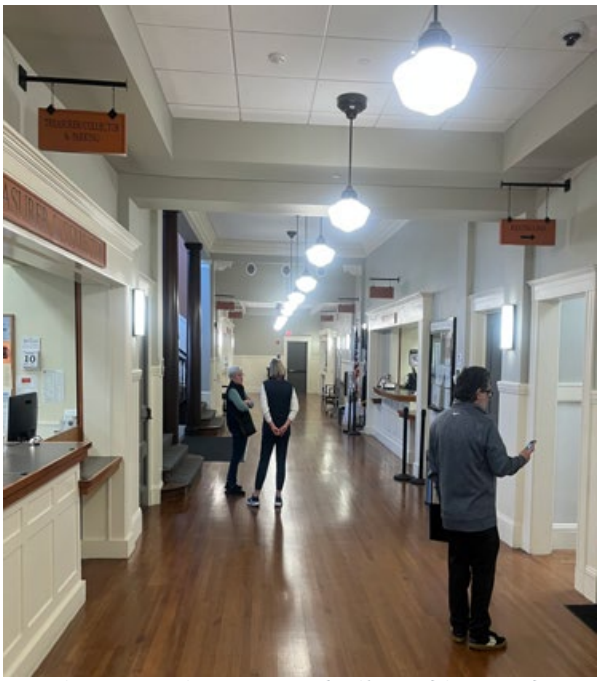
The Ames Building serves general office, meeting, and light-use public service functions. The renovation of the building is relatively recent, and finishes are in good condition and appropriate for the use of the spaces. The interior spaces are pleasant and well lit with good access to natural daylight.

The lower floor senior center features a mix of carpet in office and corridor spaces, as well as resilient floor in multipurpose spaces and epoxy in the kitchen and restrooms. Walls are generally painted with appropriate use of more resistant finishes (tile in bathrooms and FRP in the kitchen). The rear of the senior center is partially below grade, which does restrict access to natural daylight, only allowing partial windows.

The upper floor town office and meeting rooms feature a mix of wood plank floor (in corridors) and carpet in offices.



Structural upgrades as part of the 2016 renovation



Interior space is purpose built and in good condition

Programmatic Suitability

The Ames Building occupies a prominent civic site on Washington Street in Dedham Square, at the intersection of Washington Street and Court Street. The building anchors the civic core of the Square and is within walking distance of the Main Library at 43 Church Street and the Public Safety Building at 26 Bryant Street. The site has excellent pedestrian access from the Square and is served by the MBTA bus network. The location is ideal to maximize its public-facing function and maximizes its public access for users of all types.

The 53,000 SF Colonial Revival structure is spread over four floors, with the ground floor accessed from a rear walk-out door, and first floor accessed from the main entry along Washington. The program is divided with the Senior Center occupying the ground floor, with primary access from the rear parking lot. The upper floors contain town administrative offices, public access transaction counters and meeting rooms. While historic, the building is fully accessible with elevator access to each floor.

The ground floor is entirely occupied by Dedham's Senior Center. A reception area greets users with administrative offices, a nurses office and staff restroom behind. There are four larger function/ multipurpose rooms along a central corridor. Each space is outfitted to accommodate fitness, art/crafts, and a media space, but each can fit multiple functions. A commercial kitchen is accessed through the multipurpose room, with a service counter and roll-up serving window. The space is purpose-built as a senior center and generally functions well for its intended purpose

The upper floors are organized around a central stair, with town offices and service counters accessed off the central hallway. The first floor contains building reception, Town Treasurer, Assessing, Planning, and Conservation. Each space contains an accessible transaction counter, office, and storage space. The second floor contains the main select board meeting room, as well as other shared use meeting rooms and town administration offices. The upper floor has office and storage space for other town-wide offices, including the Facilities Department and Health Departments. These spaces are purpose-built as town administration and public service functions and generally functions well for its intended purpose.

The building's National Register of Historic Places designation (1983) constrains future alterations to the exterior and site, requiring SHPO review and the involvement of a historic preservation architect for any significant changes. The urban location and historic status effectively preclude building expansion, and the site should be understood as fixed in its current footprint for planning purposes.

(Note: see the Volume 2 report for usage analysis and planning studies).

PRIORITY ISSUES & RECOMMENDATIONS

Immediate Priorities (0–2 Years)

- Continue regular maintenace

10-Year Capital Improvements

- Ongoing preventive maintenance of all 2015 VRF and boiler equipment to extend service life beyond 15 years
- LED lighting control system upgrades and dimming integration as controls technology evolves
- Exterior envelope inspection — historic masonry repointing and window condition at 10-year intervals

Capital Investment History

FY	Project / Capital Improvement	Amount
FY23	Town Hall Generator	$172,601
FY24	Town Hall Cupola Remove/Reinstall	$50,000
FY24	Town Hall Exterior — Shingles / Painting / Terracotta Refinishing	$600,000
FY25	Town Hall Planning Dept Service Counter Construction	$150,000



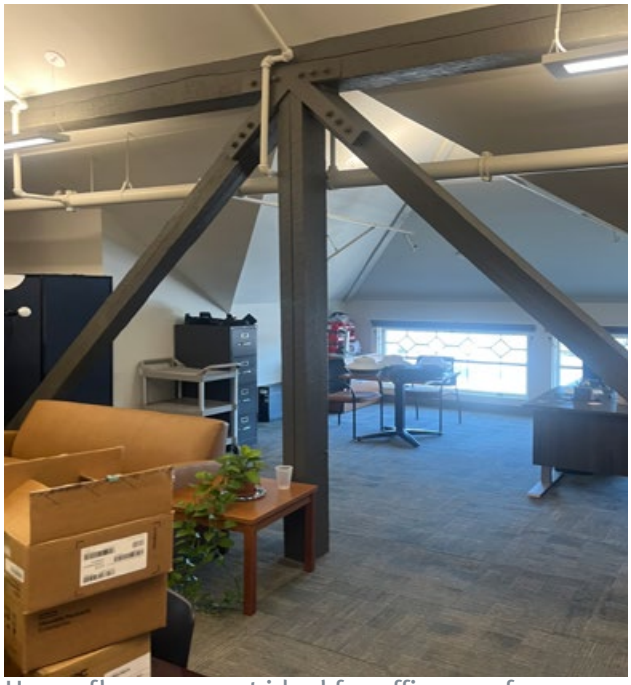
O'Brian Conference Room serves as a Central Hub for Town Governance.

Site Conditions

The Ames Building occupies a prominent civic site of approximately 2.05 acres along Washington Street in Dedham Square. The site contains paved parking, paved walkways, and planted beds, all in good condition. Vehicular access is straightforward from Washington Street.

On-site parking is limited, with surface spaces along the building perimeter supplemented by the Town's shared parking areas within Dedham Square. ADA-compliant spaces are provided consistent with the recent renovation requirements. Four level-2 EV charging spaces (two, 2 plug ChargePoint stations) are provided at the Washington-side lot and four level-2 EV charging spaces (two, 2-plug ChargePoint stations) are provided at the rear lot. Vehicular access is provided around the entire buildings, shared with the adjacent Public Safety building.

The site is classified as FEMA Flood Zone X, reflecting minimal flood risk. No wetlands are present on the parcel.



Upper floors are not ideal for office use func tions.

Sustainability & Decarbonization

FY2022 GHG emissions were 69 million tonnes (MT) CO_2e (1.94% of portfolio). Natural gas accounts for approximately 74% of emissions (boiler and Domestic Hot Water (DHW)); electricity for 26%. Energy Use Intensity (EUI) is data not isolated but building is post-renovation efficient. Dedham's Climate Roadmap identifies VRF electrification and heat pump water heating as future decarbonization pathways as remaining fossil fuel equipment reaches end of life. Rooftop solar feasibility is constrained by the historic building designation.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Future Use and Observations

The Ames Building is in very good condition, having just completed a comprehensive renovation in 2020. No major capital investment is anticipated in the short or mid-term beyond routine maintenance and the code-required grease interceptor. The building's National historic designation creates constraints for future exterior modifications and any addition of rooftop solar infrastructure. The site is constrained, making any future expansion infeasible. Town department functions should continue to be evaluated over time as the town's services evolve.

(Note: see the Volume 2 report for usage analysis and planning studies).

HVAC - Heating, Ventilation and Air Conditioning - Ames Building:

Executive Summary:

Dedham Town Hall and Senior Center, located within the Ames Building, was originally built 1897 and more recently renovated in 2020. Spaces are typically heated and cooled via variable refrigerant flow (VRF) fan coil unit systems. Ventilation is provided by a CO2 demand controlled central air handling unit with duct distribution to terminal variable air volume units. The building is provided with a direct digital controls (DDC) system and building management system (BMS). All equipment installed in the latest renovation appears to be in excellent condition.

Existing Conditions

Heating Plant:

The Ames building is provided with a small heating plant consisting of a small wall mounted gas-fired boiler which produce hot water for terminal heating equipment, such as unit heaters, located throughout the building. The boiler is high efficiency condensing gas-fired Knight model manufactured by Lochinvar. The boiler plant appeared to be in excellent condition. With regular preventative maintenance, the boiler plant is expected to last for another 20+ years. Combustion air for the boilers is provided by ductwork that is routed directly to the outside via polypropylene piping.

Heating hot water is pumped throughout the building by two (2) base mounted end-suction pumps, piped in a lead/lag configuration. The pumps are manufactured by Bell & Gossett, with a capacity of 450 GPM and a 15 HP motor. The pumps are in excellent condition and are expected to last 15+ years per ASHRAE Equipment Life Expectancy. Typical hydronic accessories such as an expansion tank and air separator are also provided.



High Efficiency Lochinvar Wall Mounted Boiler

Packaged Rooftop Air Handling Units:

The building ventilation is provided by a rooftop air handling unit. Note: This portion of the roof was not accessible at the time of the visit to confirm features and capacities. Supply air is distributed to the space via supply diffusers through an insulated galvanized sheet metal duct air distribution system. Return air is drawn back to the rooftop unit utilizing a ducted return air distribution system. Each space is served by a Variable Air Volume (VAV) box with CO2 demand control which allows for individual space control by modulating the volume of air delivered to the associated space based on CO2 limitations.

The rooftop units are in excellent condition and are expected to last 15+ years per ASHRAE Equipment Life Expectancy.

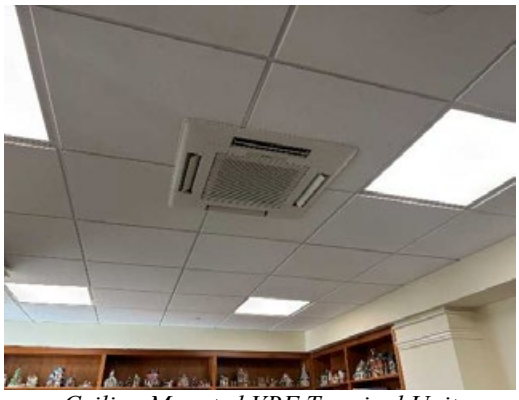


Packaged Rooftop Unit

Space Level Heating and Cooling:

Occupied spaces throughout the building are typically provided with variable refrigerant flow (VRF) terminal units for heating and cooling with associated outdoor heat pump condensers. Each space is also provided with appropriate ventilation to the space from a variable air volume box ducted to the space.

Heating-only spaces such as storage rooms, or entryways are typically provided with hot water unit heaters with insulated piping supplied from the hot water boiler plant.



Ceiling Mounted VRF Terminal Unit



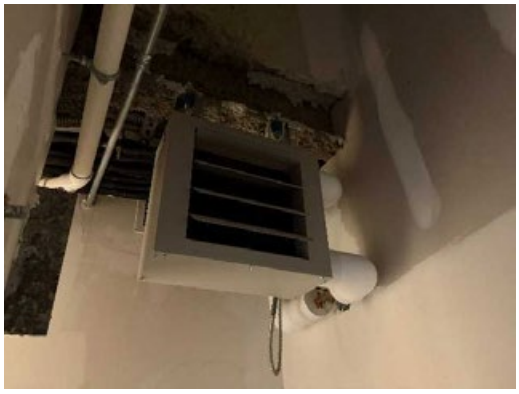
Typical Space Diffuser for Ventilation



Typical VRF Thermostat and VAV CO2 Sensor



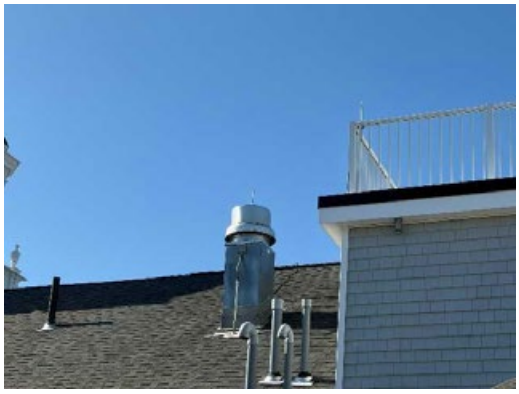
Typical VRF Heat Pump Condenser



Typical Hot Water Unit Heater

Toilet rooms:

Toilet rooms have overhead exhaust that are connected to a roof exhaust fan via a galvanized steel exhaust duct system. Make-up air is provided from the adjacent corridors.



Typical Roof Mounted Fan

Electrical/MDF/Network Rooms:

Electrical, MDF, and Network rooms are typically cooled by ductless cooling units, consisting of an indoor evaporator and roof mounted condensers.



MDF/Network Room with DCU Evaporator

Automatic Temperature Controls (ATC):

The ATC system is a full direct digital controls (DDC) controls system equipped with a Building Management System (BMS).



Typical VRF Thermostat and CO2 Sensor

Recommendations:

Based upon our review and observations of the building HVAC systems, we offer the following systems recommendations.

- Given the age of the building and the installed systems, provide proper maintenance to all equipment to meet or exceed ASHRAE Equipment Life Expectancy.

ELECTRICAL – Ames Building

Executive Summary:

On March 10, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Ames Town Hall Building. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, the buildings systems are in good condition with recent upgrades.

Electrical Distribution System:

The building main service is rated for 2000A (amperes) at a 3-phase service voltage of 120/208V (volts). Secondary service is hot sequence metered terminating at an 2000A rated service main breaker/ C.T. (current transformer) cabinet located within the buildings main electrical room at the basement level. A distribution panel rated for 2000A was located adjacent to the main service equipment and provided feeds to electrical sub-panels located throughout the building. All distribution equipment found within the buildings electrical room would be described as being in good condition.

Electrical sub-panels were found within the building main electrical room, mechanical room, storage rooms, and electric rooms. All sub-panels are in good condition.







Emergency Power System:

The building is equipped with an exterior emergency back-up 150 KW diesel generator. The generator provides emergency power throughout the building.

Life safety lighting is provided by a battery inventor.

Exit signs are provided throughout the building and are in good condition.









Fire Alarm System:

The existing building is equipped with a Edwards EST3 fire alarm control panel (FACP) located within the main electrical room at the buildings basement level. Fire alarm notification and initiation devices located throughout the building are in good condition.

A key repository box with beacon was located at the buildings main entry. Fire alarm annunciator is located at the main lobby. The method of transmission is local energy master box.











Exterior Lighting System:

Traditional style lighting fixtures post top mounted to low height poles are the primary source of lighting at the parking lot and walkway. Canopy pendant lighting at the main building entry lobby consists of pendant mounted LED dome fixture.







Interior Lighting:

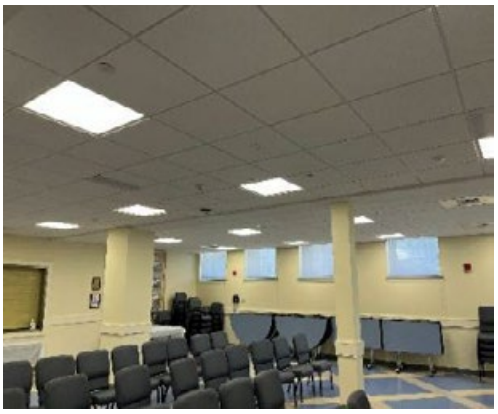
Interior lighting within the building consisted of 2x2 recessed flat LED panels. Some spaces have recessed down lights. Pendant school type globes are provided in corridors. Offices have 2x4 recessed flat LED panels.

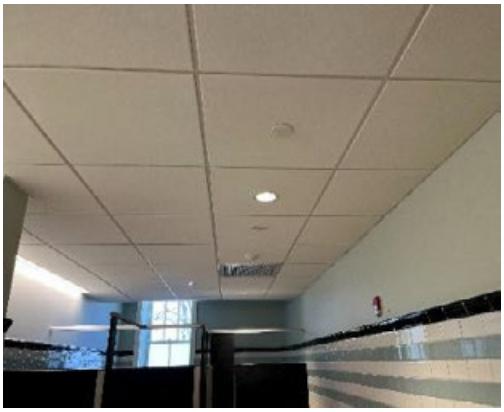
Meeting room lighting consists of pendent LED bowl fixtures and recessed down lights.

Utility lighting primarily consisted of linear LED wrap around fixtures with prismatic lensing.

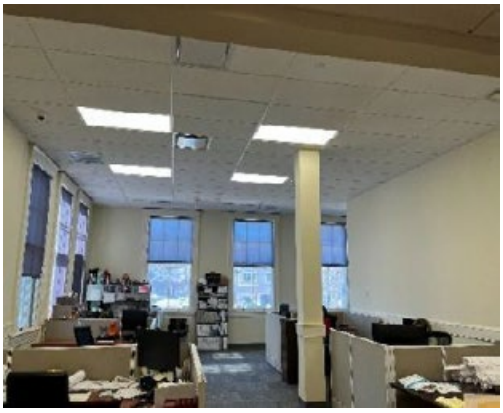
Lighting control is provided by an Eaton Lighting Control System with motion sensors and local control.


LEAVE SWITCH IN
MIDDLE POSITION













Wiring Devices & Branch Circuitry:

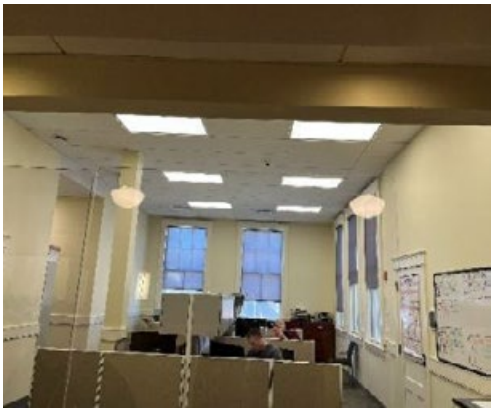
In general receptacles are located throughout the building with GFI type where required.

Security System

Security system includes exterior CCTV cameras, interior CCTV cameras, card readers, key pads, and control panels.

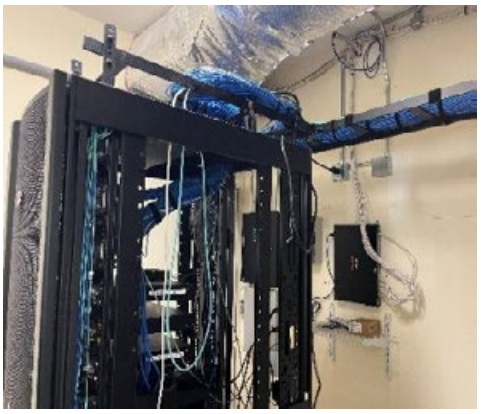


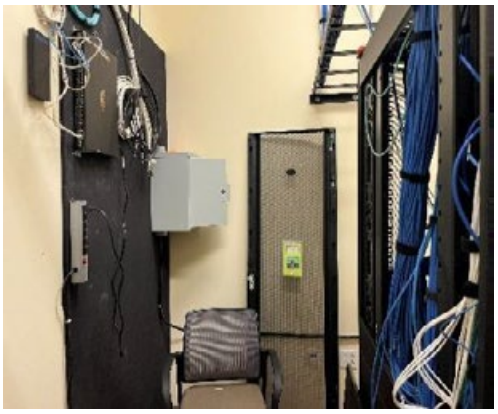




Communication Systems:

Phone and internet services enter the building underground and terminate at a demarcation wall in the libraries basement utility room. Communication systems include intercom, access points, MDF/IDF rooms, data racks, and data outlets.







Recommendations:

Systems throughout the building have been recently updated. All systems are in good condition.

PLUMBING- Ames Building

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 serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in good condition and can continue to be used with scheduled maintenance.

The plumbing fixtures are in good condition. The bathroom fixtures appear to be accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from sloped roof areas is collected by exterior gutters and downspouts which appear to discharge to a below grade drainage system. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in good condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

Fixtures:

The water closets are wall mounted, vitreous china with battery powered, sensor operated flush valves.

Urinals are wall hung, vitreous china and are waterless.

Lavatories are under counter mounted, vitreous china with battery powered, sensor operated faucets.

Electric water cooler is dual height, wall mounted, double unit bubbler, side by side with bottle filler.

Janitor's sink is a floor receptor with wall mount faucet equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with pull out spray faucet, with single lever type hot and cold-water faucet.

Exterior wall hydrants include loose key operation and threaded connection with vacuum breaker.

The Kitchen equipment and sinks are in good condition.



Water Closet



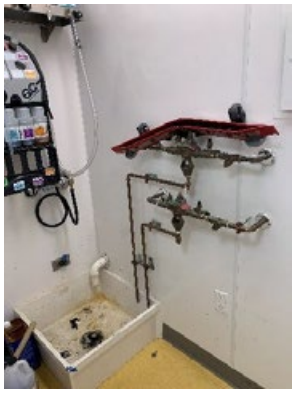
Urinal



Lavatory



EWC with Bottle Filler



Janitor's Sink



Kitchen Equipment



Sink

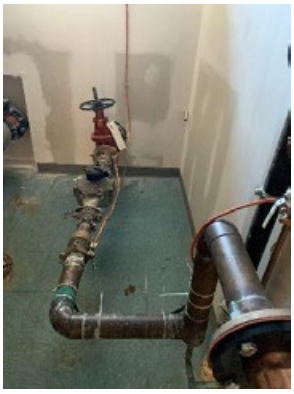


Wall Hydrant

Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 2-inch in size. There is a water meter and no reduced pressure backflow preventer on the domestic service piping arrangement.

Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated and labeled. The valves used for isolation purposes are full port ball valves, tagged with an identification number.



Water Meter

Domestic hot water is provided by a gas-fired, high-efficiency, storage tank type water heater, located in the Mechanical Room. The water heater has a storage capacity of 100 gallons and a gas input of 250,000 Btu/hr. The water heater is equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated and there is an expansion tank installed. The water heater appears to be in good condition.



Water Heater



Recirc. Pump



Expansion Tank

Gas:

An elevated pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the exterior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating boilers, the domestic water heater, kitchen equipment. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.

Drainage Systems:

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.

The Kitchen waste piping from the 3-pot sink and dishwasher is not directed to a point of use interior grease interceptor, buried in the floor.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)

- Provide grease interceptor to collect drainage from 3 pot sink and dishwasher as required by Code. (High Priority 1-2 years)

FIRE PROTECTION - Ames Building

Executive Summary

The existing building consists of an automatic sprinkler/standpipe system and is fully sprinklered. The majority of the equipment and systems installed appear to have been well maintained and are generally in good condition.

Massachusetts code requires that a commercial building, 7,500 square feet or more, must be sprinklered. Per 780 CMR 34.00 work shall not be considered a substantial renovation if the cost of installing a sprinkler system exceeds 15% of the total renovation cost. Should the existing building undergo a major renovation the building will require upgrades to the existing sprinkler system to provide complete protection of all spaces.

Existing Conditions:

There is an existing 6-inch ductile iron fire service that enters the Basement Mechanical Room. The Fire service within the building includes an existing backflow preventer, wet alarm check valve and a dry alarm check valve. The dry alarm check valve serves a dry sprinkler system serving unconditioned and attic spaces.



Double Check Valve



Alarm Check Valve

The sprinkler system has a dedicated Siamese Fire Department connection and electric bell located on the exterior of the building.

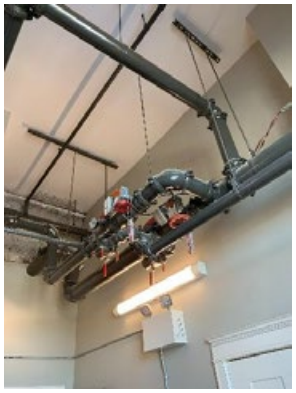


Fire Dept. Connection

There is a 4-inch fire main which serves the entire building sprinkler/standpipe system. The building is divided into zones not exceeding 52,000 square feet, each isolated by a sprinkler zone control valve assembly. The standpipes include 2-1/2-inch hose connections.



Wet and Dry Piping

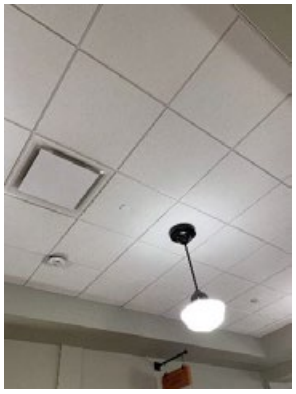


Sprinkler Zone Control



Standpipe Hose Connection

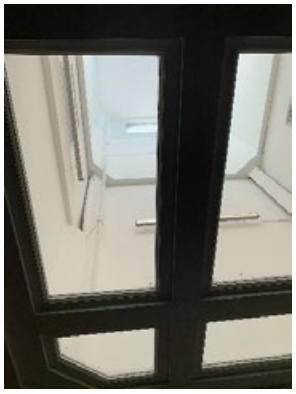
The piping for the sprinkler and standpipe system is black steel. Fitting and joints are grooved couplings or threaded depending on pipe size. The dry sprinkler system consists of galvanized steel pipes. Piping and sprinkler heads appear to be in good condition. Sprinkler heads include quick-response semi-recessed pendent type for rooms and areas with finished ceilings. Quick-Response upright sprinkler heads are utilized for rooms with no ceilings.



Pendent Sprinkler



Upright Sprinkler



Skylight Sprinkler

Recommendations:

- Maintain existing sprinkler system in accordance with MA State Building Code, NFPA 25-2020. (High Priority 1-2 years)

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Anthony P. Mucciaccio Dedham Pool (Juju's Place)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: PR-2 | Anthony P. Mucciaccio Dedham Pool (Juju's Place)

SELECT BUILDING: PR-2 | Anthony P. Mucciaccio Dedham Pool (Juju's Place)

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	PR-2	**Flood Zone:**	None
Address:	1 Recreation Road	**Wetlands:**	No
Year Built:	1975	**Historic:**	None
Last Renovated:	None	**Lot Size (ac):**	1.12
Gross Sq Ft (GSF):	11,744	**Building Use:**	Recreation
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Masonry/Steel	**Assessed Value:**	$2,430,100
Roof Year:	Partial, 2024	**Deferred Maint. ($):**	tbd
Window Year:	2023	**Est. Renovation Cost:**	tbd
No. of Floors:	1	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	367
Electrification Potential:	2041 – HP Packaged Unit (RTU)	**GHG Emissions:**	257
Solar Potential (kW):	72.2	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.95	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.1	• Poor
Structure (Avg):	3.0	• Poor
MEP / FP (Avg):	3.2	• Critical
Life Safety / Code:	2.5	• Poor

KEY COMPONENT SCORES

Roof:	3.0	Electrical:	4.0
HVAC – Heat:	4.0	HVAC – Cooling:	2.0
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



View of main pool deck.

The Dedham Pool has benefited from significant recent mechanical upgrades and remains an important community recreation asset, though aging components and life safety compliance items require near-term attention.

The Anthony P. Mucciaccio Dedham Pool, built in 1975, is an approximately 11,744 SF indoor swimming pool facility located at 1 Recreation Road. The building was originally constructed as part of the 1970's era high school expansion and connected to the main building with a bridge (now removed). The pool hosts public swimming, as well as multiple team competition teams from Dedham and surrounding communities.

There are no automatic sprinkler system and non-illuminated exit signs. The original bridge stair remains, which is creating significant structural issues. The enclosure shows significant signs of structural deterioration and there is storage in stair enclosure connecting to Dedham High School. For accessibility, men's and women's restrooms have deficiencies (toilet location, grab bars, mirror, knee clearance / pipe protection under sink). The 33% sprinkler threshold may create issues in the near term for required upgrades.

At 257 MT CO_2e, the Pool is the fourth-highest green house gas (GHG) emitter in the portfolio (7.28% of total). The recently installed Innovent dehumidification unit (2021/22) is in good condition, a newer condensing boiler is in good condition, and terminal heating equipment at the end of its anticipated service life.

The pool space is served by a grade-mounted Innovent dehumidification unit installed 2021/22 in good condition — natural gas heating section, DX cooling, energy recovery, drum-style supply diffusers along perimeter, large return air grilles. Air distribution design is ideal for pool spaces. A newer Lochinvar condensing boiler serves the locker room and toilet areas is in good condition. Terminal heating equipment (perimeter fin-tube, unit heaters) is at end of anticipated service life and is a recommend replacement.

Building Structure & Exterior

The Dedham pool is a one-story steel and masonry building, built as part of the 1975 high school expansion. The building has a one-flight stair tower which is located on the southwest corner of the building and was originally connected to the high school via a covered bridge. During the site visit, previous structural reinforcement projects were described and shown where structural steel had been inserted to reinforce tall masonry exterior walls.

Significant cracking in CMU walls, surface rust at underside of the metal roof deck and open web steel roof joists. Cracking does not appear to be due to settlement at the foundations. It is more likely that the lack of reinforcement in the CMU, it's height, and the abrupt discontinuity from the low roof to the high roof resulted in the stair core being incapable of resisting wind loads. Many cracks originated near door openings and propagated nearly the full height of the stair core.

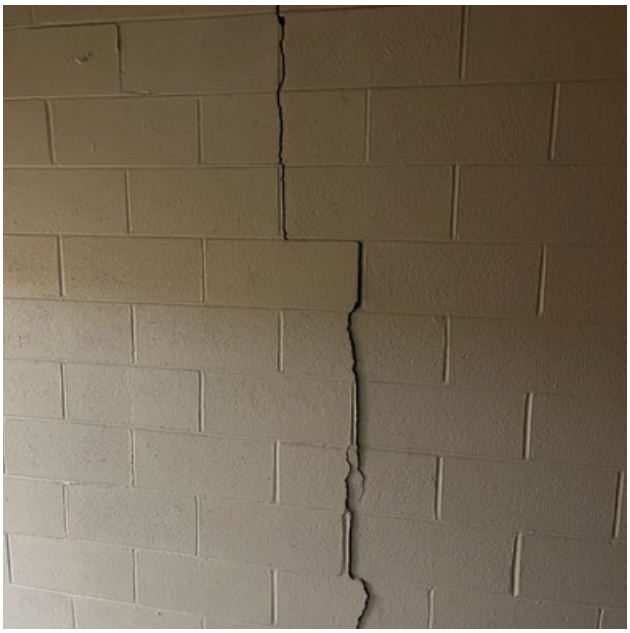
The exterior of the building is red brick masonry with large sections of translucence panels to allows diffuse light into the pool deck. The masonry is a source of maintenance issues, with extensive repointing taking place over the past few years. The masonry is still in poor conditions, which exterior cracking and areas where brick has begun to pull away from the building along the south wall observed. The glazed system was replaced and appears is good condition. The pool roof is a ballasted, flat roof system above the pool, which is older, and a flat roof on lower sections, which is newer and in good condition. Overall, the exterior is in poor condition and requires continual monitoring and maintenance.

Interior Environment

The Dedham pool and recreation functions and contains the main pool area, locker rooms, and support spaces. The building has not been renovated since its construction in 1975, and finishes are in poor condition, and while appropriate for the use of the spaces, require replacement. The pool deck is



Sections of brick at stair tower at along south wall show signs of movement and delaminating



Cracks observed in interior CMU of stair towner

pleasant and well lit with good access to natural daylight, but locker rooms and offices are dim and finishes and equipment are worn.

The pool deck features tile and painted masonry walls. The tile is in poor condition, with multiple sections which have failed. Other spaces in the building are generally tile, concrete and painted CMU. Locker rooms have original fixtures and equipment and are dated and worn. Storage is not optimized and overfilled with items.

It was reported at the time of the visit that underslab drainage has failed beneath the pool deck, which prevents surface water on the deck from draining. During the site visit, standing water was observed on the deck. Standing water creates a slip hazard, as well as increasing the rate of wear and failure of the pool deck tile. This is a critical issue which should be addressed. The motorized pool cover is also not operational, and while it can be manually covered, it is rarely used. The leads to increased corrosive chemicals in the air and increased wear on HVAC systems and finishes.. The lack of a working pool cover also reduces the quality of indoor air for users.

The filter room is adjacent to the pool, and the filtration system is original (1975) to the building. The filtration system is central to the operation of the pool, but its age, cost of repair, and availability of replacement parts create a problematic condition. Further the system is below an open metal deck, and spaces does not allow for safe and efficient service. Chemicals were not stored correctly, creating a hazardous condition any time the system is serviced.

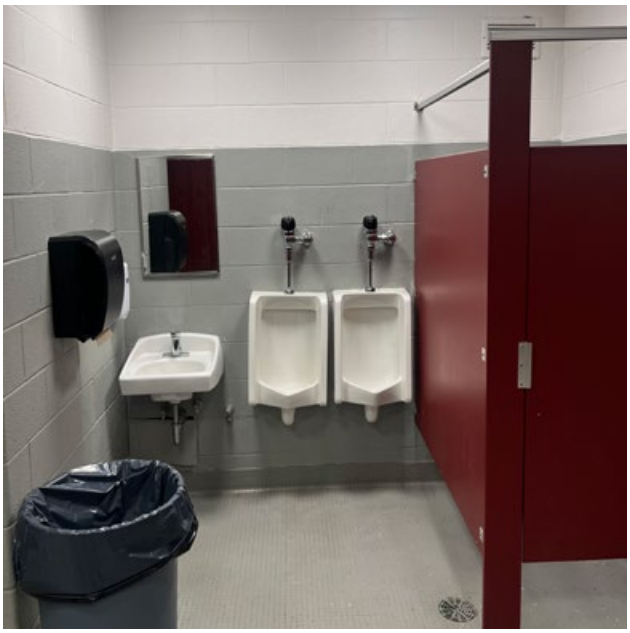
Programmatic Suitability

The Dedham pool occupies a prominent site on the shared academic campus, sitting next to the Avery school and behind the high school, and is accessed off of Recreation Road. The location has good adjaceny with the high school, middle school, and located a the center of town.

The 11,740 SF structure contains a main pool hall with built in seating, entry and concessions, locker rooms and an office. The building is purpose built as a pool hall and is well suited to its primary function, but lacks any flexibility or additional space. An acute lack of storage is evident, with materials being stored in the filter room and stair well.

While the facility is only one story, it is not fully accessible, lacking appropriate changing and bathing facilities to comply with ADA and MAAB. This limits access to all residents and users.

(Note: see the Volume 2 report for usage analysis and planning studies).



Non-accessible bathroom fixtures

PRIORITY ISSUES & RECOMMENDATIONS

Immediate Priorities (0–2 Years)

- Replace drainage at pool deck - underslab piping has collapsed
- Replace motorized pool cover
- Monitor cracking at stair tower for any increases and evaluate any further movement. Close off access to stair shaft until such a time as it can be reinforced or demolished. Restrict sidewalk access around the stair core from the outside
- Replace all non-illuminated exit signs — code violation per 780 CMR 1013.3
- Clear storage from stair enclosure connecting pool to DHS — code violation per 527 CMR 1.00
- Replace non-compliant handrail arrangements in pool area — 780 CMR 1014
- Address Men's and Women's Accessibility restroom deficiencies (toilet, grab bars, mirror, pipe insulation)
- Replace deteriorating circulation pump showing wear — one of the two Armstrong lead/lag pumps
- Replace all terminal heating equipment (perimeter fin-tube and unit heaters) — all at end-of-life

10-Year Capital Improvements

- Sprinkler system installation
- Electrical service assessment and upgrade
- Pool envelope assessment — roof, walls, and waterproofing at 50 years old
- LED lighting upgrade throughout facility
- Evaluate pool basin resurfacing needs
- Study future of building, reuse or replacement

Capital Investment History

FY	Project / Capital Improvement	Amount
FY24	Pool Brick Repointing	$70,000

Site Conditions

The Dedham pool occupies a prominent site on the central academic campus, abutting the Avery school to the east and the high school to the south. The pool is accessed from Recreation Road, but shared site and parking facilities make public parking and access difficult during school hours.

The site contains paved parking and walkways, which are in poor conditions. Vehicular access is straightforward from Washington Street.
Site drainage appears poor, with large areas of puddles observed near entry areas. Further, The site does slope into the building on the south side, so
The site is classified as FEMA Flood Zone X, reflecting minimal flood risk. No wetlands are present on the parcel.

Sustainability & Decarbonization

FY2022 GHG emissions were 257 MT CO_2e (7.28% of portfolio) is the fourth highest. Natural gas (dehumidification unit) accounts for 75%+ of emissions and electricity 25%. The 2021/22 Innovent dehumidification unit was a major upgrade but is still gas-fired. Future decarbonization would require replacing the gas dehumidification unit with electric heat pump pool dehumidification, which is available commercially. This should be evaluated at next equipment replacement cycle (~2036–2041). Solar on the 4.55-acre campus offers potential for ground-mounted solar (in progress).

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The pool occupies a central site, adjacent to the Avery and high schools within Dedham's central academic campus. It includes a large field to the north as well as parking and outdoor courts to the west. If these sites were combined, the site would comprise of approximately 4 acres. If the pool were relocated, the combined site could support a new school facility.

The 50-year-old building will require comprehensive evaluation as any repair projects are designed. Any project should be confirmed with the fire marshal and inspectional services before bidding to avoid sprinkler, accessibility and seismic retrofit requirements.

(Note: see the Volume 2 report for usage analysis and planning studies).



Original Dedication Plaque from Dedham High School Expansion.

HVAC - Heating, Ventilation and Air Conditioning: Dedham Pool

Executive Summary:

The Dedham Pool building is an approximately 11,500 SF building that was originally constructed in 1975. However, the HVAC system has been recently upgraded with a new dehumidification unit to serve the pool area. There is also a small boiler plant to provide heat to the adjacent lockers and toilet rooms. The dehumidification unit, boiler plant and associated pumps appear to be in goo to fair condition, however the terminal heating equipment appears to be at the end of its anticipated service life.

Existing Conditions

Pool Dehumidification Unit:

The pool space is served by a grade mounted dehumidification unit manufactured by Innovent. The unit is equipped with natural gas heating section, Direct Expansion (DX) cooling section, energy recovery, filters, supply fan, and return fan. Ductwork runs exterior to the building up the exterior wall and penetrates up high into the ceiling space above the pool. All exterior ductwork is double wall aluminum ductwork. Supply air is distributed to the space along the perimeter walls utilizing drum style supply diffusers which have excellent throw. Return air is drawn back to the unit by large return air grilles mounted above one end of the pool area. The air distribution system appears to have been designed very well, as this method of air distribution is ideal for a pool space. Existing drawings indicate that this duct distribution system and dehumidification unit were recently installed in 2021 or 2022. The unit and associated ductwork appear to be in great condition.

Heating hot water is pumped throughout the building by two (2) base mounted end-suction pumps, piped in a lead/lag configuration. The pumps are manufactured by Armstrong, with a capacity of 475 GPM and a 10 HP motor. The pumps are nearing the end of their recommended service life and are recommended for replacement. Typical hydronic accessories such as an expansion tank and air separator are also provided.



Pool Dehumidification Unit



Exterior Ductwork

Boiler Plant:

There is a small boiler plant that primary serves heating equipment within the locker room area of the pool building. The plant consists of a single condensing boiler, model FTXL manufactured by Lochinvar. Boiler exhaust is vented through a CPVC pipe, and boiler combustion air is drawn through a PVC pipe, both of which terminate through the exterior side wall. The venting and intake seem to be installed per the manufacturer's requirements. The boiler appears to have been installed recently and is in good condition. Hot water is distributed to terminal heating equipment by two (2) base mounted end suction pumps piped in a lead/lag configuration. One of the pumps appears to be in good condition and may have been replaced relatively recently. The other pump appears to be showing some signs of wear and tear. It's unclear what the age of this second pump is. End suction pumps typically have a life span of approximately 20 years. If this pump is nearing its anticipated life expectancy, it is recommended to be replaced with a new pump.

The pumps distribute hot water to unit heaters and unit ventilators located within the stairwell, locker rooms, and toilet rooms. In general, the terminal heating equipment appears to be nearing the end of its anticipated service life and are recommended for replacement.



Condensing Boiler



Boiler Intake and Exhaust



Existing Pumps



Typical HW Unit Heater

Lockers and Toilet Rooms:

The lockers are served by hot water unit ventilators. Fresh air is ducted to each unit ventilator by a wall mounted louver. The unit ventilators appear to be in fair to poor condition. The fresh air introduced by the unit ventilators is exhausted by roof mounted exhaust fans. It's unclear if the unit ventilators and exhaust fans are providing the proper amount of ventilation air required by today's code standards. Unit ventilators are also an antiquated method of providing heating and ventilation. Therefore, it is recommended to replace the existing unit ventilators with a new heating and ventilation system sized to deliver the ventilation air flow rate per code requirements.

Toilet rooms are provided with exhaust. Further analysis is needed to determine if the bathrooms are being exhausted at the code required exhaust rate. It is recommended to rebalance exhaust fans to meet today's code requirements.



Horizontal Ducted UV

Recommendations:

Based upon our review and observations of the building HVAC systems, we offer the following systems recommendations.

- Consider replacing all terminal heating units in the near future, which appear to be nearing the end of their anticipated service life. This includes all unit heaters, cabinet unit heaters, and unit ventilators.
- Replace the exhaust fans and rebalance ductwork to deliver the code required exhaust rate per today's standards.
- Consider replacing the remaining hot water pump that appears could be nearing the end of its anticipated service life.

ELECTRICAL – Dedham Pool

Executive Summary:

On March 26, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Richard Salter Storrs Library. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

The report details several code violations present within the building along with recommendation on how to correct them.

Electrical Distribution System:

The building's main service is rated for 400A (amperes) at a 3-phase service voltage of 277/480 (volts). The secondary service is brought from a Secondary service is hot sequence metered terminating at an 400A rated service main breaker/ C.T. (current transformer) cabinet located within the buildings main mechanical room A distribution panel rated for 400A was located adjacent to the main service equipment and provided feeds electrical to sub-panels located throughout the building. All distribution equipment found within the building's electrical room would be described as being in fair to poor condition and nearing or at capacity.

Electrical sub-panels were found within the buildings' main mechanical room. All sub-panels would be described as in poor condition. With the exception of one panelboard that appears to be in good condition and was installed more recently.

Sub panels are located in an egress corridor. They appear to be in fair to poor condition and nearing or at capacity.

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.



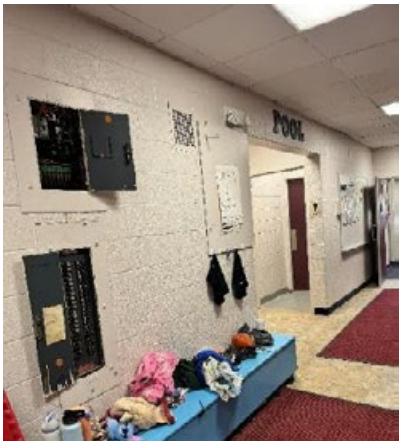

GENERAL ELECTRIC




TEMP HEATER






POOL



Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from fair to good.

Exit signs within the building are all thermoplastic type and vary in condition from poor to good. Many of the buildings' exit signs have begun to yellow, a typical sign of aging in a thermoplastic sign. Some exit signs did not appear to have a test switch typically indicating that a sign is not provided with an integral battery back-up which would be required for a building with no emergency generator.







Fire Alarm System:

The existing building is equipped with a Fire-Lite ES-200X addressable fire alarm control panel (FACP) located within the main mechanical space.. This system is adequate for the building it is protecting.

A key repository box was located at the buildings main entry. Fire alarm annunciator is located within the entry door. The method of transmission appears to be existing master box located at the main entry. Confirm this method of transmission with the local fire department.











Exterior Lighting System:

Exterior lighting consists of building mounted wall packs and flood type fixtures. The light source was unknown at the time of the survey. The main entry utilizes 2 downlights and a surface mounted square fixture. Each are in poor condition.







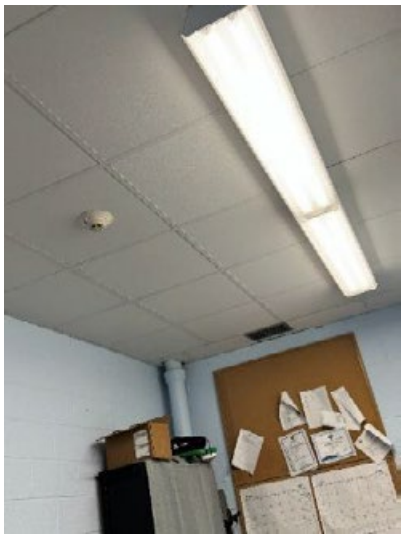
Interior Lighting:

Interior lighting within the pool building is a combination of recessed 2'x4' flat panel LED fixtures, strip fixtures for wet location in the shower area, high bay fixtures located in the pool area. It is unclear if the strip fixtures have been retrofitted with LED type bulbs. It is unclear the light source of the high bay fixtures in the pool area.

Utility lighting primarily consisted of linear wrap around fixtures some with prismatic lensing. Utility fixtures located in the mechanical room are strip fixtures with exposed bulbs and are in poor condition.

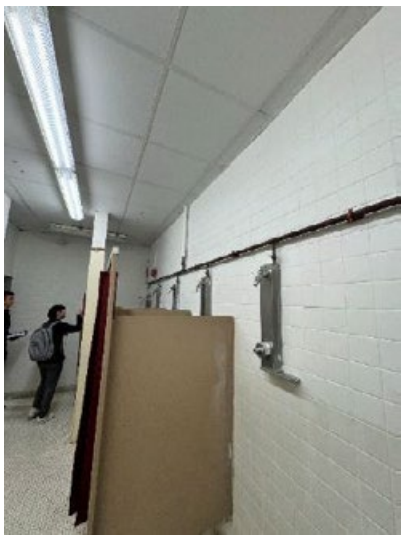
No centralized control system was found but some areas were outfitted with line voltage occupancy sensors. No daylight harvesting sensors were found. Lighting is controlled by local switching located in the office next to panel LP-2















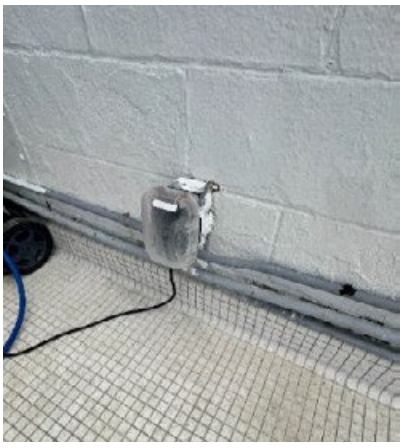


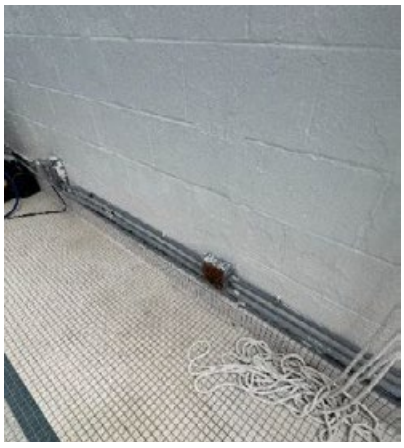
Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building. Receptacles are surface mounted with surface conduits to devices within the pool area. Metal junction boxes appear to be corroded from the environment. Receptacles in the pool area are GFI type with weather proof covers installed. Receptacles in the office are located at the desk area, but there is also plug strips and extension cords being utilized.

Exposed wiring terminations were found in several areas throughout the building.

An existing electrical snow melt system was found within the building's basement and is used for snow melt at the building's accessible ramp.











Security System

I did not observe a centralized security system. There is CCTV cameras located on the exterior of the building as well as the interior. There is a PC located at the main entrance lobby area to monitor the cameras.











Communication Systems:

It appears the incoming communication is located within the mechanical room. There is a small network rack located in the lobby area reception desk area.





Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Elimination of obsolete equipment abandoned in place should be considered for removal along with upgrade of panels that are in poor condition. Additionally, panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice. It is also recommended that if the existing service transformer is to be used it should be provided with oil containment. The transformer is showing signs of leaking into the ground.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

Fire alarm system is an addressable system and is adequate for the building.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Increasing the pole heights provided for parking lot fixtures could improve overall quality of lighting and decrease required quantity of pole locations.

Lastly, A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

It is recommended that all existing code violations be reviewed and addressed. Provide additional receptacle locations to assist in elimination of extension cord usage. Of the recommendations made may require building service upgrade as panel capacity is nearing its limits. Finally, it is recommended that all receptacles be replaced within the building and that tamper resistant receptacles be installed in any public areas.

Security System:

It is recommended that the current intrusion system installed be replaced and expanded to provide door contacts at all points of accessible entry to the building as well as a full coverage of motion sensing devices within the building at grade level.

A CCTV (Closed Circuit Television) system should be provided with cameras providing coverage to the exterior building and throughout all public areas of the library. The town standard Axis Camera Station Pro system should be provided and carried as a proprietary item.

A card access system should also be provided to secure, track, and monitor access to all entry points of the building as well as higher security areas such as the building's data closet or library directors' office. The town standard S2 system should be provided and carried as a proprietary item.

Communication Systems:

New phone and internet services should be provided to the site. The demarcation point for the phone and internet services should be re-located to a dedicated room within the building. The room should be fitted with appropriate data rack with spaces for all systems in use data, security, phone, etc. All systems shall be fed with color coded cabling for ease of identification and maintenance when necessary. The room should be conditioned and provided with rack mounted UPS (Uninterruptible Power Supply) for back up during power loss situations.

Additional telephone/data ports and wireless access points should be provided in all offices and finished areas throughout the building.

PLUMBING- DEDHAM POOL

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 serve the building.

Portions of the plumbing systems have been updated as part of building renovation and upgrade projects.

Fixtures:

The water closets are wall hung vitreous china with battery operated sensor flush valves.

Urinals are wall hung vitreous china with battery operated sensor flush valves.

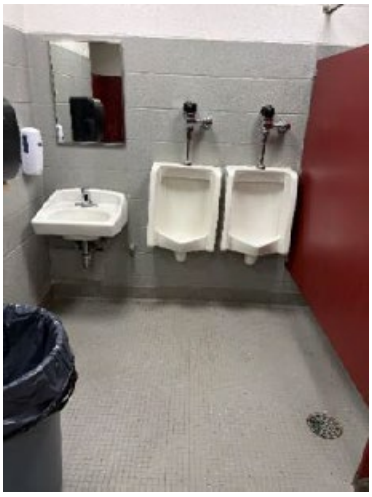
Lavatories are wall hung vitreous china with battery operated sensor type metering faucets.

Janitor's sink is a floor mounted mop sink with wall mounted faucet equipped with vacuum breaker.

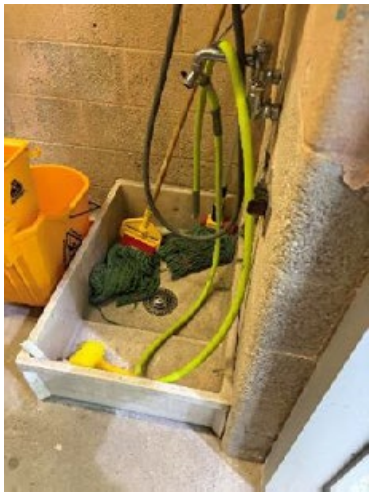
Locker room showers are surface mounted units with stainless steel enclosures and manual shower valves. Tepid water is supplied to the shower valves from a master mixing valve.

Electric water cooler is wall mounted, single unit, with bottle filler.





Typical bathroom fixtures



Mop sink



Locker room showers



Electric water cooler

Water Systems:

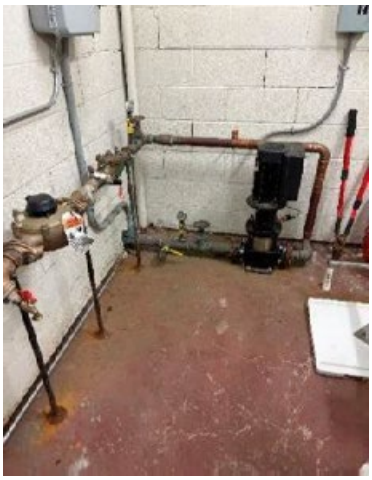
The domestic water service is in the Mechanical Room. The service appears to be 2-inch in size and includes a 2-inch water meter. There is no backflow preventer on the main service. There is a 2-inch irrigation supply after the building water meter. The irrigation supply includes a 1-1/2" water meter and 1-1/2" reduced pressure backflow preventer and booster pump.

Piping, where exposed, is copper tubing with sweat joints. Where modifications have been made copper press fitting have been used. The majority of the piping is insulated.

Domestic hot water is provided by two indirect water heaters supplied from the building heating boiler. The indirect water heaters are HTP Superstor model SSU-60, with 60 gallons of storage each. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated. The water heaters were installed in 2006 and appear to be in fair condition.



Main water service



Irrigation supply



Indirect water heaters

Gas:

Natural gas is provided to the building from the High School gas service. Natural gas is provided to the heating boiler, pool water heater, and grade mounted HVAC unit. Gas piping is black steel with threaded joints and fittings.

Drainage Systems:

Cast iron is used for sanitary drainage and roof drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper.

Roof drains appear original to the building construction.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Install thermostatic mixing valves at existing domestic water heating system.
- Replace existing roof drains.

FIRE PROTECTION – Dedham Pool:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

STRUCTURAL EXISTING CONDITIONS (Anthony P. Mucciaccio Dedham Pool)

OVERVIEW

1. Existing conditions based on original structural and architectural drawings, dated August 13, 1973, and a site visit by RSE on March 26, 2026.
2. Main portion of the building consists of the pool area, office space, and locker rooms. On the east end of the south face of the building, there is a stair tower that originally provided access to a pedestrian bridge connecting into the high school. This bridge has been demolished and the wall opening infilled with drywall and brick exterior, presumably on steel studs.
3. Pool roof is significantly higher than roof over locker rooms. Stair core roof is slightly higher than pool roof.

FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls and retaining walls at the perimeter. Additional concrete walls around the pool. Allowable soil bearing pressure is 5 TSF. 5" concrete slab on grade with welded wire mesh at the first floor. Bottom of exterior footings are 4 feet minimum below grade.
2. No known modifications to foundations since original construction.
3. Besides cracks at the corner of the stair tower frost wall, no other structural foundation issues observed.
4. Recommendations: none

SUPERSTRUCTURE

1. Steel framing includes steel columns, steel beams, open web steel joists, and metal roof deck. Lateral system is assumed to be unreinforced infill CMU shear walls.
2. Supplemental steel was provided at a later date to brace the tall CMU walls around the pool.
3. Condition/Known Issues:
    - Main Building: good, some limited cracking near door lintel.
    - CMU Stair Core: significant cracking in CMU walls, surface rust at underside of the metal roof deck and open web steel roof joists. Cracking does not appear to be due to settlement at the foundations. It is more likely that the lack of reinforcement in the CMU, it's height, and the abrupt discontinuity from the low roof to the high roof resulted in the stair core being incapable of resisting wind loads. Many cracks originated near door openings and propagated nearly the full height of the stair core.
4. Recommendations:
    - Main Building: none

- CMU Stair Core: Close off access to stair shaft until such a time as it can be reinforced or demolished. Restrict sidewalk access around the stair core from the outside.

FAÇADE

1. Exterior façade is brick veneer on CMU backup.
2. Cracking in exterior brick is visible around the CMU Stair Core.
3. Recommendations: see CMU Stair Core recommendations under SUPERSTRUCTURE

PHOTOS

	Photo: Sample of cracking in stair core.

Avery Elementary School

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: S-2 | Avery Elementary School

SELECT BUILDING: S-2 | Avery Elementary School

BUILDING INFORMATION	
Building ID:	S-2
Address:	336 High Street
Year Built:	2011
Last Renovated:	None
Gross Sq Ft (GSF):	61,000

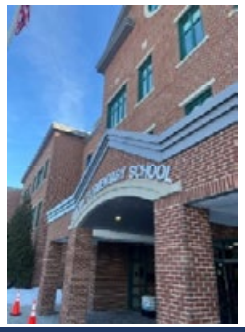
SITE CONSTRAINTS & REGULATORY	
Flood Zone:	Zone A
Wetlands:	Within Wetland
Historic:	None
Lot Size (ac):	5.6
Building Use:	Educational

ROOF & ENVELOPE	
Construction Type:	Steel/Concrete
Roof Year:	2010
Window Year:	2010
No. of Floors:	3

CAPITAL COST ESTIMATES	
Assessed Value:	$33,079,100
Deferred Maint. ($):	tbd
Est. Renovation Cost:	tbd
Replacement Cost:	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	Energy Use Intensity (EUI):	50
Electrification Potential:	2035 – VRF	GHG Emissions:	191
Solar Potential (kW):	72.2	Climate Resilience Risk:	Medium

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)		
OVERALL FCI:	1.41	Good

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.6	• Good
Structure (Avg):	1.0	• Excellent
MEP / FP (Avg):	2.1	• Fair
Life Safety / Code:	1.0	• Excellent

KEY COMPONENT SCORES			
Roof:	2.3	Electrical:	2.2
HVAC – Heat:	2.4	HVAC – Cooling:	2.4
Fire Prot.:	2.0	Plumbing:	2.0

EDUCATIONAL ADEQUACY INDEX (EAI)		
OVERALL EAI:	1.31	Good

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	1.0	• Excellent
EPI-2 Academic Suffic.:	1.6	• Good
EPI-3 Program Suffic.:	2.0	• Fair
EPI-4 Universal Access:	1.0	• Excellent
EPI-5 Building Safety:	1.3	• Excellent
EPI-6 Tech. Readiness:	1.0	• Excellent

Grade Config.:	1–5
Enrollment:	318
SF per Student:	192

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



View of Avery School Beyond High School Track.

Built in 2011, Avery Elementary is the district's newest elementary school and remains in good overall condition with well-maintained building systems. Capital investment needs are modest in the short term, with lifecycle planning for mechanical systems a primary long-term consideration.

Avery Elementary School is the Town's second-newest school building, constructed in 2011 as a replacement for the original 1952 Avery School. The three-story 61,000 SF structure is built with a steel frame and concrete-topped metal decks, clad in brick veneer with curtain wall glazing at the entrance and gymnasium. The school serves grades 1–5 and is currently operating at full capacity. The 5.6-acre site includes 61 parking spaces and athletic fields including a sport court. The school is adjacent to Dedham High School's campus on Whiting Avenue, with shared driveway access off of Recreation Road.

The building was designed to modern educational standards, participating in the MSBA program during design and construction. The school incorporates a modern HVAC system consisting of central boilers, chillers, air handling units, induction units, fan coil units, and hydronic baseboard radiators, supplemented by ductless mini-split heat pump systems and a make-up air unit. Roof systems include gabled asphalt shingle sections over classrooms and a low-slope single-ply membrane over the gymnasium and media center wing, both installed in 2011 with 20-year manufacturer warranties. The facility is fully sprinklered and equipped with a complete fire alarm and life safety system. A safe routes to school (SRTS) infrastructure improvement project, which includes new Accessibility-compliant sidewalks, bike lanes, and a signalized intersection at Whiting Avenue and Walnut Street — is currently in design, funded by a state grant.

Building Structure & Exterior

The Avery Elementary School is a three-story steel and concrete structure, built in 2011 as a replacement for the previous Avery School. The building structure is steel frame with a concrete and metal deck floor structure, typical of contemporary school construction. The construction type is very robust and no structural concerns were observed or raised

The exterior of the building is predominantly red brick masonry with punched metal windows. Smaller areas of metal glazed storefront system are located at entry areas and stairwells. The windows are a source of maintenance issues, with reports of some leaking and required repair of sealants taking place over the past few years. Generally the facade is observed to be in good condition. The roof is a mix of pitched shingles and single-ply low-slope at mechanical areas. The roof was observed to be in good condition. Overall, the exterior is in good condition and requires only regular maintenance.



Entry to the Avery school on the south side of the building

Interior Environment

The Avery Elementary School is a purpose built elementary school, containing classrooms for typical and special instruction, administration spaces, a kitchen, cafeteria and stage, gym, and support spaces. Building spaces are purpose built and generally fit for purpose. Floor finish is typically a resilient floor in most student spaces. Tile floor is located in bathrooms and kitchen, and the gym has a wood floor. Walls are generally painted wall board, with wood panels in the corridors. Tile is installed in restrooms and at drinking fountain locations. The school is a pleasant and well lit building with good access to natural daylight. Finishes are generally in good condition and have ~20 years left of their typical service life.



Classrooms are pleasant and bright with good ac cess to natural light.

Programmatic Suitability

The Avery Elementary School occupies a prominent site on the shared academic campus, sitting behind the high school and adjacent to the Dedham pool, and is accessed off of Recreation Road. The building is a purpose built elementary school, designed and built under MSBA regulations, making this building comparable, educationally, to a new school. The school has dedicated gym, cafeteria, and special instruction spaces such as Art and Music.

The school is 62,000SF and its current enrollment is slightly over 300. This averages approximately 190 square foot per student, which is in line with MSBA standards. While this does not specifically identify any space deficiencies, it shows that the Avery school is generally an appropriate size for its enrollment.

The facility is contains an elevator and was built after the current version of ADA was implemented. No deficiencies were observed.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Avery school occupies a prominent site on the central academic campus, abutting the Dedham Pool to the west and track to the south. The school is nominally accessed from Recreation Road, but the main entry faces north, and is accessed from the parking lot to the west. Small playground areas are located at each east and west sides of the building and appear in good condition. The school occupies the shared academic site and parking facilities make public parking and access difficult during school hours.

The site contains paved parking and walkways, which are in fair condition. Notably pavers were observed at the main entry which were not secured and present a tripping hazard.

The site is not within a FEMA Flood Zone, reflecting minimal flood risk. No wetlands are present on the parcel.



Paver stones at main entry.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Repair of uneven stone pavers at the main building entrance walkway
- Repair to areas of cracked sidewalk
- Installation of additional property signage for emergency services

10-Year Capital Improvements

- Lifecycle replacement of single-ply thermoplastic roof membrane (~2026)
- Replacement of ceiling-mounted induction units (54 units, ~2028)
- Building Automation System (BMS) upgrade (~2032)
- Replacement of variable frequency drives and circulation pumps (~2031)
- Exterior wall repointing at 3+ story brick masonry (~2034)
- Exterior steel door replacement (~2034)

Capital Investment History

FY	Project / Capital Improvement	Amount
FY22	Office Accessibility Renovations	$150,000
FY22	Entrance Safety Vestibule	$50,000
FY22	Roof Repairs	$100,000
FY25	Avery Interactive Board Replacement (School IT)	$84,000
FY26	Interior Security Camera System — Phase I Design & Infrastructure	$50,000
FY26	Envelope Repair — System-wide Roof Maintenance (shared)	Shared

Sustainability & Decarbonization

FY2022 GHG emissions were 191 MT CO_2e (4.5% of total municipal portfolio). Primary space and water heating is via natural gas boilers installed 2011; EUI of 50 kBtu/ft². The decarbonization Roadmap proposes VRF heat pump electrification in 2035 at end of boiler useful life, heat pump water heaters in 2035, and 72.2 kW onsite solar in 2036.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The Avery Elementary School is the newest operational elementary school in the district. Avery's relatively young age and good condition position it as a lower capital priority than Oakdale, Riverdale, and Greenlodge. HVAC equipment lifecycle replacements will begin in the early-to-mid 2030s. The School Building Rehabilitation Committee has not identified Avery for near-term replacement.

The Avery site has a large field to the east, which is flat and should be analyzed for potential addition or swing space during any future planning for elementary school replacement or consolidation.

(Note: see the Volume 2 report for usage analysis and planning studies).



School is designed with secure entry

HVAC - Heating, Ventilation and Air Conditioning: Avery Elementary School

Executive Summary:

Existing Conditions

The School opened in 2011 and is in very good condition. The school has a mixture of displacement air systems and overhead systems with hydronic heat throughout.

Central Heating Plant

The boiler room is located in a mechanical room located on the roof of the building. There are two high-efficiency condensing boilers. Each boiler was manufactured by Lochinvar Knight XL model KBN801. The boilers each have a natural gas input rating of 800 CFH, providing a heating output of 752 MBH output. The boilers appear to be in good condition and should have many more years of serviceable life expectancy remaining.



Boilers

The pumps which serve the hydronic heating equipment were manufactured by Bell and Gossett. The pumps are base mounted end suction pumps, model 1510, providing 150 GPM at 60 ft of head. Each pump has a 5 horsepower motor. The pumps appear to be in good operating condition.



Hydronic Heating Pumps

Central Cooling Plant

There is a roof mounted chiller manufactured by Trane,



Chiller

The pumps which serve the hydronic chilled water equipment were manufactured by Bell and Gossett. The pumps are base mounted end suction pumps, model 1510, providing 150 GPM at 55 ft of head. Each pump has a 5 horsepower motor. The pumps appear to be in good operating condition.



Hydronic Chilled Water Pumps

Classrooms

Classrooms Displacement diffusers providing neutral temperature air slowly dispersed at the floor level. Return for the air is pulled from the ceiling level. Perimeter fin tube radiation provides heat for each classroom. Some of the displacement diffusers are blocked by furniture or have signage or posters covering the face of the diffusers obstructing the flow.



Displacement Diffuser



Return Grilles



Perimeter Fin Tube Radiation

Terminal Heating Equipment

Throughout the building there are terminal heat devices such as convectors, unit heaters and radiation in areas where supplemental heat is required. Terminal heat devices are in good condition.



Typical Cabinet UH

Administration Area

The administrative area has perimeter fin tube radiation and Induction units mounted in the ceiling.



Induction Units



Fin Tube Radiation

Main Air Handling units

There are two larger air handling units in the Mechanical room located on the roof. Both units provide heat and cooling, 460 volt, 3 phase and have energy recovery and capable of 100% outside air. AHU-1 serves the southwest classroom 10,000 CFM and AHU-2 serves the administrative area and provides 4,500 CFM. The Air handling units were manufactured by MAFNA and appear to be in good operating condition with many years of serviceable life expectancy.



Air Handling Units



Air Handling Units

Toilet Rooms:

Toilet rooms throughout the building lack proper exhaust rates. Toilets in common bathrooms have transfers above the doors and one ceiling mounted exhaust fan. The fan appears undersized for the amount of toilets which it serves.



Toilet Room Exhaust

Automatic Temperature Controls:

Controls are direct digital controls (DDC) to a full building management system (BMS) for HVAC equipment. Based on its age, the DDC system is assumed to be in good operating condition.



Alerton Controls

Recommendations:

Based on the conditions observed of the existing HVAC systems and equipment, We recommend the following improvements to the HVAC system.

- The HVAC equipment and system appear to be in good operating condition and with routine maintenance the system should last for many years.
- Where furniture, signage or clothing may be obstructing the displacement diffuser, we recommend proper clearance be maintained in front of the displacement diffusers to flow properly from the source.

ELECTRICAL – Avery Elementary School

Executive Summary:

On February 19th, 2026, an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Avery Middle School. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings' systems are in good condition. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's electrical utility service is provided by Eversource and fed underground from a utility pole adjacent to the building's utility transformer. The building's main service is rated for 1200 Amperes 277/480V, 3 Phase, 4 Wire and is terminated into a Square D, 2-section switchboard. The main switchboard is located in the main electrical room located on the first floor which feeds the other various electrical rooms throughout the building.

The secondary service is hot sequence metered within the utility transformer and the utility meter is pedestal mounted adjacent the utility transformer. All panelboards are provided with integral surge suppression and have been sub-divided into dedicated load-type panelboards with "LP" series panels serving lighting loads, "PP" series panels serving plugload loads, "MP" series panels serving mechanical/plumbing system loads, "EP" series panels serving emergency loads and "ELP" series panels serving emergency lighting loads. All panelboards have ample spare capacity for any future loads or renovations. Electrical rooms are in compliance with NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.







Wiring Devices & Branch Circuitry:

In general receptacles are sufficiently located throughout the building and are in good condition. Receptacles located at sinks are provided with ground fault protection, but the NEC has also expanded many of the required areas under NEC 210.8.B, C, and D that are not present within the building. A renovation would trigger these added required GFCI conditions located within NEC 210.8.B, C, and D.

Emergency Power System:

The building has a 200kW, 277/480V, 3 Phase, 4 Wire Cummins diesel standby generator with integral fuel sub-base tank. The standby generator backs up technology/security loads, life safety loads and mechanical/plumbing loads for freeze protection. The generator has 3 output breakers that back-up each of the following electrical equipment: ATS-OS (Optional Standby Transfer Switch), ATS-LS (Life Safety Transfer Switch) and the building's Fire Pump.

Many of the emergency systems currently installed are code compliant to today's standards with a separation of life safety and optional standby loads. Although full compliance would require: (1) an addition of a Manual Transfer Switch for portable generator back-up while the permanent generator is in service and (2) Redundant Transfer Equipment for the Automatic Life Safety Transfer Switch for servicing of the permanent life safety transfer switch.









Fire Alarm System:

The building is equipped with a Siemens Fire Finder fire alarm control panel (FACP) with voice evacuation located within the main electrical room at the building basement level. Fire alarm notification and initiation devices located throughout the building are also in good condition.

A key repository box with beacon was located at the buildings main entry. A fire alarm annunciator is located at the main entrance. The method of transmission is a recessed local energy master box on the exterior at the main entrance.









Exterior Lighting System:

Traditional style lighting fixtures post top mounted to low height poles are the primary source of lighting for the roadway, parking lots, and at the pedestrian walking paths. Canopy lighting at the main building entry lobby consists of recessed downlight fixtures. Building mounted lighting primarily consists of traditional style sconce lighting with clear glass lens.







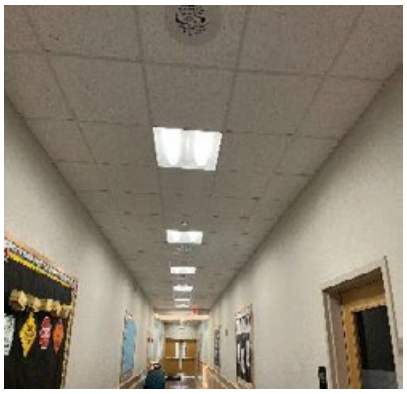


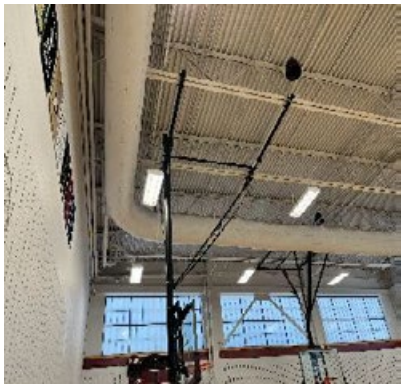
Interior Lighting:

Interior lighting within the Main Lobby consisted of LED recessed downlights. Corridors have recessed LED 2x2 with center baskets.

Recessed downlighting, suspended 6" linear fixtures with prismatic lensing are provided throughout the building. Kitchen lighting consists of recessed LED 2X2 fixtures.

Gym lighting consisted of LED High Bay 2x4 fixtures with prismatic lensing. Classroom lighting has Linear LED pendant mounted fixtures with occupancy sensors.


Security System

A Bosch intrusion system is installed with keypads located at common entrances and motion sensors throughout the first floor corridors for building protection. Card readers are located at main building entrance points. An overall building coverage is provided with CCTV cameras located at the main entrance points and around the exterior of the building. All camera footage is then stored on an on-premise Exaqvision NVR located within the MDF room where there is also a central security monitoring station.

At the main entrance there is an Aiphone AX-8MV video intercom and master stations located within the main office and principal's office to provide video and two-way talk communication with visitors. The master station is also provided with remote unlocking of the exterior main entrance door.



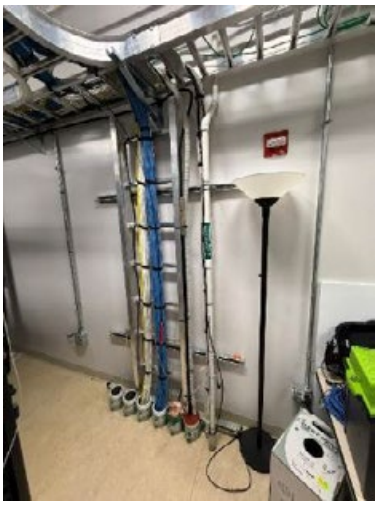


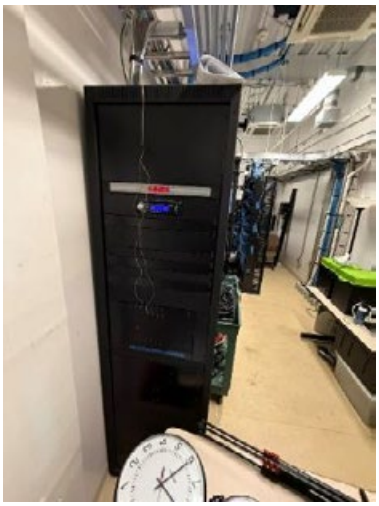


Communication Systems:

Communication services enter the building underground and terminate at a demarcation wall within the school's MDF Room. Data connection points are located adequately throughout the building for operational needs. For the school's phone system, a modern Avaya VoIP system is utilized. The Avery School building is networked back to the town's school fiber hub at the high school with a fiber backbone.

The MDF room is neatly managed with vertical and horizontal laddery tray. There are (4) 2-post network racks within the MDF room, three of which manage the building's data and communication systems and one that manages the building's security equipment. The MDF Room is also home to the school's Bogen Multicom-2000 paging and clock system.





Recommendations:

Electrical Distribution System:

The existing electrical service is sized based upon a gas heating system and if an all-electric HVAC system was to be provided as part of a building upgrade, then a new upgraded electrical service would need to be considered due to the added loads of these systems.

Emergency Power System:

It is recommended that a manual transfer switch for a portable roll-up generator be provided as required.

Fire Alarm System:

Existing system complies with current codes. No upgrade is needed.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

Interior Lighting:

Existing lighting is in good condition and no upgrades are needed.

Communication Systems:

Any existing data wiring should be upgraded to CAT6 or CAT6A if not done so already, with a 10 gig fiber optic backbone connecting all data closets.

PLUMBING – Avery Elementary School

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping, special waste (acid waste) and vent system and natural gas. Municipal sewer and municipal water serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in good condition and can continue to be used with scheduled maintenance.

The plumbing fixtures are in good condition. The bathroom fixtures appear to be accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from sloped roof areas is collected by exterior gutters and downspouts which appear to discharge to a below grade drainage system. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in good condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

Fixtures:

The water closets are wall mounted, vitreous china with battery powered, sensor operated flush valves.

Urinals are wall hung, vitreous china with battery powered, sensor operated flush valves.

Lavatories are wall hung, vitreous china with either manual or battery powered, sensor operated faucets.

Electric water cooler is recessed, wall hung, single unit bubbler, side by side with bottle filler.

Janitor's sink is a floor receptor with wall mount faucet equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucets, with lever type hot and cold-water faucet.

Science sinks are stainless steel, counter mounted, with gooseneck faucets, including vacuum breakers and lever type hot and cold-water faucets.

Classroom sinks are stainless steel, counter mounted, accessible with gooseneck faucets, with lever type hot and cold-water faucet and drinking bubbler.

Showers are acrylic surrounds with thermostatic and pressure balancing mixing valve and handheld shower.

Exterior wall hydrants include loose key operation and threaded connection with vacuum breaker.

The Kitchen equipment and sinks are in good condition.



Water Closet



Urinals



Lavatories



EWC with Bottle Filler



Staff Sink



Science Sink



Classroom Sink



Shower

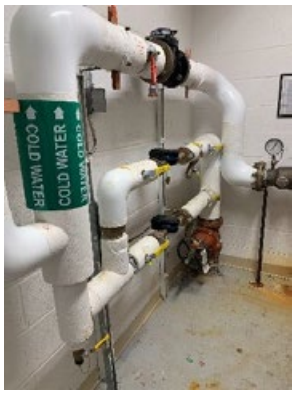


Kitchen Sink

Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 4-inch in size. There are two water meters and a reduced pressure backflow preventer.

Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated and labeled. The valves used for isolation purposes are full port ball valves, tagged with an identification number.



Water Meters



Water Piping

Domestic hot water is provided by a gas-fired, high-efficiency, storage tank type water heater, located in the Mechanical Room. The water heater has a storage capacity of 100 gallons and a gas input of 300,000 Btu/hr. The water heater is equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated and there is an expansion tank installed. The water heater appears to be in good condition.



Gas Water Heater



Mixing Valve



Expansion Tank

Gas:

A low-pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the interior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating boilers, the domestic water heater, kitchen equipment. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.



Gas Meter



Gas Boiler



Kitchen Ga Valve

Drainage Systems:

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.

The Kitchen waste piping from the 3-pot sink and dishwasher is directed to a point of use interior grease interceptor, buried in the floor.

The Science sinks are directed to a central acid neutralization tank. The acid waste and vent piping is corrosion resistant polypropylene pipe with solvent fittings.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Acid Waste Neutralization



Acid Vent Piping

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)

FIRE PROTECTION – Avery Elementary School

Executive Summary

The existing building consists of an automatic sprinkler/standpipe system and is fully sprinklered. The majority of the equipment and systems installed appear to have been well maintained and are generally in good condition.

Massachusetts code requires that a school building, 12,000 square feet or more, must be sprinklered. Per 780 CMR 34.00 work shall not be considered a substantial renovation if the cost of installing a sprinkler system exceeds 15% of the total renovation cost. Should the existing building undergo a major renovation the building will require upgrades to the existing sprinkler system to provide complete protection of all spaces.

Existing Conditions:

There is an existing 6-inch ductile iron fire service that enters the First Floor Fire Pump Room. The Fire service within the building includes an existing backflow preventer, wet alarm check valve and a 40 HP electric fire pump.



Double Check Valve



Fire Pump



Alarm Check Valve

The sprinkler system has a dedicated Siamese Fire Department connection, Fire Pump Test Header and electric bell located on the exterior of the building.

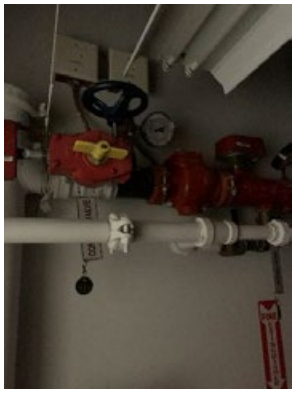


Fire Dept. Connection

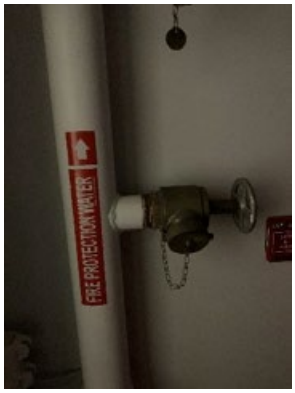


Fire Pump Test Header

There is a 4-inch fire main which serves the entire building sprinkler/standpipe system. The building is divided into zones not exceeding 52,000 square feet, each isolated by a sprinkler zone control valve assembly. The standpipes include 2-1/2-inch hose connections.

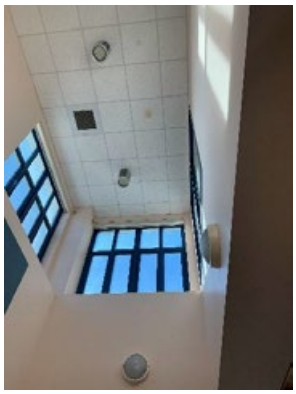


Sprinkler Zone Control Valve

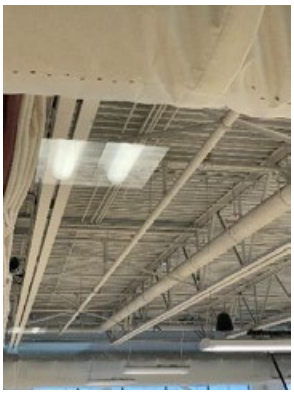


Standpipe Hose Connection

The piping for the sprinkler and standpipe system is black steel. Fitting and joints are grooved couplings or threaded depending on pipe size. Piping and sprinkler heads appear to be in good condition. Sprinkler heads include quick-response semi-recessed pendent type for rooms and areas with finished ceilings. Quick-Response upright sprinkler heads are utilized for rooms with no ceilings.



Pendent Sprinkler



Upright Sprinklers



Skylight Upright

Recommendations:

- Maintain existing sprinkler system in accordance with MA State Building Code, NFPA 25-2020. (High Priority 1-2 years)

STRUCTURAL EXISTING CONDITIONS (Avery Elementary School)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated October 1, 2010, and a site visit by RSE on February 19, 2026.

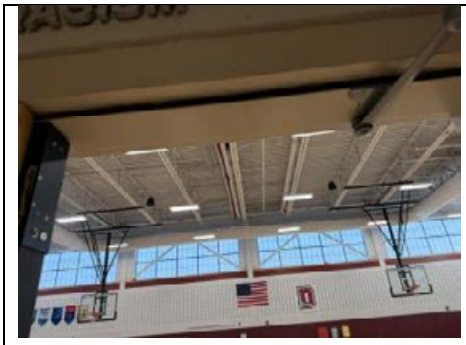
FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls and retaining walls at the perimeter. Allowable soil bearing pressure is 3 TSF. 5" concrete slab on grade with welded wire mesh at the first floor. Bottom of exterior footings are 4 feet minimum below grade.
2. No known modifications to foundations since original construction.
3. Besides minimal shrinkage cracks in the slab on grade, no other structural foundation issues observed.
4. Recommendations: none

SUPERSTRUCTURE

1. Steel framing includes steel columns, steel beams, composite metal floor deck, and open web steel joists, and metal roof deck at the gym. Lateral system consists of steel braced frames.
2. Condition/Known Issues: none
3. Recommendations: none

PHOTOS

	Photo: Open web joists and metal roof deck at gym.
	Photo: Steel framing with composite metal floor deck

Barnes Memorial Park

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: PR-3 | Barnes Memorial Park – Concession Stand & Restrooms

SELECT BUILDING: PR-3 | Barnes Memorial Park – Concession Stand & Restrooms

BUILDING INFORMATION	
Building ID:	PR-3
Address:	150 Eastern Avenue
Year Built:	tbd
Last Renovated:	None
Gross Sq Ft (GSF):	1,920

SITE CONSTRAINTS & REGULATORY	
Flood Zone:	Zone A
Wetlands:	Within Wetland
Historic:	None
Lot Size (ac):	14.51
Building Use:	Parks / Recreation

ROOF & ENVELOPE	
Construction Type:	Wood Frame
Roof Year:	tbd
Window Year:	2026
No. of Floors:	1

CAPITAL COST ESTIMATES	
Assessed Value:	$981,200
Deferred Maint. ($):	tbd
Est. Renovation Cost:	tbd
Replacement Cost:	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Electric only	**Energy Use Intensity (EUI):**	~8
Electrification Potential:	N/A – Electric only	**GHG Emissions:**	16
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	High

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	1.89	Fair

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.8	• Good
Structure (Avg):	2.0	• Fair
MEP / FP (Avg):	2.5	• Poor
Life Safety / Code:	1.3	• Excellent

KEY COMPONENT SCORES

Roof:	3.0	Electrical:	2.0
HVAC – Heat:	n/a	HVAC – Cooling:	n/a
Fire Prot.:	n/a	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-



Main Signage Mounted on Baseball Backstop.

The Barnes concession stand is a seasonal facility serving one of the Town's most active athletic parks, with fair electrical systems and basic seasonal plumbing and ventilation. Electrical code compliance and lighting improvements are the primary near-term priorities.

The Barnes Memorial Park Concession Stand and Restrooms at 150 Eastern Avenue is a seasonal facility serving the 14.51-acre Barnes Memorial Park, which includes three softball/baseball fields, one soccer field, playground, restrooms, concession, lighting, and benches. The facility is seasonal, drained down for winter, and has no heating or cooling. Electrical systems are in poor to fair condition with multiple code violations.

Concession Stand & Restrooms

The Barnes Concession stand and restroom is a small, brick-clad structure, generally in fair condition. The building is made up of two areas, one for storage and field maintenance and one for small concessions and restrooms.

There is no heating or cooling as the building is seasonal use only. Kitchen cooking area has residential appliances with no mechanical exhaust hood, a ventilation deficiency that should be addressed. Toilet rooms have fan-light combination exhaust units. 400A 3-phase service at 277/480V is fed from a pad-mount transformer. The main disconnect in the storage area and sub-panels vary in manufacturer and are in fair condition but located in violation of NEC 110.26 working clearances. There is no emergency power or emergency lighting and no fire alarm system. Interior lighting is in poor condition with missing flanges on bathroom downlights, some fixtures are no longer functioning. Receptacles are in poor to fair condition; some missing faceplates and weatherproof covers removed. CCTV cameras (Vivotek) with Altronix power supply are installed. Electrical panels also feed sports field lighting. Plumbing is in fair condition with seasonal plumbing with standard concession and restroom fixtures.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Clear code-required working clearances from all electrical panels — NEC 110.26 violations throughout
- Replace/repair missing fixture flanges and non-functioning bathroom lighting fixtures
- Replace missing receptacle faceplates and install weatherproof covers on outdoor receptacles
- Install mechanical kitchen exhaust hood to address cooking ventilation deficiency
- Upgrade Bryant load center or consolidate into primary panel board

10-Year Capital Improvements

- Full LED lighting upgrade — storage (vaportight), concession (flat panels), bathrooms (recessed fixtures)
- Add occupancy sensor controls to all spaces
- Install life safety emergency lighting on egress paths
- Evaluate fire alarm need for building given occupancy type
- Connect building to Town fiber backbone for centralized security monitoring
- Accessibility accessibility improvements to restrooms

Capital Investment History

FY	Project / Capital Improvement	Amount
	No capital appropriations recorded for this facility during FY2021–FY2026	

Sustainability & Decarbonization

FY2022 GHG emissions was 16 MT CO_2e (0.40% of portfolio), primarily electricity for sports field lighting. LED upgrade for interior and field lighting would be the most impactful efficiency measure.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

A seasonal concession stand, this building's immediate needs are primarily code compliance-related — NEC panel clearances and lighting deficiencies. The lack of any fire alarm or emergency lighting is typical of this building type and use but should be evaluated as part of any renovation trigger assessment.

The overall site is over 14 acres, making this site one of the few town-owned parcels large enough to host a large facility such as a high school or DPW facility. It also abuts the Dedham Middle School, across East Street. There is road access from Eastern Ave on the south and to East street (via Cecil Place) to the north.

The site is relatively flat. The eastern edge of the site is bordered by a brook which drains into the Wigwam Pond and the site is partially within a FEMA Zone A flood area.

(Note: see the Volume 2 report for usage analysis and planning studies).



stand alone maintenance and concession building.

HVAC - Heating, Ventilation and Air Conditioning: Barnes Concession

Executive Summary:

The Barnes and Memorial Fields Concession Building is a seasonal building which is only used during the warmer weather months and drained down for the winter so heat is not needed and freezing will not occur.

Existing Conditions

Central Heating Plant:

There is no heating site.

Central Cooling Plant:

There is no Air Conditioning at this site.

Kitchen:

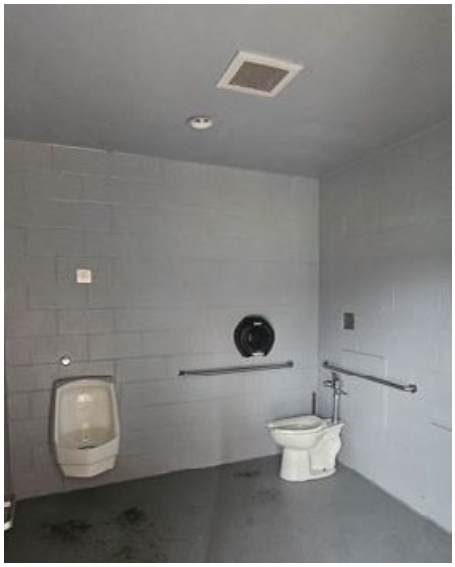
The cooking area has some residential type appliances with no means of mechanical exhaust.



Kitchen Exhaust System

Toilet Rooms:

The Toilet rooms have fan light combination units which serve the toilet rooms, the switch that serves the light also energizes the exhaust fan.



Exhaust Fans

Automatic Temperature Controls:

The Concession Stand only shares control with the fan light in each toilet room.

Recommendations:

Based on the cooking appliances utilized, a kitchen exhaust hood would be recommended to remove odors and smoke

ELECTRICAL – Barnes Memorial Field

Executive Summary:

On April 2, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Barnes Memorial Field Concession Stand. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's electrical utility service is provided by Eversource and fed underground from a utility pole located on Eastern Ave and over to a padmount utility transformer. The building's main service is rated for 400 Amperes 277/480V, 3 Phase, 4 Wire and is terminated into a 400Amp GE main disconnect. The main disconnect is located in the concession stand's storage area along with the other electrical distribution equipment. The secondary service is cold sequence metered within C.T. (current transformer) cabinet located in the storage area. The building's utility meter is building mounted on the Eastern Ave face of the building.

Electrical sub-panels are not located within dedicated electric rooms, vary in manufacturer and are in fair condition. Electrical panels serve the building for its operational needs along with feeding sports lighting out at the ball fields. Many panels are in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.













Emergency Power System:

The building is not provided with emergency power or emergency lighting life safety systems.

Fire Alarm System:

The existing building is not equipped with a fire alarm system.

Exterior Lighting System:

Exterior lighting is accomplished via recessed downlights at the covered canopy and building mounted exterior lights along the building perimeter. Recessed downlights are controlled via an exterior rated photocell located in the covered canopy and building mounted lighting look to be controlled via integral motion sensors.



Interior Lighting:

Interior lighting within the concession stand varied between utility strip fixtures within the storage space, recessed downlights within the bathrooms and recessed troffers in the kitchen/concession space. Spaces utilized line voltage manual switches for the only source of control. Fixtures throughout the spaces were in poor condition with some bathroom downlights missing flanges and some fixtures in spaces no longer functioning.









Wiring Devices:

In general receptacles are sparsely located throughout the building. Receptacles are in poor to fair condition throughout the facility. Some receptacles were noted to be missing faceplates and outdoor receptacles had their weatherproof in-use covers removed. Kitchen/concession receptacles were all provided with dedicated circuits and GFCI protection.





Security System

The building is monitored by an exterior CCTV Camera system that has an Altronix power supply for the two cameras located within the concession area. While on site it was noted that cameras were manufactured Vivotek.







Recommendations:

Electrical Distribution System:

Upgrade existing Bryant load center or relocate existing circuits to other existing panelboard located within the facility.

Panels found to be in violation of code working clearances should have all storage removed from the equipment's required working clearances for both code and safety concerns when trying to access equipment in an emergency.

Exterior and Interior Lighting System:

Upgrade all existing lighting within the facility to integral LED type. Storage spaces to be provided with vaportight impact resistant lensed fixtures, concession space to be provided with LED flat panels and public bathrooms to be provided with upgraded recessed downlights. All spaces should be provided with line voltage occupancy sensor control to allow for secondary control in the event lights are left on by occupants.

Communication Systems:

Provide a town fiber connection to concession stand for connection back to central town fiber hub located at the town hall.

PLUMBING- BARNES CONCESSIONS

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. Municipal sewer and municipal water serve the building.

Fixtures:

The water closets are floor mounted vitreous china with manual flush valves.

There is a waterless urinal located in the Men's room.

Lavatories are wall hung vitreous china with manual metering faucets.

Concessions area has a three-bowl pot washing sink with hand spray valve faucet and a wall mounted stainless steel hand sink. The three bowl sink is not connected to a grease interceptor.

There is no mop sink.

There is no drinking fountain.

Water Systems:

The main domestic water service appears to be 1-1/4 inch in size and includes a 3/4-inch water meter. There is no backflow preventer on the service.

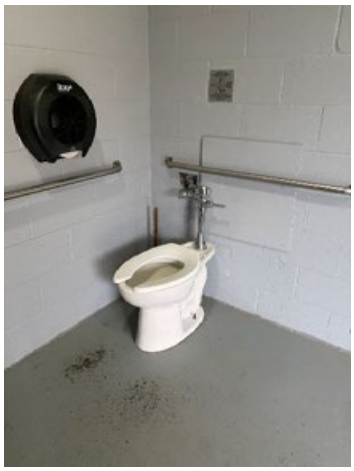
Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated.

Domestic hot water is provided by an electric tank type water heater. The water heater is 120-volt, single phase, with 2 kW heating element and 6 gallons of storage. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank. The water heater appears to be in good condition.

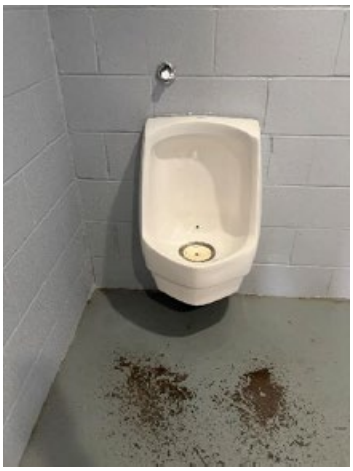
Drainage Systems:

Cast iron is used for sanitary drainage at bathroom. Piping at the concessions sinks is PVC.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



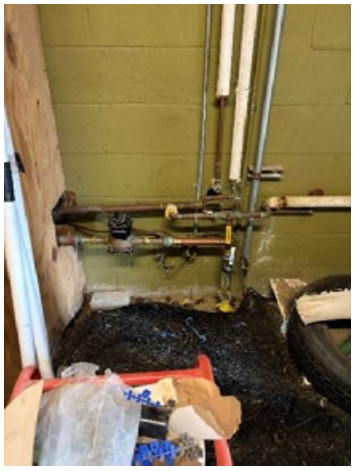
Typical toilet fixture



Waterless urinal



Typical lavatory



Domestic water service



Domestic water heater



Hand sink



Pot washing sink

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Provide mop sink and drinking water station.
- Install thermostatic mixing valve and expansion tank at water heater.
- Insulate all uninsulated domestic water piping.

FIRE PROTECTION – Barnes Memorial Field:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

Dedham High School

TOWN OF DEDHAM | FACILITIES MASTER PLAN

BUILDING SUMMARY

Building: S-7 | Dedham High School

SELECT BUILDING: S-7 | Dedham High School

BUILDING INFORMATION	
Building ID:	S-7
Address:	100 Whiting Avenue
Year Built:	1959
Last Renovated:	1967, 1975
Gross Sq Ft (GSF):	307,323

SITE CONSTRAINTS & REGULATORY	
Flood Zone:	None
Wetlands:	No
Historic:	None
Lot Size (ac):	11.38
Building Use:	Educational

ROOF & ENVELOPE	
Construction Type:	Steel/Concrete
Roof Year:	Varies
Window Year:	Varies
No. of Floors:	3

CAPITAL COST ESTIMATES	
Assessed Value:	$40,499,400
Deferred Maint. ($):	tbd
Est. Renovation Cost:	tbd
Replacement Cost:	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	55
Electrification Potential:	2030 – GSHP or VRF	**GHG Emissions:**	968
Solar Potential (kW):	247.8	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.85	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.3	• Critical
Structure (Avg):	2.3	• Fair
MEP / FP (Avg):	3.2	• Critical
Life Safety / Code:	2.6	• Poor

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	2.43	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	3.0	• Poor
EPI-2 Academic Suffic.:	2.2	• Fair
EPI-3 Program Suffic.:	2.5	• Poor
EPI-4 Universal Access:	2.4	• Fair
EPI-5 Building Safety:	2.5	• Poor
EPI-6 Tech. Readiness:	2.0	• Fair

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	3.2
HVAC – Heat:	3.0	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	3.5

Grade Config.:	9–12
Enrollment:	675
SF per Student:	455

Arrowstreet Inc. | Code Red | GGD Consultants | RSE

DRAFT — For Planning Purposes Only



Large Auditorium is extensively used for School and Town Functions.

Built in 1959 with major additions in 1967 and 1975, Dedham High School is the largest building in the Town's portfolio and carries the most significant capital needs of any single facility. Fire suppression, envelope rehabilitation, and aging mechanical systems represent the highest priorities in a multi-year capital improvement program now underway.

Dedham High School, constructed in 1959 with major additions in 1967 (B Wing, E Wing top, Girls Gym: 24 classrooms, 1 gym, locker room, multi-purpose fitness room) and 1975 (D Wing: 17 classrooms, library, cafeteria, kitchen), is the Town's largest municipal building at 307,323 SF. The high school serves grades 9–12. In the 2020 Dedham Public Schools Facilities Master Plan report, the high school was noted to be in the best condition amongst the four older public schools, but has not undergone major renovation or reconstruction in over 30 years. The building's HVAC systems have exceeded their projected end of useful life. With $29.3 million in total 10-year capital needs cited in 2016 (now much larger with inflation), the High School represents the Town's single largest facility capital challenge.

Significant observed deficiencies include cracking at the foundation, exterior walls, and interior finishes requiring an engineering study; stone masonry retaining walls at the west property boundary requiring evaluation; site drainage deficiencies between the sports field and main building; original galvanized piping requiring replacement; and original curtain wall and window systems needing replacement.

Original construction in the late 1950s and additions in the late 1960s and early 1970s predate modern fire codes — the building lacks a comprehensive fire suppression system and modern egress infrastructure as well as needing a replacement fire alarm system.

Building Structure & Exterior

The Dedham High school is a three-story, ~300,000 SF concrete and steel structure built over the course of three decades. Originally constructed in 1959 with major additions in 1967 (B Wing, E Wing top, Girls Gym: 24 classrooms, 1 gym, locker room, multi-purpose fitness room) and 1975 (D Wing: 17 classrooms, library, cafeteria, kitchen), The original 1957buildings are steel beams, columns and open web steel joists in the auditorium portion. Details suggest steel columns in the classroom and administration wings. Lateral system may rely on cinder block infill. The 1965 Additions are cast-in-place concrete flat slab floors and roof with cast-in-place concrete columns at classroom wings. Steel beams and columns with concrete slab at the art room addition. Steel beams and steel joists at gymnasium areas and lateral stability is assumed to be provided by rigid concrete frames and infill CMU walls. The 1973 Addition is open web steel joists supported on steel beams and columns with 3" concrete slabs at the second floor, and metal roof deck at the roof.

Bridges and elevated elements were incorporated in several of the additions. The 1965 bridges are concrete with concrete columns. The 1973 bridges are steel trusses with concrete slabs at the floors and tectum panels on joists at the roof. Some elevated elements include concrete beams and columns. The second-story bridges connecting the rear of the A, B, and C wings. A former bridge connection to the adjacent Dedham Pool as been removed.

Observed issues include cracks in first floor slab behind stage, encasement at lower level is cracked at expansion joint – double columns for the expansion joint, but no joint in encasement, cracks in not structural CMU walls along fan room above stage wings, cracking in walls around the stage, and the original gym. Step cracking in CMU walls at gymnasiums. At bridges and elevated elements, concrete is spalled in some locations leaving exposed rebar. The exterior loading dock also has spalled concrete and is in poor condition.



Bridges connect rear of academic wings



Exterior panels contain ACM and are in poor condition

The exterior of the building is predominantly red brick with large sections of ribbon glazing with solid panels. Panels contain ACM (asbestos containing material) which make maintenance and replacement extremely costly. Glazing is single-pane and original to its vintage of building.

Interior Environment

The Dedham High School serves secondary education purposes for Grades 9 to 12, as well as hosting district wide offices and town-wide use auditorium where town meeting is held. Most finishes are original to the vintage of addition and are in fair to poor condition. The interior spaces are dim with poor access to natural daylight and overhead lighting is dated and not optimized for learning.

Wall finishes are predominantly painted CMU or glazed CMU with painted plaster or partial plaster walls in offices and classrooms. Corridor floors are Terrazzo with classrooms having tile resilient flooring, of various types, colors, and sizes, typically in poor condition. Notable other spaces include the gyms where the main gym is a wood athletic floor, in good condition and other gym and athletic spaces have a rubber floor, in poor condition. The auditorium has stone tile flooring in the vestibule and concrete floor and carpet in the main auditorium space. It also contains extensive ornamental wood finish on walls. The Auditorium is dated but in fair condition. The Library and Cafeteria are newer spaces and finishes are in fair to good condition.

The indoor environment is generally poor for a public high school use. Many primary learning spaces do not have windows or access to outdoor air. The building is hard to navigate with many different wings and level changes.

Programmatic Suitability

Dedham High School occupies a central location in the academic campus, and the site is well suited to its academic use with adjacent facilities and fields. The 300,000 SF facility is spread over multiple wings and floors, with the ground floor accessed from the main entry along Whiting Ave.

The building is a purpose built facility for secondary education. The frontage bar along Whiting Ave contains main administration, district-wide administration offices, and auditorium. Academic wings extend north from the administration bar and contain standard classrooms. The Cafeteria and Library are located between wings B & C and infilled the previous courtyard. Gym, shop and art programs are located in a wing behind and extending from the auditorium.

Spaces are largely original to their time of construction. Large common spaces (Gyms, Cafeteria, Library, Auditorium) appear to be appropriately sized and support the current school. Classrooms, special instruction spaces (art, Music, shop, etc.) do not support contemporary teaching practices comparable to a newer high school. Special education spaces are also carried out in standard classrooms, and the building lacks dedicated spaces for breakout, testing, sub-separate instruction.

Generally, with an overall size of ~300,000sf and enrollment of 675 students, the building is oversized for its primary function, although additional spaces, such as the gym and auditorium support town wide program. Further, the building is hard to navigate, and lacks full accessibility for equity to all students.

(Note: see the Volume 2 report for usage analysis and planning studies).

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Replacement of emergency egress hardware and fire alarm control panel (Phases II–III, FY27–FY29)
- Engineering study — cracking at foundation, exterior walls, retaining walls; site drainage issues
- Full roof replacment (excluding gym roof)
- Replacement of original curtain wall system and original 1959 single-pane steel windows (60% of total)
- Engineering study and replacement — original galvanized piping throughout
- Significant Accessibility accessibility upgrades throughout
- Replacement of inadequate/non-compliant fire doors
- Replacement of 9×9 vinyl tile flooring (asbestos risk)

10-Year Capital Improvements

- Installation of comprehensive fire suppression system
- Parking lot resurfacing (83,100 SF — mill and overlay)
- Interior painting throughout

Capital Investment History

FY	Project / Capital Improvement	Amount
FY22	DHS Electrical Infrastructure Study	$125,000
FY23	Kitchen / Cafeteria Renovation	$450,000
FY23	Emergency Egress / Fire Alarm Control Panels	$95,000
FY23	Accessibility Improvements — DHS Elevator Design	$250,000
FY24	DHS C Wing Upgrade	$1,470,000
FY24	Exterior Repairs / Window Replacements (Cracked Wall)	$60,000
FY24	Rubber Membrane Roof Section Replacement (Partial - Gym)	$324,000
FY24	Security Cameras	$125,000
FY24	Athlete Training Facility Upgrade	$25,000
FY24	High School Exterior Facade — Scraping / Priming / Painting (Whiting Ave)	$50,000
FY26	Exterior Rehabilitation — Oakdale / Riverdale / DHS (continued)	$425,000
FY26	Emergency Egress / Fire Alarm Control Panel — Phase I Design Development	$125,000
FY27	Emergency Egress / Fire Alarm Control Panel — Phase I-A Construction Documents (planned)	$300,000

Site Conditions

Dedham High School occupies a prominent site on the central academic campus, abutting the Dedham Pool to the north, track to the east, and Dedham Middle School to the west. The school is accessed from Whiting Ave, as well as access to the rear lot from Elmview Place and Mt Vernon Place. Generally the site is in fair condition and parking is very limited on site. The school occupies the shared academic site and parking facilities make public parking and access difficult during school hours.

The site contains paved parking and walkways, which are in poor condition. The rear loading dock is in poor condition and drainage and retaining wall issues were observed of the west side of the building. The track and football field were observed to be in good condition.
The site is not within a FEMA Flood Zone, reflecting minimal flood risk. No wetlands are present on the parcel.



Library space within upper level of infill addition

Sustainability & Decarbonization

FY2022 GHG emissions was 968 MT CO_2e, the highest of all buildings (27.4% of total portfolio). Natural gas accounts for 70% of building emissions; EUI 55 kBtu/ft². A 120 kW solar array was installed in 2024. Decarbonization Roadmap proposes GSHP or VRF electrification in 2030 at HVAC end of useful life; ~200 wells estimated for the high school alone (or 400+ combined with middle school). Energy efficiency 2025–2029 and solar expansion to 247.8 kW is in progress.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The High School represents the Town's highest-risk, highest-cost facility challenge. The $29.3M in 10-year capital needs (2016 FCA; significantly higher in 2026 dollars) is the largest of any single building in the portfolio. The absence of a comprehensive fire suppression system in a 65-year-old building that predates modern fire codes as well as failing fire alarm system is the most critical life safety deficiencies. The Dedham Public Schools Facilities Master Plan noted the High School as the facility in the 'best condition' among the four oldest schools, but this characterization reflects only its relative standing, not an absence of major deficiencies.

Initial analysis suggests the school is oversized for the enrollment which it serves, and should be analyzed as part of any holistic school district study.

(Note: see the Volume 2 report for usage analysis and planning studies).

HVAC - Heating, Ventilation and Air Conditioning – Dedham High School

Executive Summary:

Dedham High School was originally built in 1959, with additions added in 1967 and 1975. Heat for the building is provided by a gas-fired boiler plant. Classroom spaces are heated and ventilated by vertical unit ventilators, with supplemental heat provided by fintube along the perimeter. The media center, administrative area and cafeteria are served by rooftop air handling units with hot water heating and Direct Expansion (DX) cooling. The building is provided with a combination of pneumatic and direct digital controls (DDC) system. Many of the indoor air handling units are well past their recommended service life and are recommended for replacement. The rooftop air handling units were placed within the last 20 years or so and are nearing the end of their anticipated service life and are recommended for replacement.

Existing Conditions

Central Heating Plant:

The high school is heated by a central heating plant consisting of five (5) gas-fired boilers. Two of the boilers are high-efficiency condensing boilers, model CFC manufactured by Cleaver Brooks, which produce heating hot water to serve heating equipment in the additions. The remaining three (3) boilers are standard efficiency steam boilers manufactured by Cleaver Brooks, model CB-700, which produce steam. Most of this steam is piped to a steam-to-hot-water heat exchanger, which produces additional hot water for hydronic terminal heating equipment. However, some of the steam is directed towards areas of the building that still utilize steam terminal heating equipment. Steam is considered an outdated heat source, and inefficient. The use of the hot water heat exchanger is also very inefficient, as it takes a substantial amount of energy to generate the steam, which is wasted when the steam is converted back to hot water. All five boilers were replaced in 2010, making them 16 years old. They appear to be in fair condition. However, it is recommended to replace the steam boilers with new condensing boilers and replace all steam terminal heating equipment with new hot water terminal heating equipment. Venting for the boilers is provided by insulated steel breeching vents that with cleanouts for servicing. The breeching appears to be in fair condition.

Heating hot water is pumped throughout the building by base mounted end-suction pumps, piped in a lead/lag configuration. The pumps are manufactured by Taco. The pumps appear to be at the end of their service life, are in poor condition and are recommended for replacement. Typical hydronic accessories such as expansion tanks and air separator are also provided. Dates on the expansion tanks suggest they were replaced within the last 6 years and are in good condition.



Standard Efficiency Burnham Boiler



High Efficiency Viessman Boiler



Base-mounted pump



Expansion Tank

Classroom Heating and Ventilation:

Classrooms are typically heated and ventilated by vertical unit ventilators on the exterior perimeter wall with outside air provided by a wall louver located behind the unit ventilator. Roof mounted exhaust fans are provided to exhaust the volume of outdoor air provided by the unit ventilators in order to maintain a neutral building pressure. Many of the unit ventilators were replaced around 2010, making them 16 years old. The unit ventilators and associated exhaust fans appear to be in fair condition. However, unit ventilators are now considered to be a highly inefficient method for heating and ventilation due to their lack of energy recovery. It is recommended to replace the unit ventilators with a new HVAC system such as ducted fan coil units, induction units, or Variable Refrigerant Flow (VRF) heating/cooling system as well as provide new dedicated outdoor air systems (DOAS) to provide tempered ventilation air directly to the occupiable spaces.



Typical Classroom UV

Administration:

The administration areas are heated by wall mounted fintube radiators along the exterior perimeter walls. There is no mechanical ventilation system for the administration area, so the occupants rely on natural ventilation by opening windows for a means of ventilation. Interior spaces without windows have no means of ventilation, which is a code violation.

Air conditioning is provided to the administration area by a rooftop unit that is of the 100% recirculation type, providing no means of ventilation.

Kitchen and Cafeteria:

The Kitchen is heated and ventilated by a rooftop mounted Heating & Ventilation (HV) unit, equipped with a supply fan, return fan, hot water heating section, and filters. There is no cooling section associated with the kitchen rooftop unit. A kitchen exhaust fan is provided which is connected to a kitchen exhaust hood to exhaust the heat and grease laden air from the kitchen appliances.

There is also a dishwasher with an exhaust hood connected to a roof mounted exhaust fan. The exhaust fan and associated ductwork appear to be in fair condition.



Kitchen Exhaust Hood

The Cafeteria is heated, ventilated and air conditioned by two rooftop units. The units are equipped with supply fans, return fans, hot water heating coil, DX cooling coil, and filter sections. Supply air is introduced to the cafeteria by ceiling mounted supply diffusers. Return air is drawn back to the units by wall mounted return grilles mounted high on the walls. The HV unit is equipped with gas fired heating section, supply fan, return fan, and filters.

Gymnasiums:

There are two gymnasiums within the high school, referred to as Gym A and Gym B. Gym A is served by four (4) indoor air handling units equipped with low pressure steam coil, supply fan, and filter. Each unit is tied connected to a wall mounted louver which provides ventilation air to the space. Supply air is discharged to the space by duct mounted supply grilles mounted high within the space. Return air is drawn back to the unit by the return grille mounted on the associated indoor units. There is also a roof mounted exhaust fan which connects to exhaust grilles mounted low within the gymnasium. The exhaust grille exhausts about the same volume of air that is introduced by the indoor units to maintain a relatively neutral space pressure. Although this may have been code compliant when the system was originally installed, it would likely be a code violation today since a unit of this capacity would likely require energy recovery today.



Gym Unit Ventilator

Gym B is served by two separate air systems. One side of the gym contains a single indoor air handling unit mounted high within the space. This unit is connected to a wall louver for ventilation air. The unit is equipped with a hot water coil, supply fan, and filters. Return air is drawn back to the unit through a return grille mounted on the bottom of the unit. On the other side of the gymnasium is another air handling unit concealed within a mechanical space. This unit is also equipped with hot water heating coils, supply fan, and filters. Supply air is ducted to supply grilles mounted high on the gymnasium wall.



Gym Indoor AHU

All air handling units serving both gymnasiums appear to be past their recommended service life and are recommended for replacement. It is also recommended to replace the air handling units equipped with steam coils with new units equipped with hot water coils. New hot water piping and associated valves would also be required to serve these new gym units that would be replacing the units with steam coils.

Lockers:

The Boys Locker Room is provided with heating and ventilation by an indoor air handling unit equipped with a hot water heating coil, supply fan, and filter sections. Ventilation air is introduced through a wall mounted louver ducted to the air handling unit. An inline exhaust fan is also provided to exhaust the volume of outside air introduced by the air handling unit. The exhaust fan discharges the air to a sidewall louver.



Boys Locker Room

The Girls locker room is served by multiple horizontal unit ventilators that free blow the air directly into the space without any duct distribution. Outside air is introduced through a wall louver and ducted into the inlet of the unit ventilators. There are also fintube radiators mounted along the exterior walls for additional heat. Roof mounted exhaust fans are also provided to exhaust the volume of outside air introduced by the unit ventilators to maintain a neutral space pressure.

Auditorium and Stage:

The auditorium and stage are served by two heating and ventilation units mounted on either side of the auditorium. Each unit is equipped with a heating hot water coil, supply fan, return fan, and filters. Outside air is introduced to the units through wall mounted louvers. Air is distributed up high through ceiling diffusers. Return air is drawn back to the unit via a duct distribution system located below the stage, with return grilles mounted on the face of the stage. The air handling units that serve the auditorium are well past their anticipated service life and are recommended for replacement.

Media Center:

The media center is provided with heating, ventilation and air conditioning by an RTU equipped with DX cooling, hot water heating, supply fan, return fan, and filter sections. This unit also serves adjacent computer room spaces. Air is supplied to each space by ceiling mounted supply grilles and drawn back to the unit by ceiling mounted return grilles. The RTU is not equipped with an energy recovery wheel, which would likely be required to meet the current energy conservation code requirements.

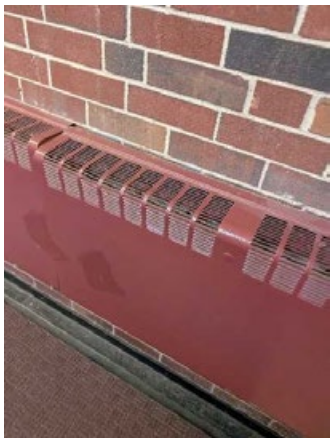
Additional cooling is provided to the computer rooms by individual air conditioning units of the 100% recirculation type. These units also supply and return air from ceiling mounted grilles.

Vestibules, Stairways and Corridor Heating and Ventilation:

Vestibules, stairways and corridors are typically heated by hydronic hot water unit heaters fintube radiators. The unit heaters appear to be in fair to poor condition. There does not appear to be any means of mechanical ventilation. The school likely relies on natural ventilation for a ventilation method in the corridor spaces, however this is generally only effective when operables windows are opened, which is unlikely to occur for a majority of the school year.



Typical Cabinet Unit Heater



Hallway fintube radiator

Toilet Rooms:

Toilet rooms have either overhead or sidewall exhaust grilles that are connected to exhaust fans. Toilet rooms with exterior perimeter exposure are also provided with heat by hydronic fintube radiators.

Automatic Temperature Controls (ATC):

The ATC system is a combination of pneumatic and direct digital controls (DDC). Pneumatic controls are an antiquated controls method and are not as reliable as today's DDC controls. It is recommended to upgrade all the remaining pneumatic controls to DDC controls. The DDC controls system is provided by GE.



DDC Thermostat



Pneumatic Controls Air Compressor

Recommendations:

Based upon our review and observations of the building HVAC systems, we offer the following systems recommendations as a base repair/upgrade option. However, given the age of the school and the antiquated HVAC systems, an all new HVAC system should be considered in the near future.

- Replace the existing standard efficiency steam boilers with new high-efficiency condensing boilers.
- Replace all existing heating equipment with steam coils (air handling units, unit ventilators, fintube, etc.) with all new hot water heating equipment.
- Remove all steam-to-hot-water heat exchangers, and all remaining steam piping. Provide all new hot water piping to serve the new heating equipment with hot water coils.
- Replace all remaining pneumatic controls with DDC controls.
- Replace all indoor air handlers, which are well past their anticipated serviceable life.
- The rooftop units are approximately 20-25 years old and are nearing the end of their recommended service life. It is recommended to replace the rooftop units with new units equipped with energy recovery wheels for increased efficiency and reduced energy consumption.

As an alternative, if an all-new HVAC system is desired we would offer the following recommendations:

- Provide an all new centralized HVAC system consisting of an all new heat pump chiller plant capable of producing both hot water and chilled water simultaneously. The existing boilers could remain as a backup source of heat in the event of a heat pump chiller. However, it is recommended to replace the standard efficiency Cleaver Brooks boilers with new, high-efficiency condensing boilers. Additional chilled water pumps, chilled water piping distribution system, and related accessories (expansion tank, buffer tank, air separator, etc.) are also required.
- Replace all unit ventilators with four-pipe fan coil units or induction units to provide space heating and cooling to all occupiable spaces.
- Provide all new rooftop dedicated outdoor air handling units equipped with hot water coils, chilled water coils, minimum MERV-13 filtration, supply fans, return fans, and energy recovery to serve the spaces served by the existing unit ventilators.
- Replace all existing rooftop and indoor air handling units with all new units equipped with energy recovery sections, chilled water cooling coils, and hot water heating coils.
- Replace all existing indoor air handling units with new indoor units or roof mounted units where possible. Units shall be equipped with hot water heating coils, chilled water cooling coils, energy recovery, supply fans, return fans, and minimum MERV-13 filtration.

Executive Summary:

On February 17th, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Dedham High School. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

There are two existing services within the building. There is a 1200A service and a 1600A service. The electrical service originates from a pad mounted transformer located at the front of the building. The electrical primary service comes off an existing utility pole located on Whiting Ave. The main distribution equipment vary in condition. The 1600A service equipment appears to be in fair condition (older). The 1200A service equipment appears to be in good condition as a recent upgrade.

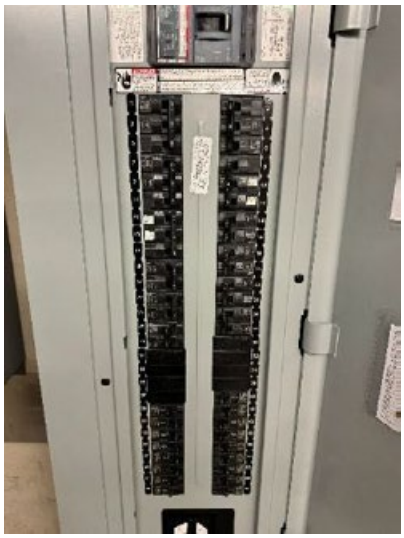
Electrical sub-panels were found within the buildings main electrical room, mechanical room, and throughout the building vary in condition. Some are newer and replaced recently. These panels are in good shape and still have some capacity. The majority of sub-panels are in fair to poor condition and at capacity.

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.





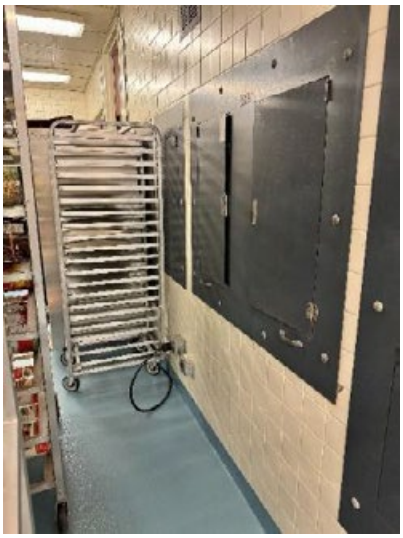



SAFETY FIRST

SAFETY FIRST
THINK SAFETY






<u>Wiring Devices & Branch Circuitry:</u>

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in poor to fair condition throughout.

Many devices throughout the facility that have been added are now surface mounted with surface mounted raceway.





Emergency Power System:

The building is equipped with 2 generators. An exterior 200KW, 250KVA diesel generator with base tank in the autoshop courtyard. There is one 400A automatic transfer switch located in the basement outside the main electric room. There is also an existing 85KW natural gas generator located withing the main electric room. This smaller generator feeds emergency lighting. This emergency system is located in the main electric room and does not meet current codes for 2-hour rated separation.

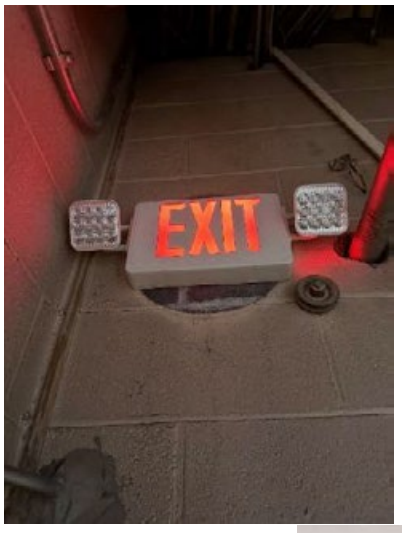
Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to new. There was a concern overall that the paths of egress within the building were not adequately covered to meet the requirements for illumination of the paths of egress as described in NFPA 101.

Exit signs within the building vary between thermoplastic type, non-self-illuminated exit signs and in some areas having the word “EXIT” painted onto door’s window transom. It is to be noted that exit signs are required by NFPA to be self-illuminated. Thermoplastic exit signs vary in condition from poor to good. Many of the buildings’ exit signs have begun to yellow, a typical sign of aging in a thermoplastic sign. Some exit signs did not appear to have a test switch typically indicating that a sign is not provided with an integral battery back-up which would be required for a building with an emergency generator not backing up emergency lighting systems.






CATERPILLAR


EXIT


32


EXIT
GYM A & SHOP
BELOW



Fire Alarm System:

The high school utilizes a Gamewell FCI fire alarm control panel which was upgraded from the existing fire alarm system and located within the main office. Although the fire alarm control panel was upgraded it does not include voice evacuation, which is a code requirement for an E-use group facility. This system is generally considered to be obsolete with conventional wired zone type architecture. Fire alarm notification and initiation devices located throughout the building are also in poor to fair condition and in need of replacement. Pull stations are all provided with Stopper II covers for added protection and false activation.

The building utilizes a hardwired master box for means of alarm transmission which is located in the main high school lobby. Located above the master box is a reduced overall building floor plan for use by emergency responders.

The kitchen utilizes a Honeywell E3 carbon monoxide detection system with Remote E3 Point Carbon Monoxide detectors located throughout the kitchen for kitchen equipment shutdown. This system is then tied back into the building's fire alarm system for monitoring.

A key repository box was located at the building's main entry, but no beacon could be found.











Exterior Lighting System:

Exterior lighting consists of wall packs and wall mounted flood lights. At each exit door with access to grade is an LED wall pack but the fixtures don't seem to have integral battery back-up which is requirement at doors with access to grade.

Located along the building exterior are wall mounted floor lights that provide general site lighting along the building perimeter.

No exterior lighting control was noted but it is assumed that the school utilizes either a mechanical timeclock or photosensor with lack of an overall centralized lighting control system within the school.





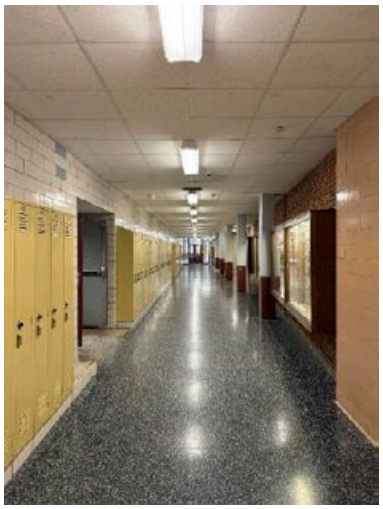
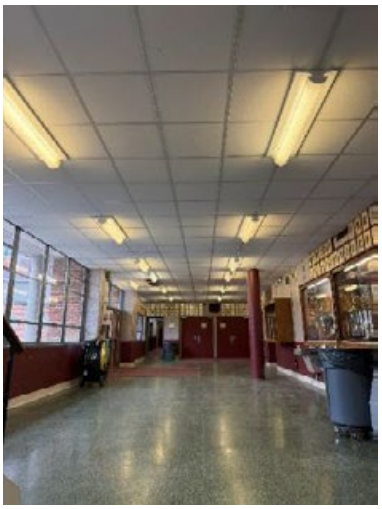
Interior Lighting:

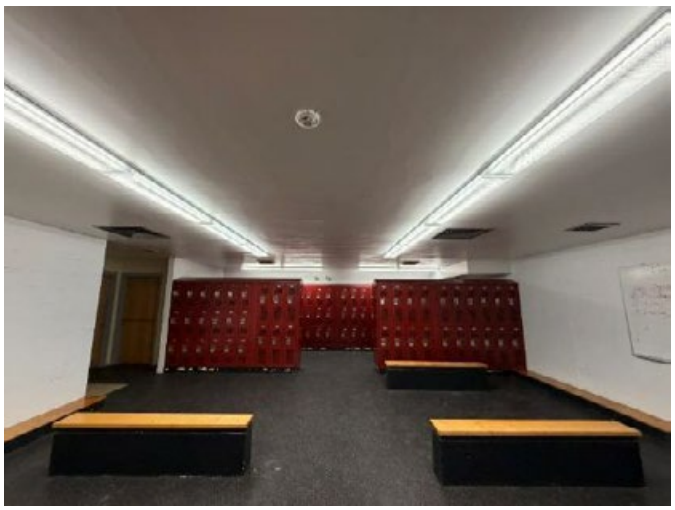
Lighting fixtures throughout the school were a mix of old fluorescent and upgraded LED fixtures. Fixtures were noted to vary in CCT (Correlated Color Temperature) between 3500K and 3000K throughout different spaces within the school. It is unclear if this shift in lighting temperature is a result of source variation or LED degradation.

Fixtures were typically found to be surface mounted within corridors, classrooms and within utility spaces. The school's library was recently renovated and new LED flat panels with integral selectable color temperatures were installed, and it was noted that several lights did not match the color temperature of the majority of other fixtures. Within this space a Sensorworx wireless lighting control system has been installed utilizing 0-10V dimming control stations and wireless occupancy sensors.

The gymnasium utilized 4-bulb high bay fixtures that look to be utilizing retrofitted LED bulbs and lighting levels throughout the space were adequate.

There is no overall centralized control system within the building with a majority of spaces relying on local manual controls.



Security System:

An intrusion alarm detection system is currently installed within the school monitoring all exterior doors with door contacts and keypads located at multiple building entrance points.

An access control system is provided at main entry points into the building and select doors within the school. The access control system consists of AWID card readers, key scan access door controllers and a eMerge management software.

The use of a CCTV (Closed Circuit Television) system is utilized to monitor the building perimeter and data closets with video storage to an Exaqvision NVR. A security monitor is located within the MDF Room for live video monitoring and playback.

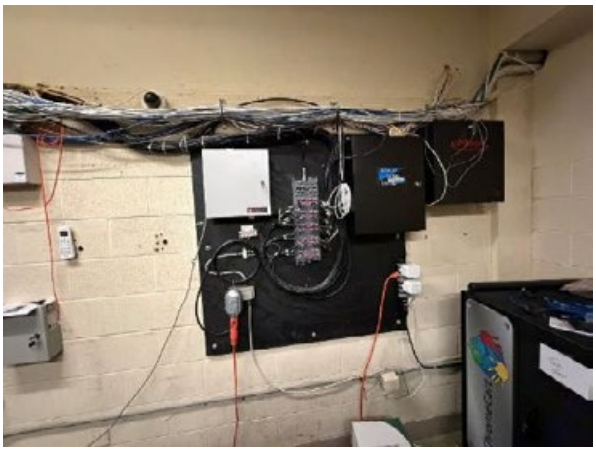
An Aiphone Video Intercom is utilized at the main entrance and provides two-way talk communication with visitors and remote door release.











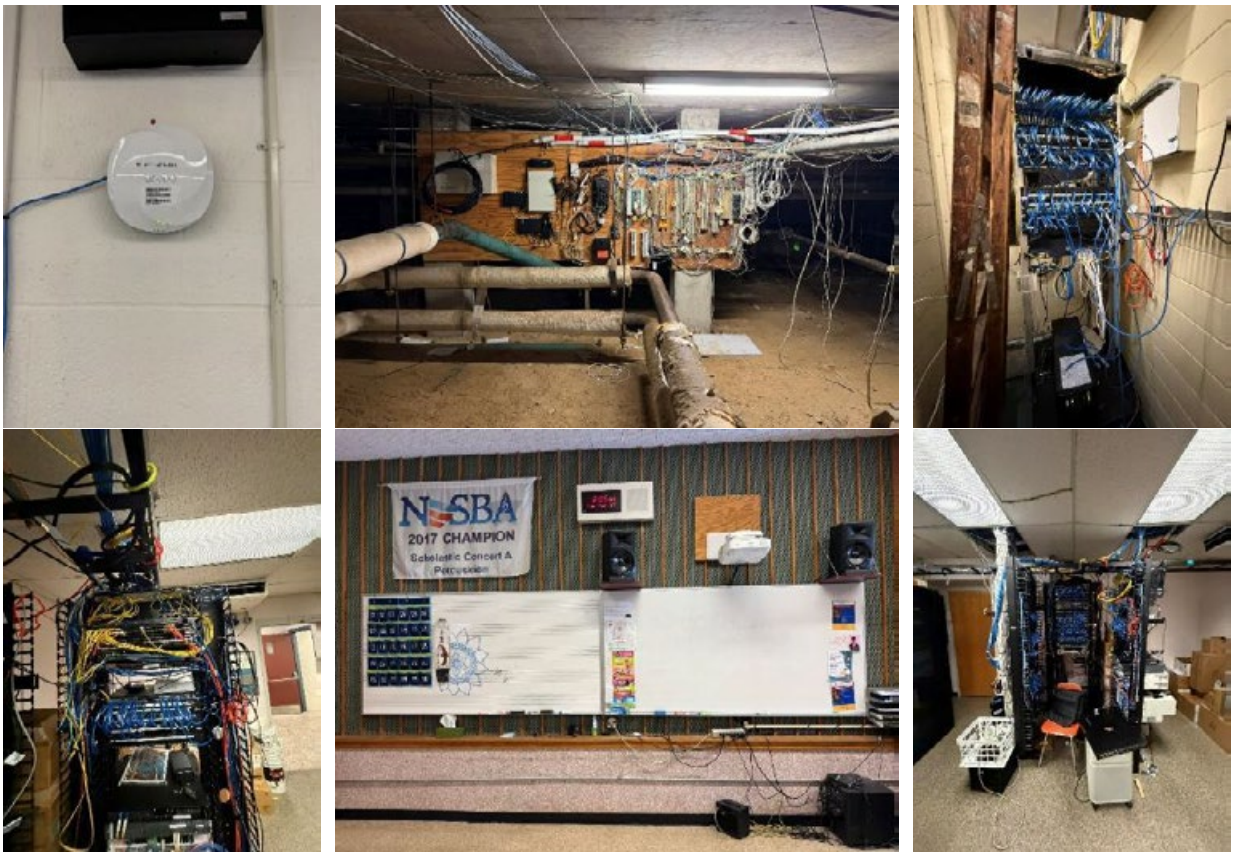
Communication Systems:

The Dedham High School is the fiber hub for the district's school network. Communication services and fiber networking enter the building underground and terminate at demarcation located within the building's crawl space. Network cabling is then run up to the Second Floor MDF Room located adjacent to the school's library.

The MDF room is home to the town's fiber district school network. The MDF Room utilizes (4) enclosed 4-post racks and (3) 2-post racks for all its network equipment and distribution. The MDF Room is tied back to (2) IDF Rooms located within the building with a fiber backbone. Network equipment is also backed up with what is estimated to be roughly a 24-30kW centralized UPS. All network cabling has been neatly managed utilizing cable management and ladder tray with CAT6 cabling being color coded dependent on end use device type.

Data connection points and wireless access points are located adequately throughout the building for operational needs. The use of short throw projectors are utilized within classrooms.

The school utilizes an Avaya VoIP phone system like other buildings across the town. A Telecor XL head end is utilized for the building's paging speaker system. The building's PA system utilizes both upgraded CAT6 surface mounted combination Telecor speaker/clocks and existing surface mounted Valcom paging speakers for overall building announcements.



Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Elimination of obsolete equipment abandoned in place should be considered for removal along with upgrade of panels that are in poor condition. Additionally, panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. All non-self-illuminated exit signs are to be replaced with self-illuminated exit signs with integral battery back-up and self-diagnostics.

Fire Alarm System:

Upgrade the existing addressable fire alarm system with a code compliant voice evacuation fire alarm system with speaker notification appliances throughout the facility.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

In addition to this it is recommended that lighting levels along the exterior egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels. All exterior fixtures along the egress path shall be replaced and provided with integral battery back-up.

Lastly, A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures in lieu of retrofitted LED bulb fixtures.

Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

It is recommended that all existing code violations be reviewed and addressed. Provide additional receptacle locations to assist in elimination of extension cord usage. Provide hard wired stack lighting fixtures to eliminate the need for extension cords run through shelving and walls. Provide new snow melt system at any new exterior building ADA ramps to maintain current building operation. of the recommendations made may require building service upgrade as panel capacity is nearing its limits. Finally, it is recommended that all receptacles be replaced within the building and that tamper resistant receptacles be installed in any public and children's areas of the library.

Communication Systems:

It is recommended the communications demarcation point with the basement crawl space be relocated to within a portion of the school building for ease of maintenance and safety.

PLUMBING – Dedham High School

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping, special waste (acid waste) and vent system and natural gas. Municipal sewer and municipal water serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in fair condition and can continue to be used with scheduled maintenance.

The plumbing fixtures are in good condition. The bathroom fixtures appear to be accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from sloped roof areas is collected by exterior gutters and downspouts which appear to discharge to a below grade drainage system. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in good condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

Fixtures:

The water closets are wall mounted, vitreous china with manually operated flush valves.

Urinals are wall hung, vitreous china with manually operated flush valves.

Lavatories are wall hung, vitreous china with either manually operated hot and cold water faucets.

Electric water cooler is recessed, wall hung, single unit bubbler, with bottle filler.

Janitor's sink is a floor receptor with wall mount faucet equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucets, with lever type hot and cold-water faucet.

Science sinks are stainless steel, counter mounted, with gooseneck faucets, including vacuum breakers and lever type hot and cold-water faucets.

Classroom sinks are stainless steel, counter mounted, accessible with gooseneck faucets, with lever type hot and cold-water faucet and drinking bubbler.

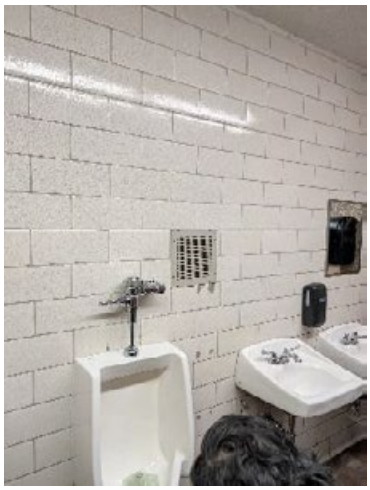
Showers are tiled surrounds with thermostatic and pressure balancing mixing valve and handheld shower.

Exterior wall hydrants include loose key operation and threaded connection with vacuum breaker.

The Kitchen equipment and sinks are in good condition.



Urinals



Lavatory



EWC with Bottle Filler



Sink

<u>Water Systems</u>:

The main domestic water service is in the Mechanical Room. The service appears to be 4-inch in size. There are two water meters and a reduced pressure backflow preventer.

Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated and labeled. The valves used for isolation purposes are either gate valves or full port ball valves.

Domestic hot water is provided by a gas-fired, high-efficiency, indirect type water heater, located in the Mechanical Room. The water heater system includes (4) four storage tanks, each with a capacity of 120 gallons. The water heater is equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated and there is an expansion tank installed. The water heater system appears to be in good condition.



Water Storage Tanks

Gas:

A low-pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the interior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating boilers, the domestic water heater, kitchen equipment. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.

Drainage Systems:

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.

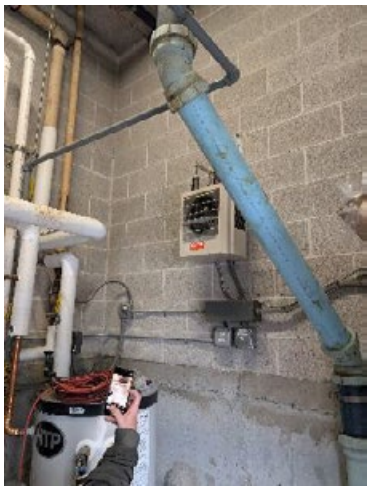
The Kitchen waste piping from the 3-pot sink and dishwasher is directed to a point of use interior grease interceptor, buried in the floor.

The Science sinks are directed to a central acid neutralization tank. The acid waste and vent piping is corrosion resistant polypropylene pipe with solvent fittings.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Cast Iron Pipe



Acid Waste Pipe

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)
- Provide new high-efficiency, water conserving, plumbing fixtures. (Low Priority 5+ years)
- Provide accessible fixtures where required. (Low Priority 5+ years)
- Install thermostatic mixing valves, expansion tanks, and hot water recirculation loops at existing water heaters. (High Priority 1-2 years)
- Provide all new domestic water piping including insulation, pipe labels and full port ball valves for isolation purposes. (Low Priority 5+ years)
- Provide all new sanitary, waste and vent piping throughout the building. (Low Priority 5+ years)

FIRE PROTECTION- Dedham High School:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

STRUCTURAL EXISTING CONDITIONS (Dedham High School)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated 6-28-57, 11-3-65, August 13, 1973, and 01-07-02, and a site visit by RSE on February 17, 2026.
2. The original school building was added to multiple times with various infills and additions. Structural systems are not consistent between additions or even within the same addition.
3. The building is built into a hill with grade at the rear a full floor level below that in the front. At the same level, wings and additions are not at the same elevation and there are ramps, stairs, and elevators distributed throughout the campus.
4. There are expansions joints within the original building and where additions abut previous elements.

FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls and retaining walls at the perimeter. Allowable soil bearing pressure is 5 TSF. Documentation of concrete slabs on grade is incomplete; some slabs are noted as 4" thick, others 5", and some not at all. Bottom of exterior footings are 4 feet minimum below grade.
2. Foundations for additions have resulted in some modifications to previous construction.
3. Concrete at loading dock is deteriorated. Some cracking in slabs on grade.
4. Recommendations: repair surface spalls

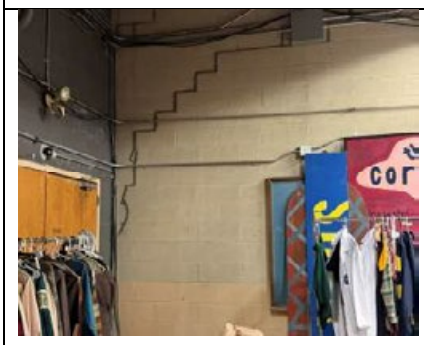
SUPERSTRUCTURE

1. Floor and roof framing includes:
    a. Original 1957: No structural drawings. Per limited architectural drawings, steel beams, columns and open web steel joists in the auditorium portion. Details suggest steel columns in the classroom and administration wings. No additional information. Lateral system may rely on cinder block infill.
    b. 1965 Additions: cast-in-place concrete flat slab floors and roof with cast-in-place concrete columns at classroom wings. Steel beams and columns with concrete slab at art room addition. Steel beams and steel joists at gymnasium areas. Lateral stability is assumed to be provided by rigid concrete frames and infill CMU walls. Bridges connecting various portions of the high school were also part of this addition.
    c. 1973 Additions: Open web steel joists supported on steel beams and columns with 3" concrete slabs at the second floor, and metal roof deck at the roof.
    d. Bridges and Elevated elements: Bridge were incorporated in several of the additions. The 1965 bridges are concrete with concrete columns. The 1973 bridges are steel trusses with concrete

slabs at the floors and tectum panels on joists at the roof. Some elevated elements include concrete beams and columns.

2. Condition/Known Issues:
    a. Original 1957: cracks in first floor slab behind stage, encasement at lower level is cracked at expansion joint – double columns for the expansion joint, but no joint in encasement, cracks in not structural CMU walls along fan room above stage wings, cracking in walls around the stage, and the original gym.
    b. 1965 Additions: None.
    c. 1973 Additions: Step cracking in CMU walls at gymnasiums.
    d. Bridges and Elevated Elements: Concrete is spalled in some locations leaving exposed rebar.
    e. General:
        - Exterior brick is damaged in some locations – potentially due to impact, or rust jacking at lintels. Other damaged brick areas are due to water from disconnected downspouts.
        - Concrete at loading dock area is badly damaged.
3. Recommendations:
    a. Original 1957: Monitor cinder block and CMU walls with cracks to determine if there is movement. Since no lateral system is clearly identified, reinforcement of masonry walls may be required to provide sufficient lateral capacity.
    b. 1965 Additions: None.
    c. 1973 Additions: None.
    d. Bridges and Elevated Elements: Where concrete is spalled and rebar is exposed, clean bar and apply cementitious repair compounds.
    e. General:
        - Exterior brick is not structural but conditions should be addressed to prevent water infiltration.
        - Concrete at loading dock should be repaired or replaced.

PHOTOS

	Photo: Cracking CMU wall in gym.
	Photo: Cracking in double steel column encasement at expansion joint – 1957 portion
	Photo: Crack backstage in 1957 portion
	Photo: Exposed rebar at elevated bridge

Dedham Middle School

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: S-6 | Dedham Middle School

SELECT BUILDING: S-6 | Dedham Middle School

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	S-6	**Flood Zone:**	None
Address:	70 Whiting Avenue	**Wetlands:**	No
Year Built:	2006	**Historic:**	None
Last Renovated:	None	**Lot Size (ac):**	8.18
Gross Sq Ft (GSF):	169,681	**Building Use:**	Educational
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Steel/Concrete	**Assessed Value:**	$63,510,700
Roof Year:	2006	**Deferred Maint. ($):**	tbd
Window Year:	2006	**Est. Renovation Cost:**	tbd
No. of Floors:	3	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	55
Electrification Potential:	2032 – GSHP or VRF	**GHG Emissions:**	538
Solar Potential (kW):	277.4	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	1.61	Good

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.9	• Fair
Structure (Avg):	1.3	• Good
MEP / FP (Avg):	2.2	• Fair
Life Safety / Code:	1.0	• Excellent

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	1.8
HVAC – Heat:	3.0	HVAC – Cooling:	3.0
Fire Prot.:	1.8	Plumbing:	1.8

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	1.51	Good

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	1.3	• Excellent
EPI-2 Academic Suffic.:	1.8	• Good
EPI-3 Program Suffic.:	2.3	• Fair
EPI-4 Universal Access:	1.0	• Excellent
EPI-5 Building Safety:	1.5	• Good
EPI-6 Tech. Readiness:	1.3	• Excellent

Grade Config.:	6–8
Enrollment:	561
SF per Student:	302

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Large Auditorium is extensively used for School and Town Functions.

Constructed in 2005, the Dedham Middle School is in good overall condition commensurate with its age and has been well maintained since opening. As the largest school building in the district, it is the second-highest GHG emitter in the portfolio and a strong candidate for future electrification.

Dedham Middle School was constructed in 2005 and serves grades 6–8. It is co-located with Dedham High School on the Whiting Avenue campus. The building is in good overall condition, consistent with its age, and has been well maintained since first occupancy. The 8+ acre site includes ample open space that could accommodate a geothermal well field if ground-source heat pumps are selected as the future HVAC upgrade path. No major capital improvements have been made since the building opened. As a newer facility, the Middle School is a lower capital priority than the aging elementary schools.

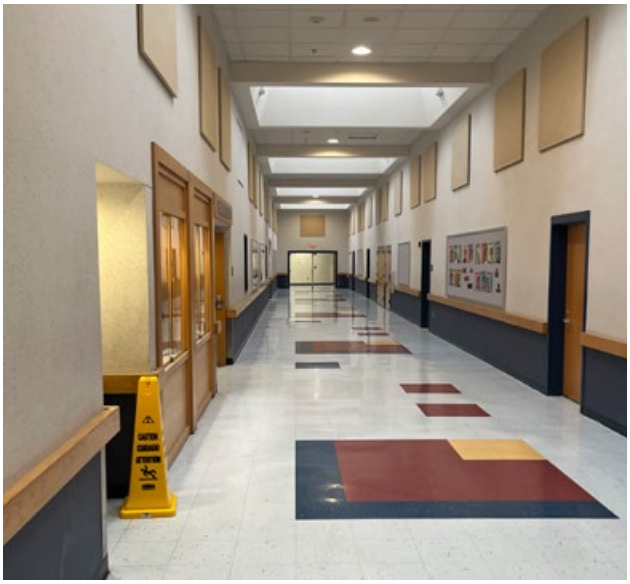
The building is constructed with a steel frame and features a mostly brick exterior envelope. The HVAC system employs natural gas hot water boilers installed in 2005 serving above-ceiling air handling units and rooftop packaged units, supplemented by fan coil units. The roof comprises multiple low-slope sections with built-up and single-ply membranes, some of which have experienced active leaks requiring repair. The exterior building sealants are approaching the end of their service life and are flagged for replacement. The middle school also operates a grey water system that supplies building toilets; the mechanical system regulating that system has failed and is requiring costly manual operation by facilities staff, triggering a FY26 capital replacement project. A loading dock dumpster enclosure and sealing/striping of parking lots were identified as near-term improvements.

Building Structure & Exterior

The Dedham Middle school is a three-story, ~169,000SF steel and concrete structure, built in 2006. The building structure is steel frame with a concrete and metal deck floor structure, typical of contemporary school construction. Steel framing includes steel columns, steel beams, composite metal floor deck, and open web steel gable joists, and metal roof deck at the gym and auditorium. Lateral system consists of steel braced frames. Besides minimal shrinkage cracks in the slab on grade that extend up through floor finishes, and minor cracking in perimeter frost walls, no other structural foundation issues observed. The construction type is very robust and no other structural concerns were observed or raised.

The exterior of the building is predominantly red brick masonry with punched metal windows. Smaller areas of metal glazed storefront system are located at entry areas and stairwells. The windows are a source of maintenance issues, with reports of some leaking and required repair of sealants taking place over the past few years. Generally the facade is observed to be in good condition. The roof is predominantly pitched shingles with single-ply low-slope at mechanical areas. The roof was observed to be in poor condition. Roof leaks due to ice dams and leaking roof drains were reported by facilities staff. ACT ceiling tiles were observed to show signs of water damage.

The exterior loading dock and rear patio area were observed to be in poor condition. The cafeteria roof drains onto the patio, which appears to be accelerating wear on the exterior slab. Cracking was observed at joints between slab and walls at patio, loading dock, and exterior stairs along rear service road. Further, rust and rotting were observed at patio and stairs, presenting a potential hazard or risk of failure.



Central corridor, interior spaces are pleasant and well lit



Rear patio and loading dock have significant deterioration

Interior Environment

The Dedham Middle School is a purpose built middle school, containing classrooms for typical and special instruction, administration spaces, a kitchen, cafeteria, auditorium and stage, library, gym, and support spaces. Building spaces are purpose built and generally fit for purpose. Floor finish is typically a resilient floor tile in most student spaces. Tile floor is located in bathrooms and kitchen, and the gym has a wood floor. The school is a pleasant and well lit building with good access to natural daylight. Finishes are generally in good condition and have ~15 years left of their typical service life.

Wall finishes are generally painted wall board, with a wood rail in the corridors. Wall tile is installed in wet spaces, such as restrooms and kitchen. Notable other spaces include the gyms where the main gym is a wood athletic floor, in good condition. The auditorium has concrete and carpet flooring as well as appropriate sound treatment to walls and ceiling. The Auditorium overall is in good condition. The Library and Cafeteria are in fair to good condition.

The indoor environment is generally good for a public school use. Primary learning spaces have ample windows and access to outdoor air. The building is easy to navigate, organized around a central, east-west corridor.

Programmatic Suitability

Dedham Middle School occupies a central location in the academic campus, and the site is well suited to its academic use with adjacent facilities and fields. The 169,000 SF facility is organized thoughtfully, with the ground floor accessed from the main entry along Whiting Ave.

The building is a purpose built facility for secondary education. The school runs parallel along Whiting Ave. The main entry is recently renovated to include modern safety features for visitor control and visual monitoring of the entry. The school is organized along a central corridor, with the cafeteria, gym, auditorium, and library at the center. Two 'pods' of classrooms extend off of each end of the corridor to create classroom neighborhoods. The west section of classrooms extends one story below to a walkout level.

Large common spaces (Gyms, Cafeteria, Library, Auditorium) appear to be appropriately sized and support the current school. Classrooms, special instruction spaces (art, Music, shop, etc.) also appear to support contemporary teaching practices comparable to a newer middle school. The school does lack some of the special education spaces for breakout, testing, sub-separate instruction.

Generally, with an overall size of ~169,000sf and enrollment of 560 students, the building is moderately oversized for its primary function, although additional spaces, such as the gym and auditorium support town wide programs.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Dedham Middle School occupies a prominent site on the central academic campus, abutting the high school to the east and Barnes Memorial Park to the west. The school is accessed from Whiting Ave. The school occupies the shared academic site and parking facilities make public parking and access difficult during school hours.

The site contains paved parking and walkways, which are in fair to poor condition. Paving and concrete along the rear (north) of the building are in poor condition.
The site does not occpy a FEMA Flood Zone, reflecting minimal flood risk. No wetlands are present on the parcel.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Repair to active roof leaks and deficient roofing, full roof replacement required
- Repair to areas of damaged concrete sidewalk, stairs, and loading dock
- Repair of active boiler exhaust pipe leaks
- Accessibility parking upgrades

10-Year Capital Improvements

- Mill and overlay of asphalt parking lots
- Lifecycle replacement of rooftop packaged units (RTU)
- Gymnasium bleacher replacement
- Above-ceiling AHU replacement (~2030s)

Capital Investment History

FY	Project / Capital Improvement	Amount
FY24	Entrance Safety Vestibule — DMS Construction	$400,000
FY24	Middle School Projector Refresh (School IT)	$162,000
FY26	Exterior Window Caulking and Weather Seal — DMS (all windows)	$130,000
FY26	Grey Water System Mechanical Update / Repair — DMS	$75,000
FY26	Envelope Repair — System-wide Roof Maintenance (shared)	Shared

Sustainability & Decarbonization

FY2022 GHG emissions were 538 MT CO_2e (15.2% of portfolio) — second-highest of all school buildings, largely due to its size. Natural gas boilers installed 2005; EUI 55 kBtu/ft² (same as DHS). Decarbonization Roadmap proposes GSHP or VRF electrification in 2030–2032, using the 8+ acres of surrounding land as a potential geothermal well field (estimated 220 wells if separate from DHS; 400+ wells if combined with DHS system). Solar: 168 kW planned 2033.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The Middle School is in good overall condition commensurate with its age and is not identified for replacement or major renovation in any current planning documents. However, the 10-year capital reserve needs confirm that lifecycle replacements of mechanical, envelope, and electrical components are approaching. The building's large footprint and its potential for geothermal integration make it a strong candidate for a comprehensive electrification study.

The building is tightly abutted on all sides by roads or residential neighbors, which limits any potential expansion for alternate grade configurations or future expansion.

(Note: see the Volume 2 report for usage analysis and planning studies).



Library is large and well appointed.

HVAC - Heating, Ventilation and Air Conditioning: Dedham Middle School

Executive Summary:

Dedham Middle School was built in 2006, making the school about 20 years old. Classroom spaces are heated and ventilated by horizontal ducted unit ventilators, with supplemental heat provided by fintube along the perimeter. The media center, stage, auditorium, and administrative area are served by rooftop air handling units with gas fired heating and Direct Expansion (DX) cooling. The lecture hall is heated, ventilated, and air conditioned by an indoor air handling unit paired with an air cooled condensing unit. The remainder of the occupied spaces are heated and ventilation by roof mounted ventilation units. The building is provided with a direct digital controls (DDC) system and building management system (BMS). All equipment is original to the building when it was constructed 20 years ago. Although the equipment generally appears to be in good to fair condition, most equipment is at or near the end of its expected service life and should be considered for replacement in the near future.

Existing Conditions

Central Heating Plant:

The middle school is heated by a central heating plant consisting of two (2) gas-fired boilers which produce heating hot water for terminal heating equipment located throughout the building. One of the boilers is a high efficiency condensing gas-fired boiler, model VSB-72 manufactured by Viessmann with a rated input of 2700 MBH. The other boiler is a standard efficiency cast iron boiler, manufactured by Burnham model V11 series, with a rated input of approximately 2900 MBH. The boilers are the original boilers that were installed when the school was originally built in 2006. The boilers appear to be in fair condition, considering their age. Boilers typically have a service life of approximately 25 to 30 years. With regular preventative maintenance, the boilers could last for another 5 to 10+ years. However, the controller for the Viessmann boiler reportedly no longer functions. It is recommended to replace the controller for proper operation of the boiler. Alternatively, consider providing a third party boiler plant controller such as the Tekmar Boiler Control, which can stage and modulate the boilers to achieve the highest efficiency based on the outdoor air temperature. When the Burnham boiler requires replacement, consider replacing with a condensing boiler similar to the Viessmann boiler for increased efficiency. Combustion air for the boilers is provided by room air supplied by one of the roof mounted Heating/Ventilation units. equipped with a motorized damper located at the exterior wall of the mechanical room. Boiler venting for both of the boilers is provided by insulated steel breeching vents that with cleanouts for servicing. The breeching appears to be in fair condition.

Heating hot water is pumped throughout the building by two (2) base mounted end-suction pumps, piped in a lead/lag configuration. The pumps are manufactured by Armstrong, with a capacity of 475 GPM and a 10 HP motor. The pumps are nearing the end of their recommended service life and are recommended for replacement. Typical hydronic accessories such as an expansion tank and air separator are also provided.



Standard Efficiency Burnham Boiler



High Efficiency Viessman Boiler



Base-mounted pump



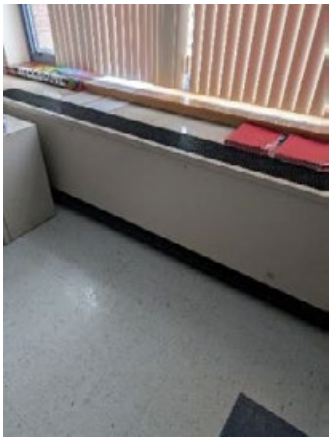
Expansion Tank

Classroom Heating and Ventilation:

Classrooms are typically heated and ventilated by horizontal ducted unit ventilators. Outdoor air is introduced through roof hoods ducted to the return air inlet of the unit ventilators. Other classroom spaces classroom spaces are served by vertical unit ventilators on the exterior perimeter wall with outside air provided by a wall louver located behind the unit ventilator. Roof mounted exhaust fans are provided to exhaust the volume of outdoor air provided by the unit ventilators in order to maintain a neutral building pressure. Classrooms that are served by the horizontal unit ventilators are also provided with fintube radiators along the perimeter for supplemental heat. The unit ventilators, fintube radiators, and roof exhaust fans generally appear to be in good to fair condition. However, they are at the end of their anticipated service life, and unit ventilators are now an outdated HVAC system due to their inefficiency.



Horizontal Ducted UV



Vertical UV

Administration:

The administration areas are heated, cooled, and ventilated by a rooftop air handling unit equipped with supply fan, return fan, direct expansion (DX) cooling section, gas fired heating section, and filter section. The unit is not equipped with energy recovery, which would likely be required by today's code requirements. Spaces with exterior perimeter exposure are also served by fintube radiators for additional heat. Return air is drawn back to the rooftop units utilizing a ducted return air distribution system. Each space is served by a Variable Air Volume (VAV) box which allows for individual space temperature control by modulating the volume of air delivered to the associated space based on space temperature.

The rooftop unit is the original unit from about 20 years ago. The rooftop units appear to be in fair condition, however they are at the end of their recommended service life.

Kitchen and Cafeteria:

The Kitchen is heated and ventilated by a rooftop mounted Heating & Ventilation (HV) unit, equipped with a supply fan, return fan, gas fired heating section, and filters. There is no cooling section associated with the kitchen rooftop unit. A kitchen exhaust fan is provided which is connected to a kitchen exhaust hood to exhaust the heat and grease laden air from the kitchen space.

There is a dishwasher with an exhaust hood connected to a roof mounted exhaust fan. The exhaust fan and associated ductwork appear to be in fair condition.

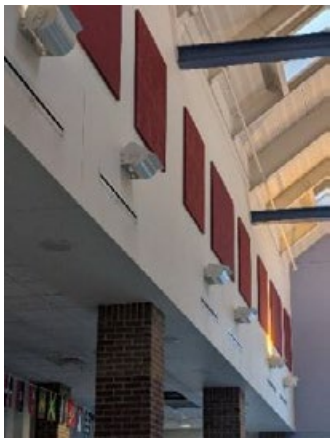


Kitchen Exhaust Hood



Dishwasher Hood

The Cafeteria is heated and ventilated by a rooftop HV unit. The HV unit is equipped with gas fired heating section, supply fan, return fan, and filters. There is no energy recovery, which would likely be required by today's code standards. Supply air is introduced to the space by sidewall mounted linear diffusers. Return air is drawn back to the unit by low wall mounted return grilles, which helps promote good indoor air quality.

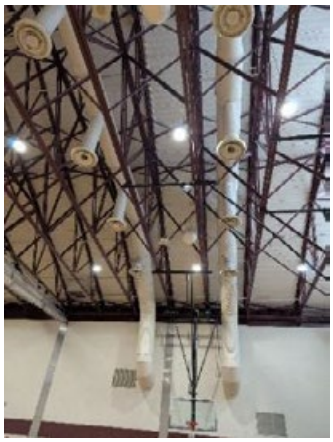


Cafeteria Sidewall Grilles

Gymnasium & Lockers:

The gymnasium is served by two (2) roof mounted HV units providing heating and ventilation. The HV unit is equipped is gas fired heating, supply fan, return fan, and filters. The HV units are also paired with Energy Recovery Ventilation units (ERVs) which are used to pretreat the outdoor air in order to reduce energy consumption. Air is supplied up high through duct mounted supply diffusers and returned through low wall mounted return grilles. The HV units and associated ERVs appear to be in fair condition

The adjacent locker rooms are also served by HV units similar to the gym, with the exception that there are no energy recovery ventilator units paired with the locker HV units. Supply air and return air is ducted to each space to ceiling mounted supply and return grilles.



Gymnasium Ductwork

Auditorium and Stage:

The auditorium and stage are each served by their own RTU. The RTUs provide heating, ventilation, and air conditioning to the associated space. Each unit is equipped with DX cooling, gas-fired heating, supply fan, return fan, and filter sections. The units are not equipped with energy recovery, which would be required by today's code requirements. Supply air is delivered up high within the space, and return air is drawn back to the unit via low wall mounted return grilles, which promotes good indoor air quality.

Media Center:

Similar to the auditorium and stage, the media center is served provided with heating, ventilation and air conditioning by an RTU equipped with DX cooling, gas-fired heating, supply fan, return fan, and filter sections. VAV boxes are also provided, which allows the media center to be broken up into zones for better temperature control. The VAV box modulates to maintain the space temperature at the associated thermostat location. This results in a more uniform temperature throughout the media center. Supply air is delivered up high within the space, and return air is drawn back to the unit via low wall mounted return grilles, which promotes good indoor air quality.

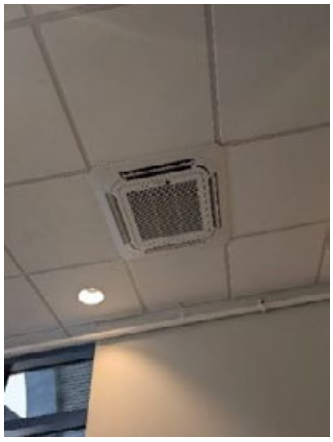
Lobby, Entry, Vestibule, Stairways and Corridor Heating and Ventilation:

The main lobby is served by a rooftop mounted HV unit, providing heating and ventilation only. Hot water unit heaters are also provided for additional heat on either side of the lobby doors.

Vestibules, and corridors are typically heated by hydronic hot water unit heaters or ducted hot water fan coil units. The unit heaters appear to be in fair condition. The main entry has been renovated within the last few years and is now heated and cooled by a split heat pump system. The heat pump is still in good condition.



Typical Cabinet Unit Heater



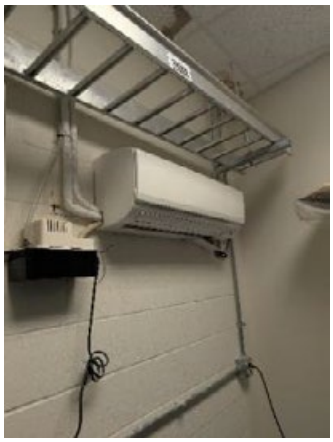
Main Entry Split System

Toilet rooms:

Toilet rooms have overhead exhaust that are connected to an exhaust fan. Make up air is provided from the adjacent corridors. Toilet rooms with exterior perimeter exposure are also provided with heat by hydronic convectors.

Electrical Rooms:

Electrical rooms are typically cooled by ductless cooling units, consisting of an indoor evaporator and roof mounted condensers.



Typical Ductless Cooling Unit

Automatic Temperature Controls (ATC):

The ATC system is a full direct digital controls (DDC) controls system equipped with a Building Management System (BMS) . The DDC controls system is provided by Siemens.



Typical Thermostat

Recommendations:

Based upon our review and observations of the building HVAC systems, we offer the following systems recommendations.

- Provide a new controller for the boiler plant, which shall control the boilers for optimum efficiency based on building load and outdoor air temperature.
- Replace the heating hot water pumps.
- All rooftop units are nearing the end of their anticipated service life. With proper preventative maintenance it may be possible to get another 5+ years of service. However, consider replacing the units with new rooftop units equipped with energy recovery sections for increased efficiency.
- Consider replacing the existing unit ventilators with new unit ventilators equipped with demand control ventilation for reduced energy consumption.

Alternatively, if there is a desire to transition away from a fossil fuel dependent heating system, consider replacing the boiler plant with an air source heat pump chiller plant which shall be capable of producing up to 140°F hot water on a design heating day. The chiller can also produce chilled water simultaneously which can be utilized to provide cooling to rooftop units equipped with chilled water coils. Additional hydronic pumps, expansion tanks, buffer tanks, air separators, and related accessories would be required if the chiller were to be used to provide air conditioning. The existing terminal heating equipment may need to be replaced to account for the decreased hot water temperature. Unit ventilators could also be replaced with new unit ventilators with chilled water coils to provide air conditioning to all classroom spaces.

ELECTRICAL – Dedham Middle School

Executive Summary:

On February 17th, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Dedham Middle School. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in good condition. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's main service is rated as 2500A (amperes) at a 3-phase service voltage of 480/277 (volts). The secondary service is brought underground from a pad mounted transformer located at the rear of the school. Secondary service appears to be terminated in a CT section of the main switchboard located in the main electrical room to a main breaker rated for 2500A. A distribution section rated 2000A was located in the main service switchboard and provided feeds electrical sub-panels and major HVAC equipment located throughout the building. All distribution equipment found within the building's electrical room would be described as being in good condition and still beneficial for the function of the school.

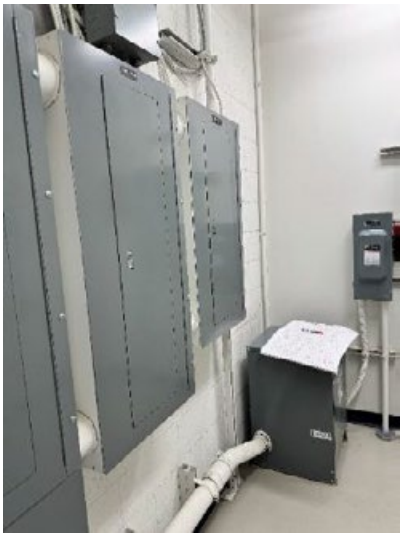
Electrical sub-panels were found within the building's main electrical room, and electrical rooms throughout the school. All sub-panels are in good condition and still have plenty of useful life left..

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.









Wiring Devices & Branch Circuitry:

In general receptacles are located throughout the school to support the building's needs and needs for 21st century learning. Receptacles are in great condition throughout the school and provided with proper protection as necessary. GFCI receptacles are located within 6' of sinks, within kitchen spaces and outdoor receptacles are provided with weatherproof in-use covers.

Emergency Power System:

The building is equipped with a Kohler 180KW emergency back-up generator. Life Safety is provided via ATS#1(ATS-LS) fed from a 100A breaker mounted on the generator. All other emergency backed up equipment is provided via ATS#2(ATS-OS) fed from a 250A breaker mounted on the generator. The generator is mounted on top of the base tank inside the building. The generator is in good condition and appears to maintained routinely.






Exit signs within the building are all thermoplastic type and are generally in good condition. Exit signs within the gymnasium have been provided with wire guards for unit protection.





Fire Alarm System:

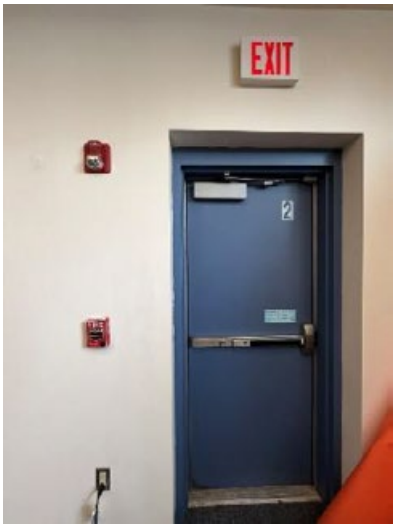
The high school utilizes a Notifier fire alarm control panel located in the main office and a remote annunciator located within the school's main lobby. The fire alarm control panel, although in good condition, does not include voice evacuation which is a code requirement for an E-use group facility. Fire alarm notification and initiation devices located throughout the building are also in good condition with pull stations located in the gymnasium provided with Stopper II covers.

The building utilizes a hardwired master box for means of alarm transmission which is located outside the main entrance. Located adjacent to the master box is a key repository box and a red beacon located along the building's Eastern Ave facing wall.











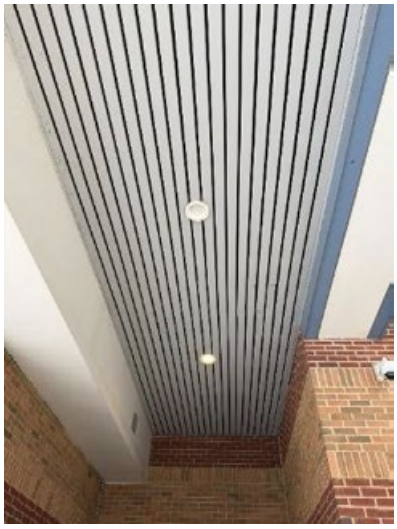
Exterior Lighting System:

The building utilizes a mix of wall mounted wall packs and site area pole fixtures for site illumination. Above every exit door to grade level is a wall mounted wall pack. Along all building sidewalks, parking areas and drive lanes are site area poles.

All exterior lighting is controlled via a combination photocell on and timeclock off function with all circuiting fed via an “Outside Lighting Panelboard”.







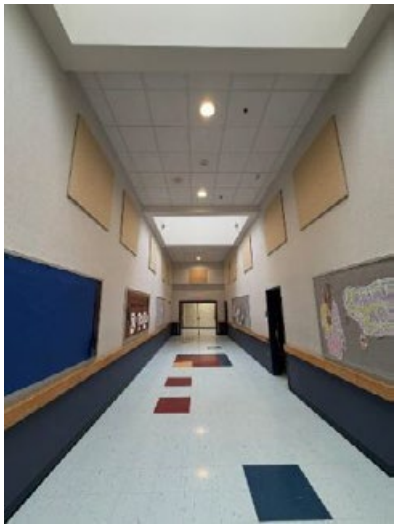
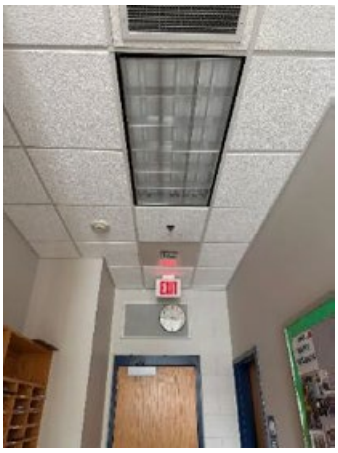
Interior Lighting:

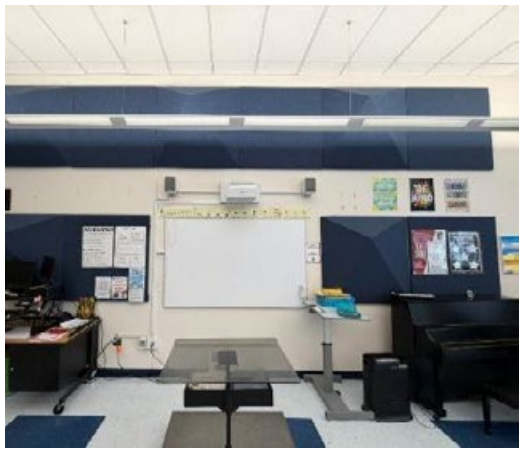
Interior lighting has all been retrofitted from fluorescent to LED bulbs. The use of indirect pendant lighting is utilized throughout all classrooms which although is claimed to be an efficient lighting design, the space can be perceived as darker than truly is.

Corridors utilize the use of recessed troffers and recessed downlights. Utility spaces utilize linear wrap fixtures with a prismatic lens that are either surface mounted, or chain mounted depending on obstructions within the space.

For lighting controls, the school utilizes panel integrated Powerlogic G3 controllers that are tied to area occupancy sensors to provide control of the circuit breaker position. The Powerlogic G3 controller can be both programmed or set to an Auto or Manual mode at the individual circuit breaker.






Security System:

A Maxsys intrusion alarm detection system is currently installed within the school to monitor the building via door contacts and security motion sensors.

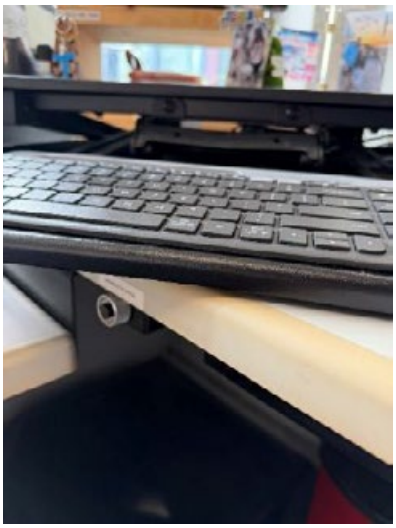
An access control system is provided at main entry points into the building and select doors within the school. The access control system consists of AWID card readers and keyscan door controllers and management software.

The use of a CCTV (Closed Circuit Television) system is utilized to monitor the building perimeter and data closets utilizing Hikvision cameras. All video is stored to an Exaqvision NVR with a security monitor located within the MDF Room for live video monitoring and playback.

An Aiphone Video Intercom is utilized at the main entrance and provides two-way talk communication with visitors, and a remote door release button is provided under the desk.





Communication Systems:

Communication services and fiber networking enter the building underground and terminate at demarcation located within the school's MDF Room located adjacent to the school's Auditorium.

The school is connected back to the town's school fiber hub located at the high school with single mode fiber. The MDF Room utilizes (4) 2-post racks for all its network equipment and distribution. The MDF Room is tied back to an IDF Room located within the classroom wing of the building with a fiber backbone. Network equipment is also backed up with a 12kW centralized UPS and TEP panel where all network equipment is circuited back to. Network cabling has been neatly managed utilizing cable management and ladder tray with CAT6 cabling having been color coded dependent on end use device type.

Data connection points and wireless access points are located adequately throughout the building for operational needs. The use of short throw projectors are utilized within classrooms.

The school utilizes an Avaya VoIP phone system like other buildings across the town. A Telecor head end system is used for the building's paging speaker system with recessed paging speakers located throughout building corridors and classroom spaces for overall building announcements.

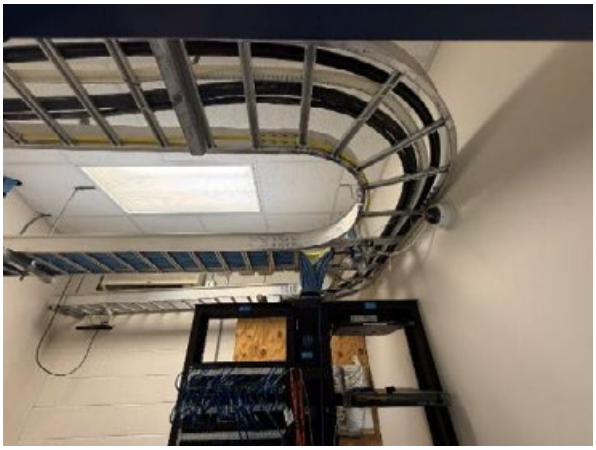
A wireless Sapling clock system is utilized for a building wide synchronized clock system with head end located with the building's MDF Room.















Recommendations:

Electrical Distribution System:

The existing electrical service is sufficient to power the existing building loads. Distribution equipment is generally in good condition and has capacity to add to. Depending on the extent of any renovations to the school there may need to be additional distribution added. It appears the electrical service has the capacity to do that.

Panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

The emergency power system appears to be in good working order. Continue to maintain regular testing of the system per manufacturer's recommendations.

Fire Alarm System:

Upgrade the existing addressable fire alarm system with a code compliant voice evacuation fire alarm system with speaker notification appliances throughout the facility.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures with a direct/indirect distribution.

Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Communication Systems:

It is recommended that the existing UPS be upgraded to support expanded technology systems and increased demand in modern MDF/IDF environments. GGD would recommend the replacement of the existing 12kw UPS with a new 24kW UPS that is provided with an integral maintenance bypass.

PLUMBING- Dedham Middle School

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, special waste (acid waste) and vent system, storm drain piping, and natural gas. Municipal sewer and municipal water serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in good condition and can continue to be used with scheduled maintenance.

The plumbing fixtures are in good condition. The bathroom fixtures appear to be accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from sloped roof areas is collected by exterior gutters and downspouts which appear to discharge to a below grade drainage system. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in good condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

Fixtures:

The water closets are wall mounted, vitreous china with battery powered, sensor operated valves.

Urinals are wall hung, vitreous china with battery powered, sensor operated flush valves.

Lavatories are wall hung, vitreous china or trough type solid surface with either manual or battery powered, sensor operated faucets.

Electric water cooler is dual height, surface mounted, double unit bubbler, side by side with bottle filler.

Janitor's sink is a floor receptor with wall mount faucet equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucet, with lever type hot and cold-water faucet.

Classroom sinks are stainless steel, counter mounted, accessible with gooseneck faucets, with lever type hot and cold-water faucet and drinking water dispenser.

Science sinks are stainless steel, counter mounted, with gooseneck faucets, including vacuum breakers and lever type hot and cold-water faucets.

Showers are acrylic surrounds with thermostatic and pressure balancing mixing valve and handheld shower.

Exterior wall hydrants include loose key operation and threaded connection with vacuum breaker.

The Kitchen equipment and sinks are in good condition.



Water Closet



Staff Sink



Science Sink

Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 4-inch in size. There is a water meter and reduced pressure backflow preventer on the domestic service piping arrangement.

Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated and labeled. The valves used for isolation purposes are full port ball valves, tagged with an identification number.

Domestic hot water is provided by a gas-fired, high-efficiency, indirect water heater with a pair of auxiliary storage tanks, located in the Mechanical Room. The water heater has a gas input of 600,000 Btu/hr and each storage tank has a capacity of 200 gallons. The water heater is equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated and there is an expansion tank installed. The water heater appears to be in good condition.

Gas:

An elevated pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the exterior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating boilers, the domestic water heater, kitchen equipment and science classroom turrets. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.



Gas Turret

Drainage Systems:

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.

The Kitchen waste piping from the 3-pot sink and dishwasher is directed to a point of use interior grease interceptor, buried in the floor.

The Science sinks are directed to a central acid neutralization tank. The acid waste and vent piping is corrosion resistant polypropylene pipe with solvent fittings.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)

FIRE PROTECTION- Dedham Middle School

Executive Summary

The existing building consists of an automatic sprinkler/standpipe system and is fully sprinklered. The majority of the equipment and systems installed appear to have been well maintained and are generally in good condition.

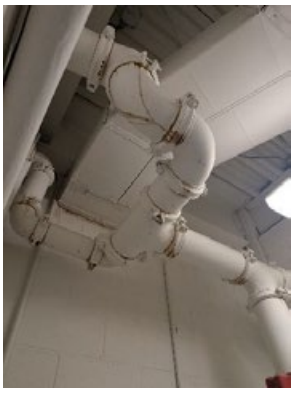
Massachusetts code requires that a school building, 12,000 square feet or more, must be sprinklered. Per 780 CMR 34.00 work shall not be considered a substantial renovation if the cost of installing a sprinkler system exceeds 15% of the total renovation cost. Should the existing building undergo a major renovation the building will require upgrades to the existing sprinkler system to provide complete protection of all spaces.

Existing Conditions:

There is an existing 6-inch ductile iron fire service that enters the First Floor Mechanical Room. The Fire service within the building includes an existing backflow preventer, wet alarm check valve and a dry alarm check valve. The dry alarm check valve serves a dry sprinkler system serving unconditioned and attic spaces.



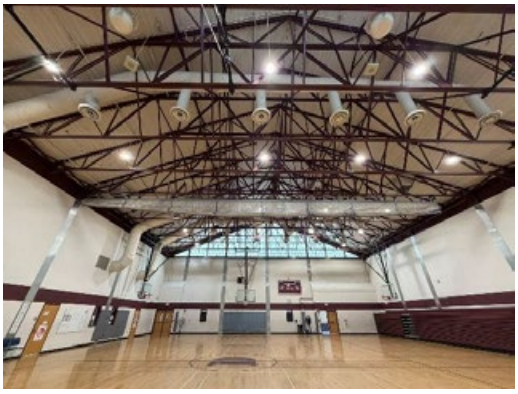
FP Valves



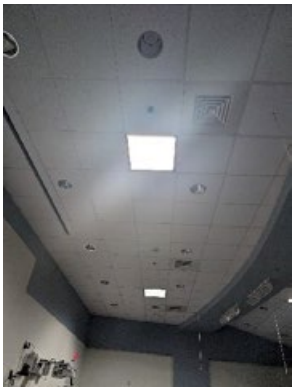
Sprinkler Piping

The sprinkler system has a dedicated Siamese Fire Department connection and electric bell located on the exterior of the building. There is a 4-inch fire main which serves the entire building sprinkler/standpipe system. The building is divided into zones not exceeding 52,000 square feet, each isolated by a sprinkler zone control valve assembly. The standpipes include 2-1/2-inch hose connections.

The piping for the sprinkler and standpipe system is black steel. Fitting and joints are grooved couplings or threaded depending on pipe size. The dry sprinkler system consists of galvanized steel pipes. Piping and sprinkler heads appear to be in good condition. Sprinkler heads include quick-response semi-recessed pendent type for rooms and areas with finished ceilings. Quick-Response upright sprinkler heads are utilized for rooms with no ceilings.



Upright Sprinklers



Pendent Sprinklers

Recommendations:

- Maintain existing sprinkler system in accordance with MA State Building Code, NFPA 25-2020. (High Priority 1-2 years)

STRUCTURAL EXISTING CONDITIONS (Dedham Middle School)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated January 2, 2004, and a site visit by RSE on February 17, 2026.
2. The school is built on a hill which allows for a partial walk out basement level on the west end of the school.

FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls and retaining walls at the perimeter. Allowable soil bearing pressure is 2.5 TSF. 5" concrete slab on grade with welded wire mesh at the first floor. Bottom of exterior footings are 4 feet minimum below grade.
2. No known modifications to foundations since original construction.
3. Besides minimal shrinkage cracks in the slab on grade that extend up through floor finishes, and minor cracking in perimeter frost walls, no other structural foundation issues observed.
4. Recommendations: none

SUPERSTRUCTURE

1. Steel framing includes steel columns, steel beams, composite metal floor deck, and open web steel gable joists, and metal roof deck at the gym and auditorium. Lateral system consists of steel braced frames.
2. Condition/Known Issues: roof leaks due to ice dams and leaking roof drains have been reported by facilities staff. Some ACT ceiling tiles show signs of water damage.
3. Recommendations: Water infiltration should be addressed to prevent deterioration of building structure.

EXTERIOR STAIRS / RETAINING WALLS

1. Concrete walls and slab at rear plaza behind cafeteria. Exterior concrete stair and ramp.
2. Original construction
3. Condition/Known Issues: cracking in concrete walls, and pavers. Surface rust on railings.
4. Recommendations: monitor conditions.

PHOTOS

	Photo: Cracking at rear concrete wall.
	Photo: Additional cracking at rear concrete wall

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Department of Public Works (DPW)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: D-1 | Department of Public Works (DPW)

SELECT BUILDING: D-1 | Department of Public Works (DPW)

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	D-1	**Flood Zone:**	Zone A
Address:	55 River Street	**Wetlands:**	No
Year Built:	1950	**Historic:**	None
Last Renovated:	1968	**Lot Size (ac):**	3.29
Gross Sq Ft (GSF):	18,267	**Building Use:**	Public Works
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Masonry/Steel	**Assessed Value:**	$1,971,900
Roof Year:	Garage 2023 & 2025	**Deferred Maint. ($):**	tbd
Window Year:	1950	**Est. Renovation Cost:**	tbd
No. of Floors:	2	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	~9
Electrification Potential:	2025 – VRF (planned)	**GHG Emissions:**	120
Solar Potential (kW):	48.1	**Climate Resilience Risk:**	Medium

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.88	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.0	• Poor
Structure (Avg):	2.7	• Poor
MEP / FP (Avg):	2.6	• Poor
Life Safety / Code:	3.2	• Critical

KEY COMPONENT SCORES

Roof:	2.0	Electrical:	2.5
HVAC – Heat:	1.5	HVAC – Cooling:	1.5
Fire Prot.:	4.0	Plumbing:	2.5

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Newer Salt Shed

The 1967 DPW facility on River Street has a mix of recently upgraded and significantly aged mechanical systems, and the site's outbuildings are well beyond their serviceable life. A planned major capital project in FY30 represents the primary long-term investment opportunity to address longstanding operational and infrastructure deficiencies at this site.

The Dunn Public Works Facility on River Street is a one-story, 13,800 SF building built in 1967 that houses the Department of Public Works and the Engineering Department. The site also accommodates the Recreation Department Garage, and the Town's salt shed (replaced 2004). The 2035 Master Plan notes the building lacks adequate space for storage and that departments are divided within the building, inhibiting efficient operations. The building contains a mixture of aged and antiquated equipment with some recently added VRF systems in the office areas. A $13 million Maintenance Garage and Vehicle Wash is planned for FY30.

The cast iron boiler experienced a catastrophic failure and was undergoing emergency replacement at the time of the teams site visit. The replacement is a Weil McLain EG natural gas-fired sectional boiler (282 CFH input, 237 MBH output) and is a like-for-like replacement without turndown capability or high efficiency. Office areas were retrofit in 2025 with Mitsubishi/Trane VRF systems (160 MBH heating, 144 MBH cooling) in good condition. A Renew Aire energy recovery ventilator (1,100 CFM) serves office and locker room areas. Outbuildings HVAC systems are aged and antiquated, well beyond their anticipated serviceable life expectancy and considered unreliable. There is no adequate heat dissipation in the compressor room and toilet room exhaust systems are original and antiquated. The site is serviced by 400A 3-phase service. In 2023, a renovation added a manual transfer switch for a portable roll-up emergency generator and improved resilience. Distribution panels are in fair condition but nearing capacity and any HVAC modification would require a service upgrade. The fire alarm system is addressable, code-compliant, and appears recently upgraded. Plumbing is in fair condition overall.

Building Structure & Exterior

The Dedham Department of Public Works (DPW) facility is made up of three primary buildings and smaller site structures. The main DPW building is a single story office, with lower floor garage and maintenance spaces. The site also hosts a detached garage with two sections (one DPW, one Parks and Recreation) for vehicular storage and maintenance, and a separate salt shed structure.

The main DPW building was built in 1962 and is a steel and concrete building, with a slab-on-grade floor, CMU and cast-in-place walls, and metal joist roof structure with metal deck roof. The separate garage building is of similar construction type, partially built in the 1960's and expanded in 1974. The salt shed was built in the mid-2000's.

Generally the structure is in fair condition. Minor cracking to slabs, foundations, and CMU walls were observed in the main DPW building. More significant cracks were observed in the separate garage CMU walls, particularity at openings. Areas of replaced CMU were also observed, suggesting active settlement and a lack of reinforcing in the walls. The salt shed is newer and no issues were observed.

The exterior of the main DPW building is cement block, with metal glazing, both punched openings and storefront glazing. Exterior finishes are original to the building and were observed to be in fair condition. The separate garage is a concrete block finish and observed to be in poor condition.

The roof is a single-ply membrane, low sloped roof on both the main building and separate garage. The garage roof was replaced in stages, in 2023 and 2025. The main DPW roof has been replaced and no issues were reported.



Dated and small kitchen in conference room



Visible exterior cracking at garage outbuilding

Interior Environment

The Dedham DPW is a purpose built facility, containing offices on the upper level and equipment storage, and maintenance on the lower level. Interior spaces are largely original and offices have wood panel, with resilient tile floor, generally in fair condition. Lower level spaces have painted concrete block or glazed tile wall finish and a concrete floor. While these spaces are utilitarian in nature, the finish are in poor quality after decades of heavy use.

The indoor environment is generally poor for a public service use. Primary work spaces are dim and lack adequate natural light. Spaces are cluttered and finishes are dated. Other spaces for vehicle storage and maintenance are utilitarian, but also dim and lack adequate natural light and fresh air. There is not proper separation between the work spaces and truck and maintenance space, indoor air quality is likely poor.

Programmatic Suitability

The Dedham DPW is a purpose built facility, containing offices on the upper level and equipment storage, and maintenance on the lower level as well as the on-site salt shed and adjacent garage. The building is grossly undersized for its purpose as both demands and equipment have grown since its construction. Offices are cramped and there is an acute lack of storage. Rooms contain multiple functions, such as kitchen and conference room.

The central interior garage is much too small for Dedham's fleet of vehicles and drainage under the central wash bay has collapsed, hindering operations. The separate garage has a total of 4 vehicle bays and is shared between DPW (west half) and Parks and Rec (east half). The salt shed appears to be fit for purpose and has adequate storage for town needs. Further, there is a general lack of storage for equipment and vehicles, which hinders operational readiness. Equipment degrades faster when left outside and there is increased time required to respond during event. DPW also has overflow storage at other sites in Dedham (St Mary's Lot and Brookdale Cemetery).

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The DPW site along High street to the south, and Mother Brook to the north. Residential parcels abut to the east and west. The site is approximately 3.27 acres in size, smaller than is required for a facility of this size and activity. The site is further limited by slope and vegetation bordering the brook, so that only approximately 2/3rds of the site is actually usable. The site was observed to be very cluttered, wit multiple areas of outdoor material storage, equipment storage, and vehicular storage. The tight site limits and creates difficulty for storage, vehicular access and flow, and the site has very limited parking.

During the site visit, drainage appeared poor and standing water was observed in multiple locations, Pavement was is varying conditions, but typically poor. Generally the site is in poor condition.

Due to its proximity to the Mother Brook, the site is partially located within a FEMA Flood Zone AE. No wetlands are present on the parcel. Due to its critical function during adverse weather events and location prone to flooding, the current location is not ideal for Dedham's DPW.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Install central fire alarm system - none present
- Address compressor room heat dissipation — no adequate ventilation or cooling currently
- Replace original antiquated toilet room exhaust systems
- Electrical service upgrade planning — current 400A service is near capacity; FY30 garage will require new service
- Assess fire suppression needs for main building and outbuildings
- Insulate exposed piping in main mechanical areas

10-Year Capital Improvements

- FY30 Maintenance Garage and Vehicle Wash ($13M planned) — primary long-term capital investment for this site
- Site master planning — adequacy of 13,800 SF for DPW operations remains a concern per Master Plan
- LED lighting upgrade throughout main building and outbuildings
- Space needs analysis coordinating with FY30 garage project

Capital Investment History

FY	Project / Capital Improvement	Amount
FY22	DPW Roof Replacements — Mechanics/Parks & Rec Garages	$100,000
FY25	HVAC Replacement	$513,428
FY25	Roof Replacements — Town Facilities (DPW Roof B)	$250,000
FY26	Emergency Boiler Replacement (in progress at time of GGD site visit)	Emergency

Sustainability & Decarbonization

FY2022 GHG emissions: 120 MT CO_2e (3.41% of portfolio). Fossil fuels (natural gas + diesel fleet) dominate. The 2026 boiler replacement is like-for-like and does not improve efficiency. The 2025 VRF office retrofit reduces fossil fuel consumption in that zone. The FY30 garage design should incorporate heat pump systems, high-efficiency lighting, electric vehicle charging, and potentially solar to align with the Climate Roadmap.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The DPW facility's emergency boiler failure in early 2026 highlights the fragility of aging infrastructure with no backup capacity. The like-for-like replacement is understandable for operational continuity but does not address the efficiency or carbon reduction goals in the Climate Roadmap.

The DPW is a critical facility to the town's day to day functions, in addition to responding to critical weather events. The current building and site do not adequately support Dedham's DPW. Alternate sites should be considered for a relocated and expanded facility.

(Note: see the Volume 2 report for usage analysis and planning studies).



Vehicle Bay, Drainage Pipe Below is Crushed and Not Functioning

HVAC - Heating, Ventilation and Air Conditioning: East Dedham DPW

Executive Summary:

The DPW building has a mixture of aged and antiquated equipment with some new equipment which has recently been added to administration areas.

Existing Conditions

Central Heating Plant:

The Boiler plant was currently out of commission at the time of our site visit. The existing cast iron boiler had catastrophic failure and needed emergency replacement. At the time this report was being generated, the replacement boiler was actively being piped. The new boiler is a replacement in kind cast iron sectional boiler. It will maintain the same discharge water temperature output as the previous boiler and does not have means of turndown. The replacement boiler is manufactured by Weil McLain Model EG and is natural gas fired with an input rating of 282 CFH and an output rating of MBH 237.



Boiler being installed

Office Areas:

Office areas in the building have been retrofit with heat pump variable refrigerant flow (VRF) systems which consist of indoor ceiling mounted, an outdoor air-cooled condensing unit and refrigerant piping. The VRF system was manufactured by Mitsubishi Trane and provides a total BTU 160 MBH for heating and 144 MBH of cooling. The VRF system was installed in 2025 and the equipment appears to be in good condition and will have many years of a serviceable life.



Typical Heat Pump Units



Outdoor Condensing Unit



VRF Central Controller

Mechanical Ventilation:

Mechanical ventilation for the office areas of the building is provided by a Renew Aire energy recovery ventilator (ERV). The unit provides 1,100 CFM of supply and exhaust. The unit is installed on the Mezzanine level located in the garage area. The ERV has a DX heating and cooling coil with a LEV kit to provide neutral air temperature of the discharge supply air from the ERV. The DX heat pump coil has condensate drain piping. This unit serves office areas and the locker room.



Energy Recovery Unit



Ventilation Ductwork to Office Areas

Vehicle Storage Area:

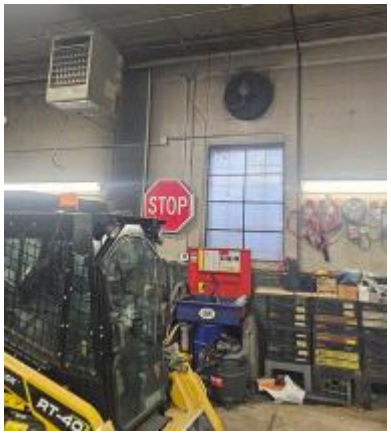
The Vehicle Storage Area has very basic HVAC equipment. The space is mostly heated garage gas straight tube infrared heaters. The tube heaters are natural gas fired. They appear to be in fair condition. The vehicle parking area lacks exhaust and any sensors which could energize in the event that a vehicle is left on and vehicle exhaust reaches dangerous levels in the space.



Typical Infrared Heater

Adjacent Out Buildings:

Aside from the main DPW building, there are 3 other out buildings on the site. One of the buildings is a salt shed and the other two buildings which are used for repairs for vehicles and small engine repairs. All systems in these buildings are well beyond their anticipated serviceable life expectancy and would be considered unreliable to maintain building temperature and ventilation. There are no HVAC systems in the salt shed, this building is fully open to the outdoors and HVAC is not required. The Vehicle Repair garage systems are aged and antiquated and should be considered to be replaced to be reliable modern equipment. There is a large compressor in a small room in this building. There does not appear to be adequate means of heat dissipation for the space. The small engine repair, storage building have the straight gas fired infrared heaters.



Vehicle Repair Garage



Small Engine Repair, Storage Building

Toilet Rooms:

The Toilet rooms have a ceiling mounted exhaust to central exhaust fans located on the roof. These original systems appear antiquated.



Exhaust Grilles in Toilet Room.

Automatic Temperature Controls:

The majority of controls throughout the building are stand-alone in nature. There is a central controller for the new VRF system which has all VRF equipment back to the panel where it can be centrally monitored and adjusted.



VRF Controller

Recommendations:

Based on site observations of the existing equipment and systems at the site, we offer the following recommendations.

- When the boiler replacement has been completed, the controls should be sequenced along with the VRF equipment serving the same area.
- Terminal heating devices would be recommended to be replaced. The cast iron radiators would be recommended to be replaced with heating terminals such as convectors, fin tube radiation or radiant heat panels.
- Replace existing antiquated equipment in the out buildings providing reliable heating and ventilation in this space.
- A building management system (BMS) is recommended for all HVAC to provide space temperature monitoring adjustment and alarm notification for improved energy efficiency and thermal occupant comfort.

ELECTRICAL – Dedham DPW

Executive Summary:

On April 2, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Dedham DPW. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings' systems are in fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's electrical utility service is provided by Eversource and fed underground from the building's utility transformer. The building's main service is rated for 400 Amperes 120/208V, 3 Phase, 4 Wire. In 2023, the facility underwent a renovation project to back feed the existing service with means of a portable roll-up emergency generator with a manual transfer storm switch. The existing service was captured and terminated into an ABB 400Amp Main Disconnect. The main disconnect and feeds the existing main distribution panelboard which are both located in the main electrical room located on the first floor. The main distribution panelboard feeds the other various panels located throughout the building and auxiliary buildings on the site.

The secondary service is cold sequence metered utilizing a Class 320 utility meter that is located within the main electric room. Distribution equipment found within the building varies in manufacturer and would be described as in fair condition and nearing or at capacity.

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.











Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building and the use power strips are commonplace within office spaces. Receptacles are in poor to fair condition throughout. Receptacles located within 6 feet of a sink are not provided with GFCI protection and are a violation of NEC 210.8.B.

Exposed wiring terminations and damaged surface raceway/equipment were observed while on site. All of these items are violations of the NEC (National Electrical Code) and should be addressed.






Emergency Power System:

The building is equipped with the provisions for a roll-up emergency back-up generator which is stationed within the DPW parking lot and is manufactured by Generac. A recently installed 400 Amp ESL storm switch is installed to provide back-up of the existing service.

Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to fair condition. There was a concern overall that the paths of egress within the building were not adequately covered to meet the requirements for illumination of the paths of egress as described in NFPA 101.

Exit signs within the building are all thermoplastic type and vary in condition from poor to good. Many of the buildings' exit signs have begun to yellow, a typical sign of aging in a thermoplastic sign. Some exit signs did not appear to have a test switch typically indicating that a sign is not provided with an integral battery back-up which would be required for a building with no emergency generator.







Fire Alarm System:

There is no existing fire alarm system within the building and is not required by code.

Exterior Lighting System:

Exterior lighting is accomplished via building mounted wall packs and flood lights throughout the site that appear to be utilizing fixture mounted photosensors for control. At the front entrance canopy surface mounted fixtures are utilized but one of the fixtures is missing its lens, which exposes the internal light engine to outdoor elements. Exterior lighting all look to be LED type, but given fixture locations there is an overall concern for the illumination of the site.

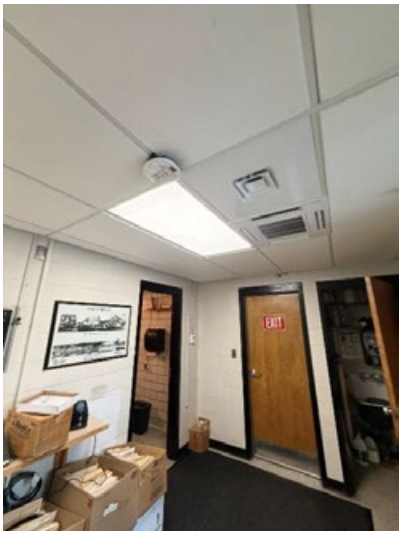


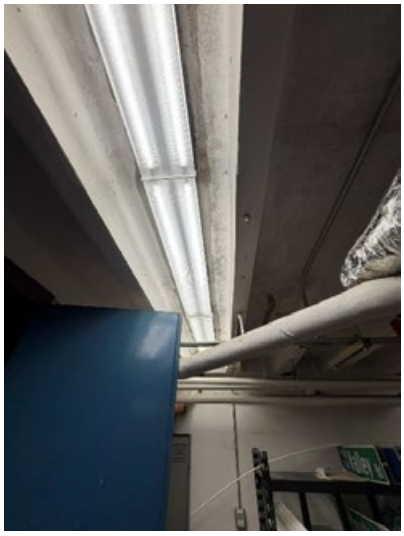
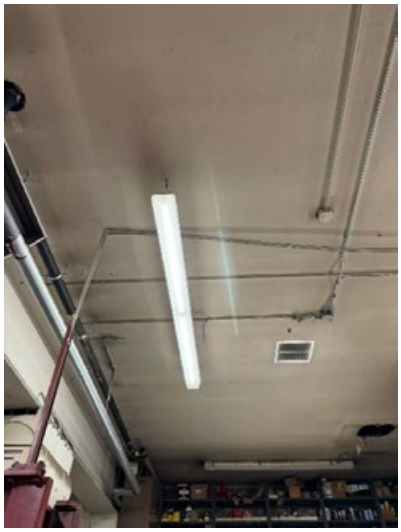


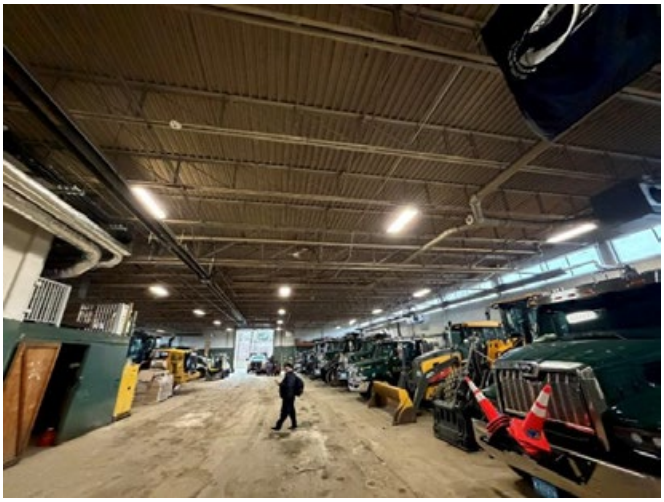
Interior Lighting:

Interior lighting within the existing DPW building consisted of a mix of different fixtures based on space type. Fixtures throughout the facility appeared to have been replaced with integral LED Fixtures or retrofitted with an LED bulb. Within the garage spaces, high bay fixtures with acrylic lens are utilized. In the utility spaces, surface mounted linear wrap fixtures with prismatic lensing are utilized. While in office spaces, fixtures have been upgraded to LED flat panels.

There is no centralized lighting control system, and the only level of lighting controls is via manual light switches within each dedicated space.





Security System

CCTV cameras are located on the exterior of the building to monitor the building perimeter. There was no access control or intrusion system visible throughout the building.

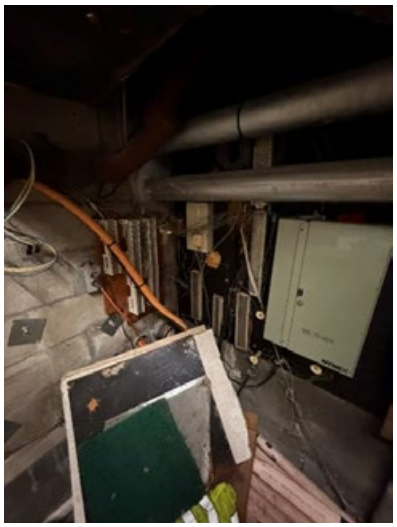




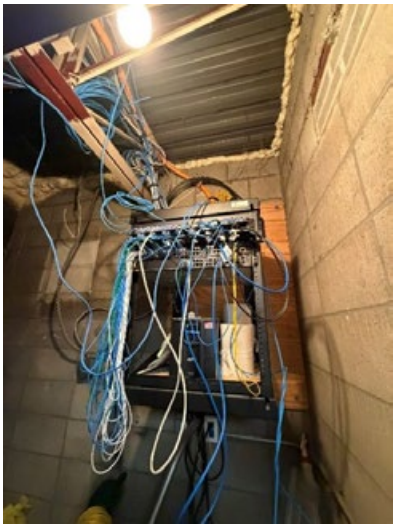
Communication Systems:

Communication and fiber services enter the building underground and terminate at a demarcation wall in the facilities main electrical room. Network infrastructure is then routed up to a wall mounted network rack hung within an existing storage closet and handles the building's IT infrastructure.

The incoming fiber is networked back to the Town Hall and terminated at the wall mounted network rack. Data cabling seems to have been color coded per end use device type with the use of white, green and blue CAT 6 cabling. Data connection points are sparsely located throughout the building and many of the network outlets have been maxed out. Wireless Access Points have been scattered throughout the facility for full building Wi-Fi coverage. Similar to other town building's the facility utilizes an Avaya VoIP phone system.








Sat



Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in fair condition and is nearing capacity. Any renovations that would include major modifications or additions would require an in-depth review of existing loads and future loads to determine if a service upgrade is necessary.

Panels found to be in violation of working code clearances should either be relocated or modified to be compliant.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement. GGD recommends the use of rough service or weatherproof exit signs dependent on the space type.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Lastly, A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all garage and utility lighting be considered for upgrade with polycarbonate impact resistant fixtures. Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

It is recommended that all existing code violations be reviewed and addressed. Provide additional receptacle locations to assist in the elimination of extension cord usage.

Security System:

Provide and install a complete intrusion detection system to secure the building after hours. Providing door contacts at entry points to the building and garage doors. Also provide motion sensing devices that provide full coverage of the interior of the building with access from grade level.

A card access system should also be provided to secure, track, and monitor access to all entry points of the building as well as higher security areas such as the building's data closet.

Communication Systems:

Provide additional telephone/data ports within all offices and finished areas throughout the building as needed for daily operations.

PLUMBING- DPW

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 serve the building.

Fixtures:

The water closets are floor mounted vitreous china with manually operated flush valves.

Urinal is wall hung vitreous china with manually operated flush valve.

Lavatories are wall hung vitreous china with manual faucets.

Janitor's sink is trap standard mounted, enameled cast iron sink with wall mount faucet equipped with vacuum breaker.

Locker room showers do not appear to be used.

Break room sink is a single bowl stainless steel drop-in type with gooseneck faucet and vegetable spray.

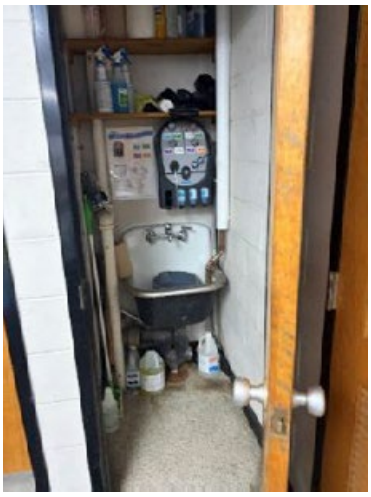
There is no drinking water station. There is a bottled water dispenser located in the Break Room.



Typical bathroom fixtures



Break Room sink



Service sink



Bottled water dispenser

Water Systems:

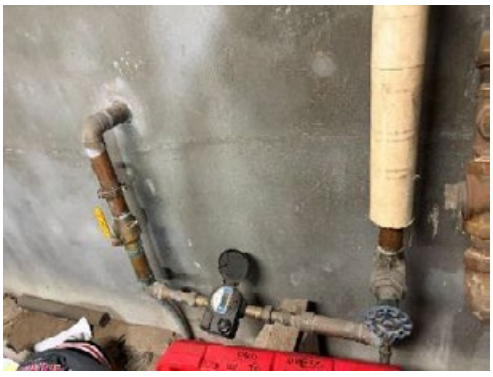
The domestic water service appears to be 2-inch in size and includes a water meter. There is no backflow preventer on the main service.

Piping, where exposed, is copper tubing with sweat joints. Where modifications have been made copper press fitting have been used. The majority of the piping is insulated.

Domestic hot water is provided by a gas-fired tank type water heater. The water heater has a natural gas input of 40,000 BTUH and 40 gallons of storage. At the time of the field visit the existing cast iron heating boiler had catastrophic failure and needed emergency replacement. As part of the replacement, it appears the existing gas-fired water heater will be replaced with an indirect water heater fed from the new boiler.



Domestic water heater



Domestic water service

Gas:

Natural gas is provided to the building. The gas meter is located in the lower level mechanical room. Natural gas is provided to the heating boiler, domestic water heater, and garage unit heaters. Gas piping is black steel with threaded joints and fittings.



Interior gas meter



Gas fired unit heater (Garage)

Drainage Systems:

Cast iron is used for sanitary drainage and roof drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper.

Vehicle storage area has floor drains. The garage floor drains are connected to an oil/water separator. Staff indicate that the existing garage waste piping has collapsed in some areas of the garage.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Replace existing roof drains.
- Relocate gas meter to exterior.
- Repair below slab garage waste piping in vehicle storage area.

FIRE PROTECTION – Dedham DPW:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

Dolan Center (Former Parks & Rec)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: PR-1 | Dolan Center / Former Recreation Center

SELECT BUILDING: PR-1 | Dolan Center / Former Recreation Center

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	PR-1	**Flood Zone:**	Zone A
Address:	269 Common Street	**Wetlands:**	Within Wetland
Year Built:	1976	**Historic:**	None
Last Renovated:	None	**Lot Size (ac):**	10.79
Gross Sq Ft (GSF):	7,534	**Building Use:**	Parks / Recreation
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Wood Frame	**Assessed Value:**	$6,106,600
Roof Year:	tbd	**Deferred Maint. ($):**	tbd
Window Year:	1976	**Est. Renovation Cost:**	tbd
No. of Floors:	2	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Propane (LP)	**Energy Use Intensity (EUI):**	~4
Electrification Potential:	2040 – Ducted ASHP	**GHG Emissions:**	24
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	High

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	3.48	Critical

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.7	• Critical
Structure (Avg):	3.7	• Critical
MEP / FP (Avg):	3.7	• Critical
Life Safety / Code:	2.9	• Poor

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	4.0
HVAC – Heat:	3.3	HVAC – Cooling:	3.3
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Temporary Structural Supports at second floor framing

The former Dolan Recreation Center on Common Street is currently vacant and awaiting a programming decision, with the surrounding 11.5-acre site continuing to serve the community through athletic fields, a dog park, community gardens, and Charles River access.

The Dolan Center and Sugrue Field campus is located along Common Street on an 11.5-acre site abutting the Charles River. The site includes the former Dolan Recreation Center, which has deteriorated to the point that the Parks Department has relocated to the Capen School. The Dolan Center contains offices, a gymnasium, and a dance studio; outdoor amenities include the Town Dog Park, community gardening plots, a turf baseball/softball field, a boat launch, and a nature trail. The Dolan Center is currently vacant and awaiting a programming and renovation decision. Parks & Recreation was relocated due to structural deterioration, which has been temporarily reinforced, but requires a long term solution.

The building plumbing is not operational. Liquid petroleum gas service has been removed and capped. All fixtures are present but not functioning, but plumbing is in poor condition. No HVAC is operational. Full plumbing fixture replacement, new water heating system, new mop sinks and drinking stations, and accessible fixtures are required. There are serious concerns around the long-term viability of structural and envelope systems if any re-use scenario.

Building Structure & Exterior

The Dolan Center is a two-story wood structure, built in 1976. The foundation is a concrete slab on grade. The bottom of exterior footings are 4 feet minimum below grade. Besides minor cracking in perimeter frost walls which have been repaired, no other structural foundation issues observed.

The building is wood framed stud walls with wood joist floor structure and a wood framed roof. Two areas of structural reinforcing were observed, with additional wood framing and lally columns supporting the roof structure. Water damage was observed at both locations. Reinforcing is temporary in nature and should not be expected to be permanent. Monitoring of deficient structure should continue even though the building is not occupied until a permanent solution is enacted or the building is removed.

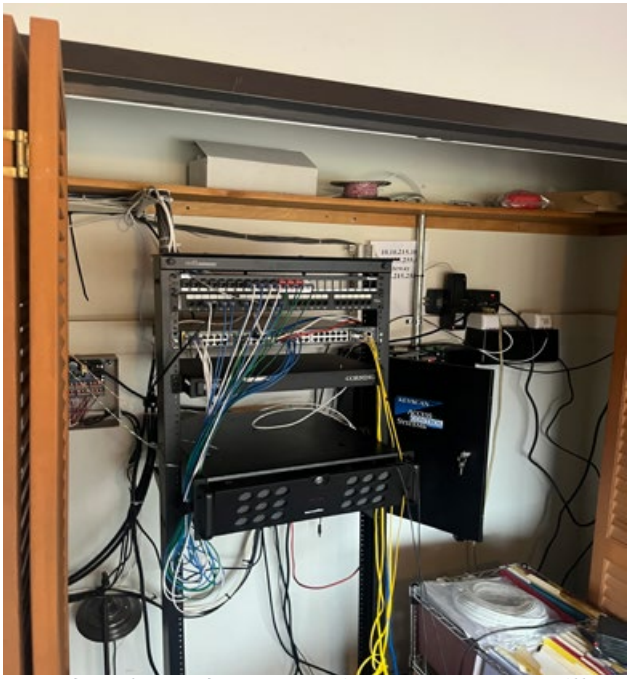
The exterior of the building is wood siding with ribbon windows, sliding type windows. Windows are wood frame and original to the building, and observed to be beyond their service life. There were multiple areas of exterior rot and failure observed. There are also exterior decks on the second floor with sliding glass doors. Generally the facade is observed to be in poor condition. The roof is a shingle clad pitched roof with borrowed lights about the second floor corridor. The roof is in poor condition, with multiple areas of water intrusion observed. There was a large tree branch which had fallen on the roof and likely further damaged the roof and structure below. The roof should be monitored to prevent further leaks and damage to interior spaces.

Interior Environment

The Dolan Center was originally built as living quarters and a printing press for brothers who lived in the adjacent monastery. Parks and Recreation occupied the building largely as is, with living units remaining on the second floor, and used as offices. First floor spaces were lightly converted and used to recreation classes (dance and workout studio) and the three bay garage was used for storage. Floor finish is typically carpet tile. Tile floor is located in bathrooms and the dance studio has a wood floor. Walls are generally painted Wall board. Tile is installed in restrooms



Water infiltration damage at ceillings suggest leaking roof.



IT and Parks and Rec security systems are still on site and active.

Carpet finish was in poor condition, beyond its service life, heavily worn, and had water damage. Walls are in fair to poor condition, and the finishes are dated and past their service life. Kitchenettes in living units were in poor condition as well. Many spaces are cluttered and lack dedicated storage. Indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply as well as damp conditions.

Programmatic Suitability

The Dolan Center and field sit towards the north west end of Dedham, near I-95 and surrounded by town woods and conservation land. The building was originally built as living quarters and a printing press, which limits its flexibility for alternate uses. The building and main entry face the park to the north and the Dedham dog park sits between the Dolan Center and Common Street.

The building and available site are limited in size and the fit and condition of the building are not good for reuse. The Dolan Center likely did not support the Parks and Recreation program well either. The three-bay garage may have value for storage and vehicle support for Town maintenance functions. Some services should be maintained to support the dog park, baseball field, and boat launch.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Dolan Center sites along Common Street to the south and borders the Charles River to the north. . Parking along front and side and the site includes a playground area and ball fields. The site is moderately sized, at nearly 4 acres, and is largely flat and developed.

The site contains paved parking and walkways, which are in fair to good condition. The site is classified as FEMA Flood Zone AE because it borders the Charles River, but the building itself is upland. Wetlands are present on the parcel per GIS review and significant in the upper portion where the site abuts the river.



Kitchinettes are in second floor rooms and in poor condition.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Conduct structural assessment before any reoccupancy

10-Year Capital Improvements

- If re-occupied: full plumbing replacement, new water heating system, HVAC, and Accessibility upgrades throughout
- Evaluate boat launch accessibility and Accessibility compliance
- Long-term: Charles River frontage and climate resilience planning

Capital Investment History

FY	Project / Capital Improvement	Amount
N/A	None	TBD

Sustainability & Decarbonization

GHG emissions were not separately metered when vacant. The Charles River frontage and 11.5-acre green site offer significant opportunities for climate-resilient outdoor programming, green stormwater infrastructure, and ecological restoration.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The Dolan Center and its campus require a clear programming decision before any further capital investment in buildings is warranted. The site's environmental assets, Charles River access, open space, gardens, dog park, are significant community resources that should be preserved and enhanced regardless of the building decision.

The sites relatively remote location and the presence of wetlands and flood zone limit any potential redevelopment.

The town completed an updated conceptual design (03/2026, Activitas) which propsed replacing the existing Dolan Center with a small (+/- 1,200SF) support building as well as expanded parking, a playground, pickleball courts, and improvements to the existing dog park and canoe launch. Improving the existing park and maintaining its connection to the Charles River align with findings in this report.

(Note: see the Volume 2 report for usage analysis and planning studies).



Large Tree Branch Which has Fallen and Damaged Roof

HVAC - Heating, Ventilation and Air Conditioning: Dolan Center

Executive Summary:

The Dolan Center Building was used by the Parks and Recreation department but hasn't been used in many years. The building is currently vacant and the building HVAC systems are currently out of commission. The building and systems inside and outside have sustained substantial damage. In addition to the noticeable physical damage, All of the equipment is beyond its physical life expectancy and would require replacement. It is our understanding that the building the only system that remains active is an outdoor hosebib connection for the dog park directly outside the building.

Existing Conditions

Heating and Air Conditioning:

When in use, the building was heated and air conditioned by gas fired residential type air handling units with DX refrigerant air cooled condensing units located outside. The systems are not being used for heat or air conditioning. Condensing units utilize R-22 refrigerant and have suffered physical damage from tree branches which have come down on the equipment.



Refrigerant Pipe on Back wall



Outdoor Condensing units

Kitchen:

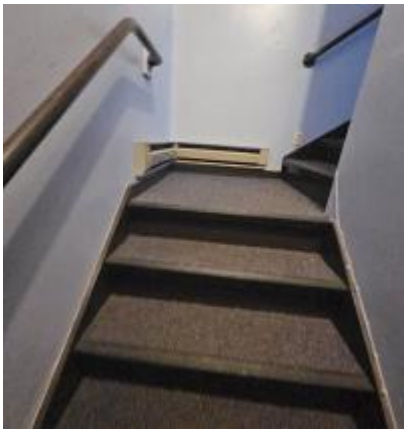
The cooking area has some residential type appliances with no means of mechanical exhaust.



Kitchen Exhaust System

Terminal Electric Heat:

Throughout the building there is terminal electric heat such as electric fin tube radiation and Electric Unit Heaters.



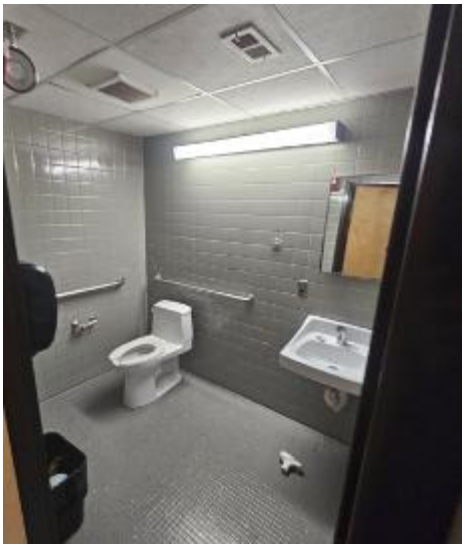
Terminal Electric Heat



Terminal Electric Heat

Toilet Rooms:

The Toilet rooms have fan light combination units which serve the toilet rooms, the switch that serves the light also energizes the exhaust fan.



Exhaust Fans

Automatic Temperature Controls:

All controls throughout the building are stand-alone in nature. These include both low voltage thermostats

For the air handling units and line voltage for terminal electric heat and switches for exhaust fans.

Recommendations:

Based condition of the building overall and HVAC equipment and systems that serve it, all HVAC equipment and systems would be recommended to be fully removed and replaced if the building was determined to be renovated back to occupiable status. The proposed HVAC system would need to be coordinated with the proposed floor plans and building upgrades for load calculations to be performed for heating, air conditioning and ventilation requirements to be met. The proposed system would be energy efficient and capable of remote monitoring, adjustment and notification.

ELECTRICAL – Dolan Center

Executive Summary:

On February 19th, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Dolan Center. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The building is no longer in real use by the town, and its systems have fallen into poor condition due to long-term neglect and lack of maintenance. The systems are broken down throughout the report with recommendations being provided per system area.

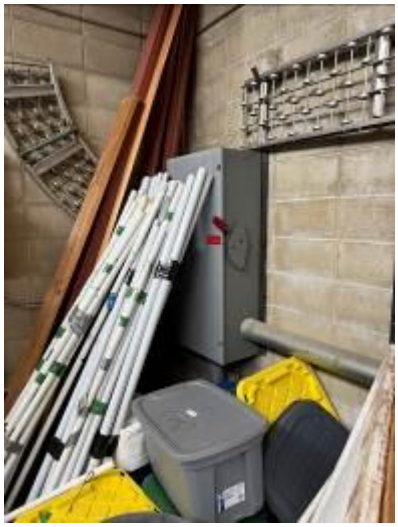
Electrical Distribution System:

The building's main service is rated for 600 Amperes, 3-phase, 4-wire with a service voltage of 120/208V. The secondary service is brought overhead by Eversource to a utility pole located on the customer's property and secondary service cables are then run underground to a main service disconnect located within the facility's garage. The secondary service is cold sequence metered terminating into a 600A rated Arrow Hart main service disconnect switch before entering a C.T. (current transformer) cabinet. The utility meter is located at the exterior of the building at the receiving area located at the back side of the garage.

A 600A main service disconnect feeds into a distribution electric trough, where disconnect switches feed out to various electrical sub panels within the building. Electrical sub-panels vary in manufacturer but are typically in poor to fair condition and have passed their serviceable life like other electrical equipment within the building.

Panels located within the garage were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment due to the storage of items within the garage.







Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in poor to fair condition throughout.

Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). There was a concern overall that the paths of egress within the building were not adequately covered to meet the requirements for illumination of the paths of egress as described in NFPA 101. Exit signs within the building were not self-illuminated which is violation of NFPA standards.





Fire Alarm System:

The existing building is equipped with Gamewell fire alarm control panel (FACP) which is located within the facility's garage space. The panel is estimated to be roughly 15 years old and is currently displaying a trouble status. It was noted that while on site there was a water leak from the windows above that did appear to be dripping onto the fire alarm control panel.

Fire alarm notification and initiation devices are located throughout the building and are in fair condition. A remote annunciator is located at the main entrance and performs all functions of the fire alarm control panel.

The building utilizes a hardwired master box which is located at the exterior of the building for the means of alarm transmission.







Exterior Lighting System:

The facility utilizes a mix of building wall packs and floodlights and site area poles for its exterior site lighting. Site pole fixtures were provided with integral photosensors for exterior lighting control. A majority of the exterior lighting looked to be LED type aside from the surface canopy fixtures located above garage doors. These surface garage fixtures had gone through severe yellowing that determining the existing light source type was not possible.




Interior Lighting:

Interior lighting consisted of a majority of fluorescent surface fixtures that were provided with prismatic lensing. Some existing sconce lighting had been retrofitted with LED bulbs. All spaces relied on manual control within each given space.







Security System:

No intrusion detection system was found within the building.

An access control system is provided at main entry points into the building utilizing AWID card readers.

The use of a CCTV (Closed Circuit Television) system is utilized to monitor the building.





Communication Systems:

Communication services enter the building undergound and terminate at a demarcation wall within the garage. Communication services are terminated onto 110 blocks and feed out to various locations within the building. There is a lack of technology infrastructure within the building to support commercial building functions within the 21st century.





Recommendations (Dependent on future use of existing building):

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Panels found to be in violation of code working clearances should have all storage removed from the equipment's required working clearances for both code and safety concerns when trying to access equipment in an emergency.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

All exit signs should be replaced with self-illuminated type exit signs with integral battery back-up and self-diagnostics. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

It is recommended that the existing fire alarm control panel's trouble is cleared. Continue performing routine maintenance on the fire alarm system to ensure proper functionality, code compliance, and reliable detection and notification in the event of an emergency.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting not already converted to LED should be replaced with current LED.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area.

Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Security System:

It is recommended that an intrusion detection system be installed and provided with door contacts at all points of accessible entry to the building as well as full coverage of motion sensing devices within the building at grade level.

Communication Systems:

Provide new communication services with upgraded fiber connectivity back to the town's fiber hub located within the town hall.

Provide a dedicated data room with data racks, cable management and dedicated room conditioning units to maintain equipment performance. Upgrade all existing data cabling to CAT6A type.

PLUMBING- SUGRUE FIELD

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. The LP gas system has been removed. Municipal sewer and municipal water serve the building. The building is currently vacant. The plumbing fixtures are not operational.

Fixtures:

The water closets are floor mounted vitreous china with flush tanks.

Lavatories are wall hung vitreous china with either manual or sensor type faucets.

Janitor's sink is trap standard mounted, enameled cast iron sink with wall mount faucet equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucets.

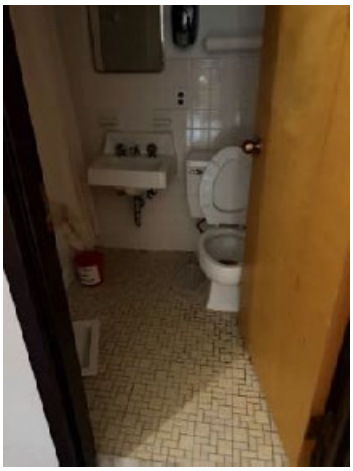
There is no drinking fountain.

Water Systems:

The main domestic water service is located beneath a stair landing. The service appears to be 2-inch in size and includes a 1-inch water meter. There is no backflow preventer on the service.

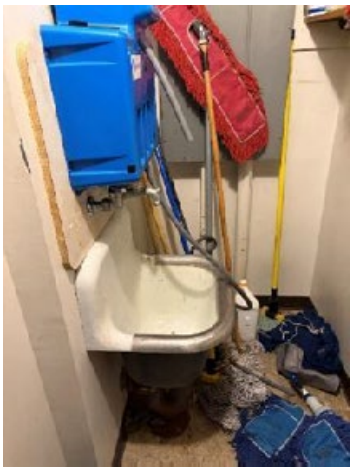
Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated.

Domestic hot water is provided by an electric tank type water heater. The water heater is 240-volt, single phase, with 4.5 kW heating element and 40 gallons of storage. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank. The water heater appears to be in fair condition.





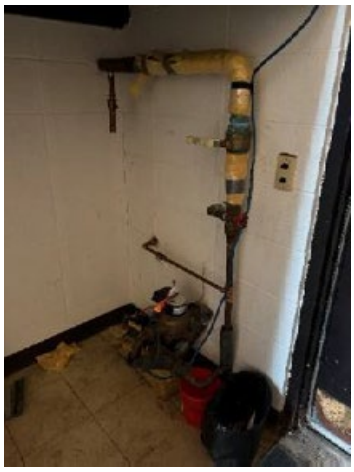
Typical bathroom fixtures



Service sink



Staff sink



Domestic water service



Domestic water heater

LP Gas:

The building was served by LP gas. The LP gas tank has been removed and service piping at the building has been capped.

Drainage Systems:

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.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Provide one mop sink on every floor.
- Provide drinking water station at each group of bathrooms.
- Install new domestic water heating system including thermostatic mixing valve, expansion tank, and hot water recirculation loop.

FIRE PROTECTION – Sugrue Field:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

Early Childhood Education Center

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: S-1 | Early Childhood Education Center

SELECT BUILDING: S-1 | Early Childhood Education Center

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	S-1	**Flood Zone:**	Zone A
Address:	1100 High Street	**Wetlands:**	Buffer Zone (100 ft)
Year Built:	2023	**Historic:**	None
Last Renovated:	None	**Lot Size (ac):**	29.2
Gross Sq Ft (GSF):	51,000	**Building Use:**	Educational
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Steel/Concrete	**Assessed Value:**	$23,449,400
Roof Year:	2019	**Deferred Maint. ($):**	tbd
Window Year:	2019	**Est. Renovation Cost:**	tbd
No. of Floors:	1	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	~25
Electrification Potential:	2033 – VRF	**GHG Emissions:**	125
Solar Potential (kW):	Planned	**Climate Resilience Risk:**	Medium

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	1.19	Excellent

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.4	• Good
Structure (Avg):	1.0	• Excellent
MEP / FP (Avg):	1.4	• Good
Life Safety / Code:	1.0	• Excellent

KEY COMPONENT SCORES

Roof:	1.6	Electrical:	2.0
HVAC – Heat:	2.0	HVAC – Cooling:	1.0
Fire Prot.:	1.0	Plumbing:	1.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	1.27	Excellent

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	1.0	• Excellent
EPI-2 Academic Suffic.:	1.8	• Good
EPI-3 Program Suffic.:	1.8	• Good
EPI-4 Universal Access:	1.0	• Excellent
EPI-5 Building Safety:	1.0	• Excellent
EPI-6 Tech. Readiness:	1.0	• Excellent

Grade Config.:	PreK & K2
Enrollment:	279
SF per Student:	183

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Large Skylights Organized Classroom Pods.

The ECEC is one of Dedham's newest and best-condition facilities, opened in 2019 and designed to current educational, accessibility, and life safety standards. Near-term planning priorities focus on energy efficiency and decarbonization rather than capital repairs.

The Thomas J. Curran Early Childhood Education Center (ECEC) opened in February 2019 at 1100 High Street as a new replacement facility for pre-kindergarten and kindergarten students.

The 50,000 SF single-story Type IIB building was designed to current educational and accessibility standards. The building was found it to be in general code compliance for a building of its age and construction type. The design appears to function well for younger aged children and design elements are customized for their use and learning styles. The layout is designed around classroom neighborhoods and ample natural light is available to children.

The Climate Roadmap documents GHG emissions and proposes a decarbonization pathway. The building has a fully automatic sprinkler system throughout and fire alarm with EVAC (emergency voice alarm) and emergency responder radio coverage. It has multiple accessible entrances, accessible restrooms, and accessible drinking fountains throughout. Building is 1-story so no elevator is required. One issue identified: unprotected steel decking in certain areas, which should be evaluated relative to the Type IIB construction requirements. Per Climate Roadmap, primary space and water heating is natural gas, installed 2019. EUI data not separately available but building is designed to 2019 energy code standards.

Building Structure & Exterior

The Dedham Early Childhood Education Center (ECEC) is a one-story steel and concrete structure, built in 2019 as a replacement for the previous early education center, located in the former Capen School building. The building structure is steel frame with a concrete slab on grade and metal deck roof structure, typical of contemporary school construction. Besides minimal shrinkage cracks in the slab on grade that extend up through floor finishes, no other structural foundation issues observed. The construction type is very robust and no structural concerns were observed or raised

The exterior of the building is predominantly a rain screen panel (metal composite panel) with areas of CMU (including watertable) and punched metal windows. Smaller areas of metal glazed storefront system are located at entry areas. A large entry canopy cover the main entry. The facade was observed to be in excellent condition. The roof is a mix of pitched shingles and single-ply low-slope at mechanical areas. The roof was observed to be in good condition where visible, due to snow cover (no issues reported). Overall, the exterior is in excellent condition and requires only regular maintenance.

Interior Environment

The ECEC is a purpose built school for Pre-kindergarten and kindergarten aged students, containing classrooms, administration spaces, a multipurpose space for dining and indoor play, and support spaces. Building spaces are purpose built and fit for early childhood education. Floor finish is typically a resilient tile floor in most student spaces. Epoxy floor is located in bathrooms. Walls are generally painted wall board with a wood wainscot in the corridors. Tile is installed in restrooms and at drinking fountain locations. The school is a pleasant and well lit building with excellent access to natural daylight. Finishes are in good condition and have ~25 years left of their typical service life.



Entry to the ECEC, with some rusting visible at facia



Classrooms are pleasant and bright with good ac cess to natural light.

Mechanical, electrical, and plumbing services are all new and designed to be compliant with current building codes. As such, the indoor environment is healthy and students and staff have ample access to fresh air and finishes are low-VOC.

Programmatic Suitability

The Dedham ECEC occupies a bucolic site on the west side of Dedham, surrounded by conservation land. The building is a purpose built early eduction facility, designed and built under MSBA regulations, making this building fit for purpose. The school features appropriately sized toileting facilities and accommodations for young children, which differ from older students. Each classroom has dedicated toileting facilities, integrated storage and sinks and dedicated cubby storage - all designed for young children.

The school is 51,000SF and its current enrollment is slightly over 275. This averages approximately 185 square foot per student, which is in line with MSBA standards. While this does not specifically identify any space deficiencies, it shows that the ECEC school is generally an appropriate size for its enrollment.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Dedham ECEC occupies a bucolic site on the west side of Dedham, accessed off of High street, and surrounded by conservation land low density residential lots. Parking is located in the front of the school with fire access around the building. Playground areas are located at the north and north west sides of the building and are purpose designed for young children. The playareas are in good condition.

The site contains paved parking and walkways, which are in good condition. Four level-2 EV charging spaces (two, 2 plug ChargePoint stations) are provided at the main parking lot.
The site does contain areas demarcated as FEMA Flood Zone A, although the building is built above this level, reflecting minimal flood risk and no ongoing issues were reported. Wetlands are present on the parcel, including the Lower Brook, although the building is set away from wetland areas.



Multipurpose room with playground beyond

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Evaluate unprotected steel decking areas — confirm compliance with Type IIB construction requirements
- Test EVAC system and emergency responder radio coverage per 527 CMR maintenance requirements

10-Year Capital Reserve Items

- Natural gas boiler and water heater lifecycle planning — installed 2019, expected replacement ~2039–2044
- Consider HVAC electrification to heat pump systems at end of boiler life (2039+)
- Rooftop solar — site has 4.55-acre campus; solar evaluation recommended (~72 kW per Climate Roadmap)
- Building envelope inspection at 10-year mark (2029) — particularly roof membrane and curtain wall/window sealants

Capital Investment History

FY	Project / Capital Improvement	Amount
FY22	Solar Energy Program for ECEC (Town Meeting Article 16 — indefinitely postponed)	$0

Sustainability & Decarbonization

FY2022 GHG emissions were 125 MT CO_2e (3.53% of portfolio). Natural gas accounts for approximately 86% of emissions. Climate Roadmap proposes: energy efficiency measures 2025–2029; VRF electrification in 2030 at end of boiler life; heat pump water heater in 2030; 72.2 kW onsite solar in 2040. The solar Article at 2022 Town Meeting was postponed; re-introducing a solar lease or PPA for the ECEC roof should be considered.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The ECEC is among the Town's newest and best-condition facilities. Capital investment needs are minimal in the short term.

For planning purposes, the site and building have limited alternate uses for the school department. The facility is highly designed for its specific user age group, making reuse for an alternate age costly. Similarly, which the site is large, the buildable area is limited by existing floor zone and wetlands.

(Note: see the Volume 2 report for usage analysis and planning studies).



Large Classrooms well suited for younger child education.

HVAC - Heating, Ventilation and Air Conditioning: Dedham ECEC

Executive Summary:

Existing Conditions

The School opened in 2019 and is in very good condition. The school has a mixture of displacement air systems and overhead systems with hydronic heat throughout.

Central Heating Plant

The school has two high-efficiency condensing boilers. Each boiler was manufactured by Fulton Endura model EDR-1000. The boilers each have a natural gas input rating of 1000 CFH, providing a heating output of 960 MBH output. The boilers appear to be in good condition and should have many more years of serviceable life expectancy remaining.



Boiler 1



Boiler 2

Classrooms

Classrooms Displacement diffusers providing neutral temperature air slowly dispersed at the floor level. Return for the air is pulled from the ceiling level. Perimeter fin tube radiation provides heat for each classroom. Some of the displacement diffusers are blocked by furniture or have signage or posters covering the face of the diffusers obstructing the flow.



Displacement Diffuser



Return Grilles



Perimeter Fin Tube Radiation

Terminal Heating Equipment

Throughout the building there are terminal heat devices such as convectors, unit heaters and radiation in areas where supplemental heat is required. Terminal heat devices are in good condition.



Typical Cabinet UH

Gymnasium/Playroom

The Gym/playroom is heated and cooled by overhead ductwork distribution. The system appears in good condition and should still have years of serviceable life.



Gym

Roof Top Units

There are four RTUs Which serve the building in the sizes and capacities listed below. The RTUs were manufactured by Valent provide heat by means of natural gas and DX cooling. The units are 460 volt, 3 phase.

RTU-1 serves the Admin area and has a total CFM of 4925. RTU-2 serves the Kindergarten and has a total CFM of 8500 CFM. RTU-3 serves Pre-Kindergarten and has a total CFM of 7650/ RTU-4 Serves the Dining Area and Playroom (Gym) and has a total CFM of 7550. Based on the age of the equipment, the RTUs should be in good condition.

The Kitchen has a make up air unit which was manufactured by ThermoTek, model T2- IBT-200-G15, the unit is 200 CFH and an output of 160 MBH, 1800 CFM. Based on the age of the equipment, the MAU should be in good condition.

Toilet Rooms:

Toilet rooms throughout the building lack proper exhaust rates. Toilets in common bathrooms have transfers above the doors and one ceiling mounted exhaust fan. The fan appears undersized for the amount of toilets which it serves.



Toilet Room Exhaust

Automatic Temperature Controls:

Controls are direct digital controls (DDC) to a full building management system (BMS) for HVAC equipment. Based on its age, the DDC system is assumed to be in good operating condition.



Siemens Controls

Recommendations:

Based on the conditions observed of the existing HVAC systems and equipment, We recommend the following improvements to the HVAC system.

- The HVAC equipment and system appear to be in good operating condition and with routine maintenance the system should last for many years.
- Where furniture, signage or clothing may be obstructing the displacement diffuser, we recommend proper clearance be maintained in front of the displacement diffusers to flow properly from the source.

ELECTRICAL – Dedham ECEC

Executive Summary:

On February 19th, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Early Childhood Education Center. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in great condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's main service is rated for 1200 Amperes 3-phase 4-Wire with a service voltage of 277/480V. The primary electrical service is brought from Eversource underground from a utility pole located on High Street and over to the utility transformer located on the owner's property. The secondary service then is run underground to the location of the Main Electric room adjacent to the school's gymnasium. The secondary service is hot sequence metered at the utility transformer with utility meter is pedestal mounted adjacent the padmount transformer.

The secondary service is terminated into a Square-D two-section main switchboard which is separated into a main circuit breaker section and distribution section. The switchboard is provided with external surge suppression and a Powerlogic multimeter to monitor the building's electrical consumption. The single distribution switchboard section is utilized to feed all downstream electrical panelboards located within the two remote electric rooms. All panelboards have been sub-divided into dedicated load-type panelboards with "LP" series panels serving lighting loads, "PP" series panels serving plug load loads, and "MP" series panels serving mechanical/plumbing system loads, "EP" series panels serving emergency loads and "ELP" series panels serving emergency lighting loads. All panelboards are manufactured by Square-D and are in great condition with spare capacity for any future renovations.

All panelboards in electric rooms were found to be in compliance with NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.











Emergency Power System:

The building has an 80kW, 277/480V, 3 Phase, 4 Wire Kohler diesel standby generator with integral fuel sub-base tank. The standby generator backs up technology/security loads, life safety loads and mechanical/plumbing loads for freeze protection. The generator has two output breakers that back-up ATS-OS (Optional Standby) and ATS-LS (Life Safety). Life safety loads have been separated into two hour-rated closets to be compliant with today's standards for life safety loads.

Although full compliance would require: (1) an addition of a Manual Transfer Switch for portable generator back-up while the permanent generator is in service and (2) Redundant Transfer Equipment for the Automatic Life Safety Transfer Switch for servicing of the permanent life safety transfer switch.

Emergency lighting is fed via dedicated "ELP" series panelboards located within two-hour rated closets and backs-up selected fixtures along the paths of egress. All exit signs are of edge-lite type with green lettering and handicap exit signs are located at grade-level exits displaying the Massachusetts Approved symbol of Accessibility.









Fire Alarm System:

The existing building is equipped with a Simplex 4100 ES addressable fire alarm control panel (FACP) located within the main electrical room. This system is relatively new. Fire alarm notification and initiation devices located throughout the building are also in good condition. BDA System is also provided in the building.

A key repository box with beacon was located at the buildings main entry. Two fire alarm annunciator is located at the main entrance and secondary entrance. The method of transmission is via recessed local energy master box located at the main entrance adjacent to one of the annunciators.












Exterior Lighting System:

Canopy lighting at the main building entry lobby consists of surface mounted LED linear fixtures. Parking lot lighting is comprised of shoebox style fixtures mounted on poles.



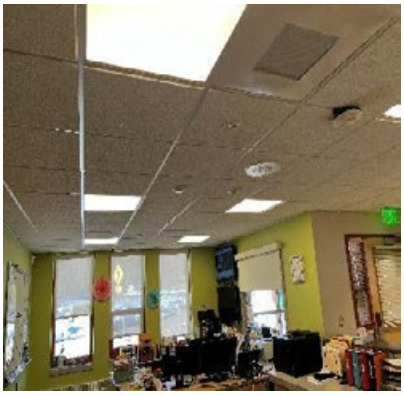

Interior Lighting:

Interior lighting within the vestibule consisted of recessed downlights.

The Main Lobby has pendant circular fixtures. Office lighting consists of 2x2 LED flat panels recessed prismatic lensing.

Pendant linear lighting fixtures are located in the classrooms.

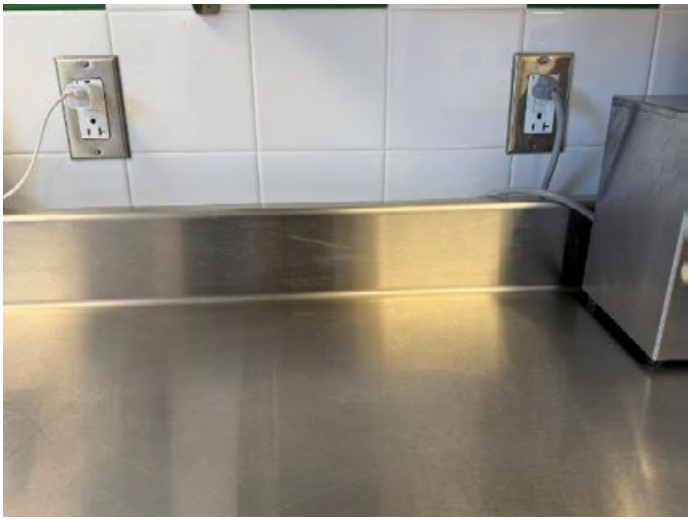





Wiring Devices:

In general receptacles are located throughout the school to support the building's needs and needs for 21st century learning. Receptacles are in great condition throughout the school and provided with proper protection as necessary. GFCI receptacles are located within 6' of sinks, within kitchen spaces and outdoor receptacles are provided with weatherproof in-use covers.





Security System

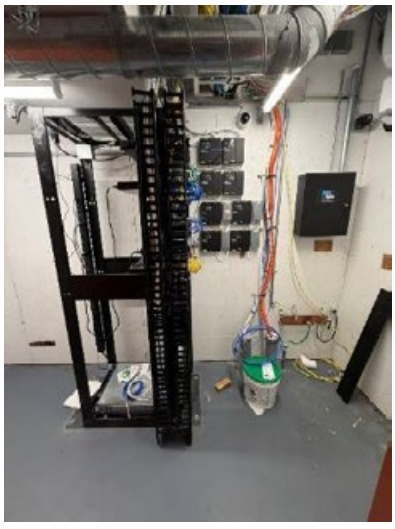
The building is protected by a DSC Maxsys intrustion detection system with door contacts at exterior doors and motion sensors monitoring the building's corridors and all areas accessible into the building from grade level.

The use of a CCTV (Closed Circuit Television) system is utilized to monitor the building's corridors and common spaces as well as the building's perimeter. Security cameras are manufactured by Axis with all camera footage saved to a local Exacqvision NVR located in the MDF. Located in the main office is a security monitor for viewing and monitoring of all live camera footage.

An access control system is provided at all main entry points into the building utilizing HID card readers, keyscan access door controllers and a dormakaba keyscan management software.

An Aiphone Video Intercom is utilized at both the main entrance and the receiving door for two-way talk communication with visitors and deliveries at either entrance.











Communication Systems:

Communication services enter the building underground and terminate at a demarcation point within the school's MDF Room. Data connection points are located adequately throughout the building for operational needs. For the school's phone system, a modern Avaya VoIP system is utilized. The ECEC building is networked back to the town's school fiber hub at the high school with a single mode fiber.

The MDF room is neatly managed with vertical and horizontal laddery tray. There are (3) 2-post network racks and (1) 4-post network rack within the MDF room. The MDF Room is home to the school's Telecor paging and clock system head end. Data cabling has been color coded per end use device type with the use of white, yellow, green and blue CAT 6 cabling. The MDF also provides connections to the two other network closets within the school with a fiber backbone.

With the MDF room also being two-hour rated, it is also home the building's BDA (Bi-Directional Antenna) system which has been installed to assist with police and fire department radio connections when responding to the building in an emergency situation.







Recommendations:

Electrical Distribution System:

Continue performing routine maintenance on electrical distribution equipment to ensure safe operation, minimize downtime, and extend system lifespan.

Emergency Power System:

Provide a manual transfer switch for portable generator back-up of the life safety systems to be code compliant with today's standards in life safety systems.

Continue performing routine maintenance on the emergency standby generator system to ensure reliable operation during power outages and maintain compliance with safety standards.

Fire Alarm System:

Continue performing routine maintenance on the fire alarm system to ensure proper functionality, code compliance, and reliable detection and notification in the event of an emergency.

PLUMBING- - Dedham ECEC

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 serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in good condition and can continue to be used with scheduled maintenance.

The plumbing fixtures are in good condition. The bathroom fixtures appear to be accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from sloped roof areas is collected by exterior gutters and downspouts which appear to discharge to a below grade drainage system. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in good condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

Fixtures:

The water closets are wall mounted, vitreous china with manually operated valves.

Urinals are wall hung, vitreous china with manually operated flush valves.

Lavatories are wall hung, vitreous china or trough type solid surface with either manual or battery powered, sensor operated faucets.

Electric water cooler is dual height, surface mounted, double unit bubbler, side by side with bottle filler.

Janitor's sink is a floor receptor with wall mount faucet equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucet, with lever type hot and cold-water faucet.

Classroom sinks are stainless steel, counter mounted, accessible with gooseneck faucets, with lever type hot and cold-water faucet and drinking water dispenser.

Showers are acrylic surrounds with thermostatic and pressure balancing mixing valve and handheld shower.

Exterior wall hydrants include loose key operation and threaded connection with vacuum breaker.

The Kitchen equipment and sinks are in good condition.



Water Closet



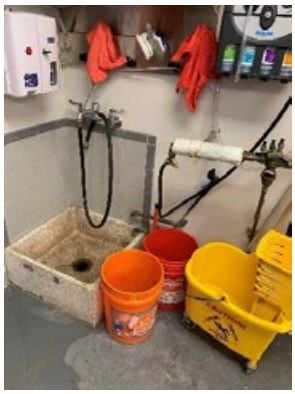
Urinal



Lavatory



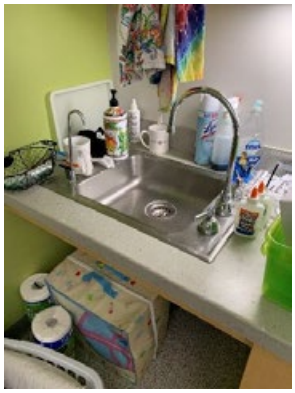
EWC with Bottle Filler



Mop Sink



Staff Sink



Classroom Sink



Kitchen Hand Sink

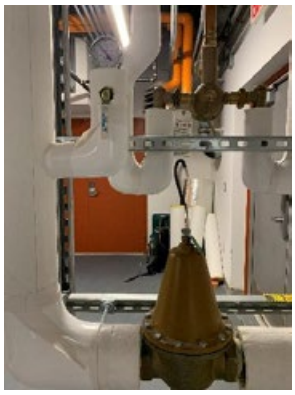
Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 4-inch in size. There is a water meter and reduced pressure backflow preventer and pressure reducing valve on the domestic service piping arrangement.

Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated and labeled. The valves used for isolation purposes are full port ball valves, tagged with an identification number.



Water Meter



PRV

Domestic hot water is provided by a gas-fired, high-efficiency, storage tank type water heater, located in the Mechanical Room. The water heater has a storage capacity of 100 gallons and a gas input of 250,000 Btu/hr. The water heater is equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated and there is an expansion tank installed. The water heater appears to be in good condition.



Water Heater



Mixing Valve



Expansion Tank

Gas:

An elevated pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the exterior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating boilers, the domestic water heater, kitchen equipment. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.



Gas Meter



Gas Piping

Drainage Systems:

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.

The Kitchen waste piping from the 3-pot sink and dishwasher is not directed to a point of use interior grease interceptor, buried in the floor.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)

FIRE PROTECTION- Dedham ECEC

Executive Summary

The existing building is fully sprinklered. The majority of the equipment and systems installed appear to have been well maintained and are generally in good condition.

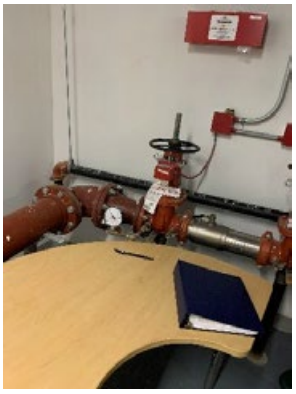
Massachusetts code requires that a school building, 12,000 square feet or more, must be sprinklered. Per 780 CMR 34.00 work shall not be considered a substantial renovation if the cost of installing a sprinkler system exceeds 15% of the total renovation cost. Should the existing building undergo a major renovation the building will require upgrades to the existing sprinkler system to provide complete protection of all spaces.

Existing Conditions:

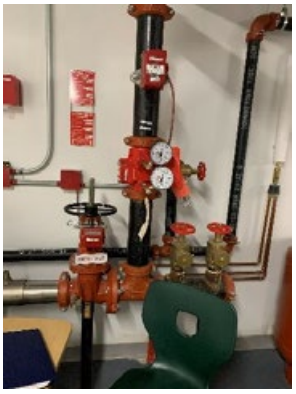
There is an existing 6-inch ductile iron fire service that enters the First Floor Mechanical Room, including a post indicator valve. The Fire service within the building includes an existing backflow preventer and a wet alarm check valve. There is a 4-inch distribution main which serves the entire building. The building is divided into zones not exceeding 52,000 square feet, each isolated by a sprinkler zone control valve assembly.



Post Indicator Valve



Double Check Valve



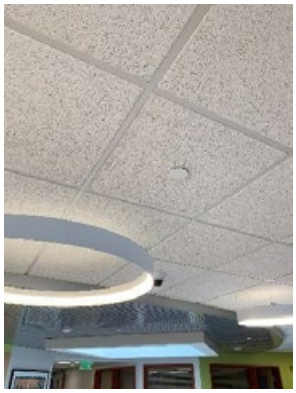
Wet Alarm Check Valve

The sprinkler system has a dedicated Siamese Fire Department connection and electric bell located on the exterior of the building.

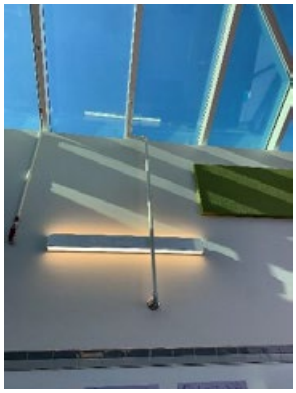


Sprinkler Zone Control Valve

The piping for the sprinkler and standpipe system is black steel. Fitting and joints are grooved couplings or threaded depending on pipe size. Piping and sprinkler heads appear to be in good condition. Sprinkler heads include quick-response semi-recessed pendent type for rooms and areas with finished ceilings. Quick-Response upright sprinkler heads are utilized for rooms with no ceilings.



Pendent Sprinkler



Sprinkler Skylight



Upright Sprinkler

Recommendations:

- Maintain existing sprinkler system in accordance with MA State Building Code, NFPA 25-2020. (High Priority 1-2 years)

STRUCTURAL EXISTING CONDITIONS (Early Childhood Education Center)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated July 2020 2004, and a site visit by RSE on February 19, 2026.

FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls and retaining walls at the perimeter. 4" concrete slab on grade with welded wire mesh at the first floor. Bottom of exterior footings are 4 feet minimum below grade.
2. No known modifications to foundations since original construction.
3. Besides minimal shrinkage cracks in the slab on grade that extend up through floor finishes, no other structural foundation issues observed.
4. Recommendations: none

SUPERSTRUCTURE

1. Steel framing includes steel columns, steel beams, cold formed metal roof trusses, and metal roof deck. Lateral system consists of steel braced frames.
2. Condition/Known Issues: none
3. Recommendations: none

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Endicott Estate and Outbuildings

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: T-4 | Endicott Estate and Outbuildings

SELECT BUILDING: T-4 | Endicott Estate and Outbuildings

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	T-4	**Flood Zone:**	None
Address:	656 East Street	**Wetlands:**	No
Year Built:	1904	**Historic:**	Listed – National Register
Last Renovated:	None	**Lot Size (ac):**	11.62
Gross Sq Ft (GSF):	25,228	**Building Use:**	Cultural / Historic
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Wood Frame	**Assessed Value:**	$5,640,600
Roof Year:	unknown	**Deferred Maint. ($):**	tbd
Window Year:	tbd	**Est. Renovation Cost:**	tbd
No. of Floors:	2	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	~29
Electrification Potential:	2032 – VRF	**GHG Emissions:**	72
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.62	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	2.5	• Poor
Structure (Avg):	2.0	• Fair
MEP / FP (Avg):	3.1	• Poor
Life Safety / Code:	2.9	• Poor

KEY COMPONENT SCORES

Roof:	2.0	Electrical:	4.0
HVAC – Heat:	3.0	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	3.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-



Endicott Estate grand front entry

The 1905 Endicott Estate is an architecturally significant historic property on an 18-acre site that serves as a cultural venue and event space, and carries multiple active life safety and accessibility deficiencies requiring near-term resolution.

The Endicott Estate is an 18-acre historic property on East Street featuring a three-story main building with basement built in 1905, a greenhouse, garage, and the Endicott Branch Library (addressed separately as T-3 in this report). The main building (~20,200 GSF, ~5,150 SF footprint) serves as a venue for cultural programs, Town meetings, and private event rentals and is an important revenue source. HVAC systems were found to be at or near end of life, electrical systems in poor to fair condition and at capacity, and there are life safety deficiencies. The main building lacks a sprinkler system and multiple egress, accessibility, and exit signage code violations as the highest priority issues.

A single gas-fired boiler (approximately 82% efficient, atmospherically vented) is in fair condition but should be considered for replacement. The original steam system has been converted to hot water using copper and PEX piping — critically, the piping is uninsulated, causing significant heat loss. Kitchen exhaust hood is compensating type. Terminal heating equipment is nearing end of serviceable life (unit heaters, cabinet unit heaters, unit ventilators). Hot water pump is also nearing end of life. Replacement of all terminal devices is recommended. The 200A single-phase service is at capacity (fair condition, nearing or at capacity) and there is no emergency generator — transfer switches are installed in the basement but not connected to anything.

The fire alarm system was recently upgraded and is addressable and code-compliant. The main entrance is not accessible and accessible restroom have maneuvering clearance and floor space deficiencies. There are no accessible drinking fountains and non-compliant handrail arrangements at interior stairs were observed.

Building Structure & Exterior

The Endicott Estate is an 18-acre site, which features a main house, garage, greenhouse, and smaller house which is rented to a private tenant. The main house is a three-story, 25,000 SF colonial revival structure built in 1904 as a private residence and estate and listed on the National Register of Historic Places in 2002.

The building is a wood framed structure which is installed over rubble and brick basement walls. Brick piers and interior walls are located in basement. Peeling paint in some areas indicates moisture issues, either humidity or moisture infiltrating through the brick. Above the foundation is a wood framed building with hipped roofs. Wood trim at roof eaves and porches show signs of rot and deterioration. If not addressed, these can lead to water infiltration and rot of structural elements within the building. Rotted elements should be repaired to prevent deterioration of building structure.

The exterior of the building is clad with painted wood clapboard with ornate wood trim. There is a large ornate story entry canopy along south-east facade. Punched openings are double hung wood sash windows, generally with a 1 over 1 pattern. The roof is pitched, with asphalt shingles.

The greenhouse is a typical metal and glass greenhouse structure, observed to be in fair condition. The caretaker house is rented by a private tenant and was not observed during this study.

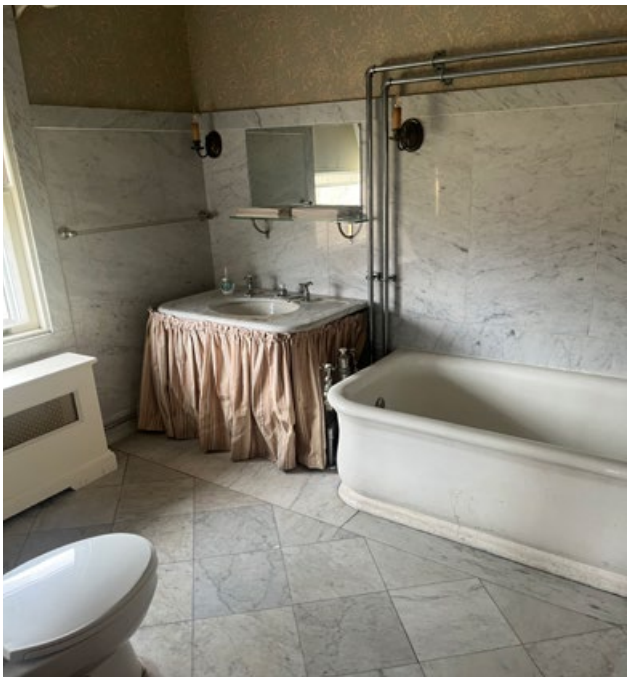
Interior Environment

The main Endicott Building serves as an active center for civic and public-use event rental functions. This use was outlined in the will of Katherine Endicott.

The interior of the Endicott house still retains much of the original materials including oak and mahogany paneling, wood flooring, carved moldings, ornate mantles, and marble bathroom fixtures and walls.



Interior entry with ornate woodwork



Second floor bathrooms are not accessible

Window and door surrounds feature elaborate architraves. The second floor was utilized as the sleeping quarters and contains seven bedrooms, three bathrooms, now used as event space, particularly for weddings. Second floor interior finishes include plaster walls, simple moldings, wood paneling, and marble bathrooms containing their original plumbing fixtures. The upper floor is within the roof and features similar wood plank floors and plaster walls. The upper floor is used for storage and not accessible to the public. The interior spaces are dated, but well lit with good access to natural daylight.

Programmatic Suitability

The Endicott Estate anchors the historic Endicott neighborhood and is a prominent civic site for gathering and recreation. The building anchors the 18-acre site with its bucolic landscape.

The 25,000 SF Colonial Revival structure is used for meetings, events, and weddings, with the ground floor used as primary gathering spaces. The upper floor still contains the bedrooms and bathrooms used by the original residents and supports event functions, particularly wedding events. The basement and upper floors contain mechanical and storage spaces and are not usable by the public. While historic, the building is not fully accessible. There is no accessible access to each floor and there are accessibility issues with bathrooms and entry spaces. The residential construction of the main estate does effectively support its use, although upgrades to kitchen and other event facilities could increase its value and future revenue.

The large, well manicured site also supports the estates public event functions. The site is one of the largest green spaces within Dedham and supports passive recreation. The site is large with ample space to support outdoor events, both public (classic car show) and rented (outdoor tents for weddings and other large events).

The building's National Register of Historic Places designation (2002) and deeded will to the town constrains future alterations to the exterior and site, requiring SHPO review and the involvement of a historic preservation architect for any significant changes. The residential nature of the construction and layout also preclude other uses without extensive cost and planning effort.

The historic status and estate effectively preclude building expansion, and the site should be understood as fixed in its current footprint for planning purposes.

(Note: see the Volume 2 report for usage analysis and planning studies).



Endicott Greenhouse on Estate Site

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Install sprinkler system
- Full electrical service upgrade — current 200A single-phase is at capacity; any HVAC modification requires upgrade
- Replace all non-illuminated exit signs
- Resolve accessible entrance — ramp pinch point makes main entry non-accessible (521 CMR)
- Resolve Accessibility restroom deficiencies — maneuvering clearance and clear floor space issues
- Replace uninsulated HVAC piping in basement to restore heat delivery efficiency
- Replace all non-compliant winder treads and handrail arrangements (780 CMR 1011.5.3 & 1014)
- Exterior building assessment — structural, envelope, and drainage evaluation

10-Year Capital Improvements

- Boiler replacement — approaching end of serviceable life; replace with high-efficiency condensing unit
- Complete replacement of all terminal heating devices (unit heaters, cabinet unit heaters, unit ventilators)
- Replace hot water circulation pump (near end of life)
- Install accessible drinking fountain per 521 CMR
- Upgrade kitchen exhaust

Capital Investment History

FY	Project / Capital Improvement	Amount
FY21	Endicott Sprinklers / Utility Excavation (additional funding)	$168,000

Site Conditions

The Endicott Estate occupies a bucolic site within the Endicott neighborhood, accessed off of East street, and surrounded by low density residential lots. Parking is located in the north side of the estate with an adjacent gazebo. The estate is made up of broad terraced lawns marked by mature elms, spruce and weeping willows surrounding the estate.

The site contains paved parking and walkways, which are in good condition. The site does not contain any FEMA Flood Zones. Wetlands are not present on the parcel.

Sustainability & Decarbonization

FY2022 GHG emissions were 72 MT CO_2e (2.04% of portfolio). Fossil fuels (natural gas) account for approximately 82% of emissions. Uninsulated heating piping further reduces efficiency. Decarbonization Roadmap proposes electrification and high-efficiency boiler replacement at end of boiler life. Rooftop solar constrained by building character and heritage. Insulating existing piping is an immediate no-cost energy efficiency measure.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The lack of a sprinkler system at the Endicott Estate is the most urgent life safety issue in the entire Town portfolio. A building of this public use type (Group A-2 Banquet Hall) conducting private events without functional fire suppression creates significant liability. The building's continued use as a private event venue (revenue source) makes this a particularly high-profile risk management issue. The building is not fully accessible, which limits its use and its historic designation makes modifications more difficult.

(Note: see the Volume 2 report for usage analysis and planning studies).



Existing Kitchen is Outdated

HVAC - Heating, Ventilation and Air Conditioning: Endicott Estate

Executive Summary:

The Endicott Estate HVAC systems which serve the building appear to have reached or are close to their end of their anticipated serviceable life expectancy and should be considered to be replaced with modern systems with improved energy efficiency and thermal improvement for occupant comfort.

Existing Conditions

Central Heating Plant:

The building is heated by a single boiler producing heating hot water. The boiler is natural gas fired, approximately 82% Efficient. The boiler is atmospherically vented with the breeching run into the existing chimney. The boiler appears in fair condition but should be considered for replacement. The pump for the hydronic heating system is an inline pump which distributes heating hot water throughout the building. The original heating system produced low pressure steam, but has been retro-fit to provide heating hot water. Heating piping has been converted from cast iron pipe which is used in steam applications to copper piping and flexible pex tubing. Flexible pipe is easier to retro-fit applications because the pipe installation is more forgiving than straight rigid piping. The piping is not insulated which allows heat loss through the pipe wall to the basement area and lowers the temperature of the water to the terminal heating devices.

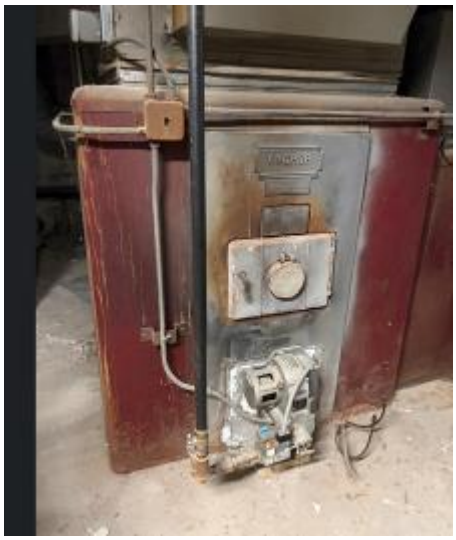


Boiler



Hydronic Heat Manifold

There is an antiquated unit located in the basement that does not appear to be operational or in use. This equipment would be recommended to be removed.



Abandoned Unit in Basement

Kitchen:

The kitchen cooking equipment is located under a kitchen exhaust hood. The kitchen exhaust hood is a compensating type which introduces make up air in front of the hood to minimize the amount of exhaust being pulled from the remaining kitchen.



Kitchen Exhaust System

There is a secondary cooking area which is also located under a hood. This is likely decorative remaining for the historical characteristics and likely no longer in use.



Historic Kitchen Exhaust System

Terminal Heating Devices:

Terminal heating devices throughout the building are radiators which have remained from when the system was low pressure steam as the heat source in the building. These heaters have been converted to hot water heat. Hydronic hot water is a lower temperature than low pressure steam, so the terminal heating devices do not receive the amount of heat they are designed to heat the spaces. Many of the controls are still low-pressure steam type valve controls



Terminal Heating Devices



Terminal Heating Device

Air Conditioning:

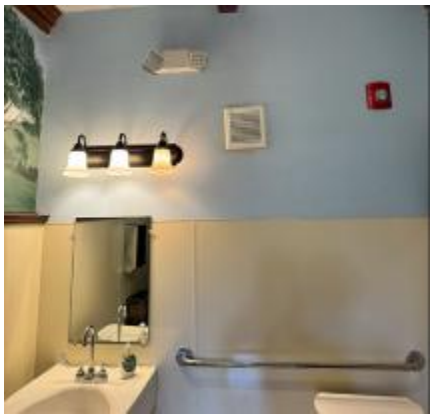
There are two air cooled condensing units located on a pad at grade outside the building. These units are connected by refrigerant pipe to indoor units which provide AC. The condensing units appear to utilize R22 refrigerant and appear at the end of their anticipated serviceable life expectancy.



Existing Air-Cooled Condensing Unit

Toilet Rooms:

The Toilet rooms have a wall mounted exhaust fan and cast iron radiator for heat.



Exhaust Fans

Automatic Temperature Controls:

Controls observed appear to be stand-alone in nature. Controls for the terminal heating devices are low pressure steam control valves. There is no programmable means for occupied or unoccupied setback.



Radiator Controls

Recommendations:

Based on site observations of the existing equipment and systems at the site, we offer the following recommendations.

- The existing radiators should be considered to be replaced with heating terminal devices that are sized for the appropriate water temperature entering the terminal devices.
- The standard efficiency boiler should be considered to be replaced with a high efficiency condensing boiler which would have outdoor temperature reset and consume less gas and improve energy efficiency.
- Air conditioning equipment should be considered to be replaced with new more efficient and reliable AC.
- HVAC equipment would be recommended to connected to a building management system (BMS). This would allow the system operate in a more energy efficient manner, allowing alarm notification, remote access and improved overall thermal comfort throughout the building.

ELECTRICAL – Endicott Estate

Executive Summary:

On March 26, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Endicott Estate. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the building systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

The report details several code violations present within the building along with recommendation on how to correct them.

Electrical Distribution System:

The building's main service is rated for 200A (amperes) at a 1-phase service voltage of 120/240V (volts). The secondary service is brought from an Eversource utility pole 48/79 located on East Street. Secondary service is hot sequence metered terminating at an 200A rated service main breaker panelboard in the electrical room at the basement level. There is an additional utility meter connected to a similar 200A rated main breaker panelboard also located in the electrical room at the basement level. Electrical sub-panels are located throughout the building. All distribution equipment found within the building's electrical room would be described as in fair condition and nearing or at capacity. The second utility meter and associated panelboard appear to have been installed at a more recent date and are in good condition.

Electrical sub-panels were found within the buildings' main electrical room (i.e. basement).
Panels appear to be in locations that were not code violations with the proper working clearances in front of them. Those sub panels appear to be in fair condition and nearing or at capacity.






FOYER
EXIT
SIGNS





Emergency Power System:

The building is not equipped with an emergency back-up generator. The building does have provisions for a pad mounted exterior generator. There are transfer switches provided in the basement area but they are not connected to anything currently. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to new. There was a concern overall that the paths of egress within the building were not adequately covered to meet the requirements for illumination of the paths of egress as described in NFPA 101.

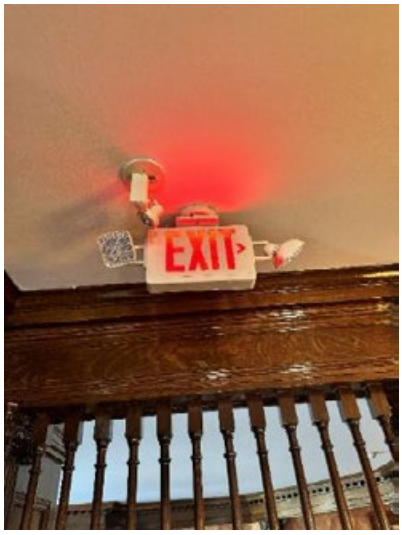
Exit signs within the building are all thermoplastic type and vary in condition from poor to good. Many of the buildings' exit signs have begun to yellow, a typical sign of aging in a thermoplastic sign..









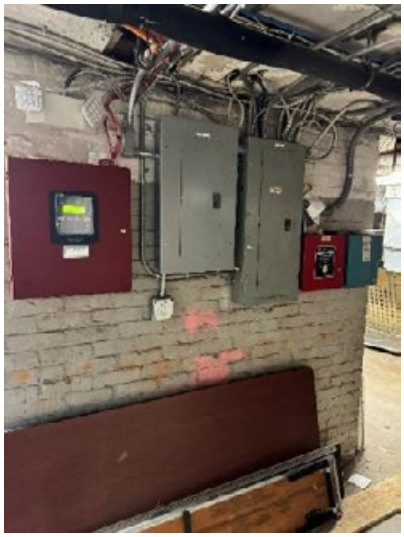




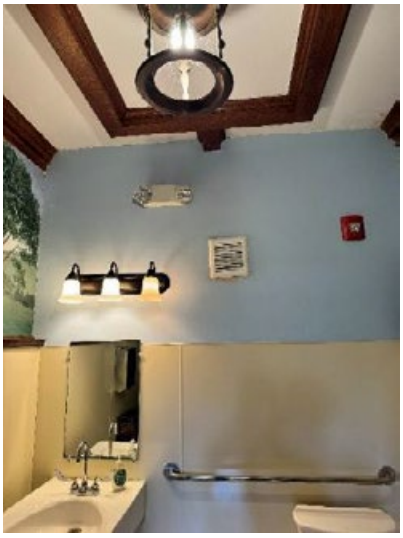
Fire Alarm System:

The existing building is equipped with a Fire-Lite ES-200x addressable fire alarm control panel (FACP) located at the buildings basement level. This system is generally considered to be obsolete with conventional wired zone type architecture. Battery back-up was not observed at the time of the visit. Fire alarm devices were in good condition, indicating a recent fire alarm upgrade in the building..

A key repository box with beacon was located at the buildings main entry. No fire alarm annunciator or graphical map was found during the visit to the site. The method of transmission is provided via AES Intellinet wireless system.







Exterior Lighting System:

Traditional style building mounted fixtures, pendants and wall mounted. Additional wall pack fixtures have been installed at the top corners on the exterior. There are no parking lot pole fixtures provided on this site. In general, the lighting source is standard fluorescent lighting. There are no energy efficient LED light source present.





Interior Lighting:

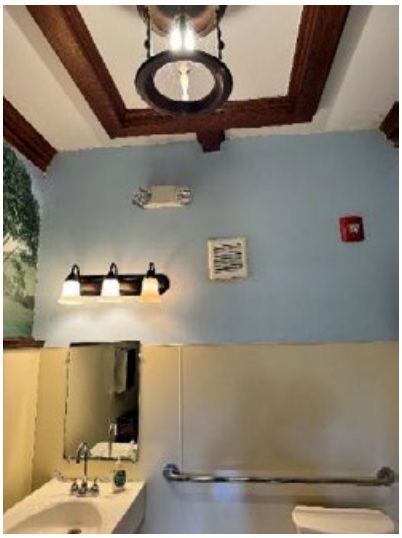
Interior lighting within the existing building consisted of more traditional style pendant mounted lighting with brass type finishes and frosted glass domes. The lighting does not appear to have LED light source provided or retrofitted into these fixtures. There is also traditional wall sconce fixtures in the corridor areas.

There are also some additional downlighting provided within the main common spaces. These appear to be non LED light sources.

Utility lighting primarily consisted of linear wrap around fixtures some with prismatic lensing, The only exception to these were some porcelain socket style lighting fixtures found in basement and in attic.

No centralized control system was found but some areas were outfitted with line voltage occupancy sensors. No daylight harvesting sensors were found.












Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in poor condition throughout. Some receptacles have been painted this is generally considered a code violation as it alters the UL listing of the device and has the potential to negatively affect how the device functions. Floor boxes were found to have damaged or missing covers. Some receptacles have been replaced with more recent receptacles. They do not appear to be tamper resistant. Most receptacles appear to be of the 3 prong type with ground.

Exposed wiring terminations were found mainly in the basement area. There is what appears to be an old panelboard location that has been utilized as junction box with exposed wiring terminations. Missing junction box covers, and extension cords utilized for connection to receptacles were observed.







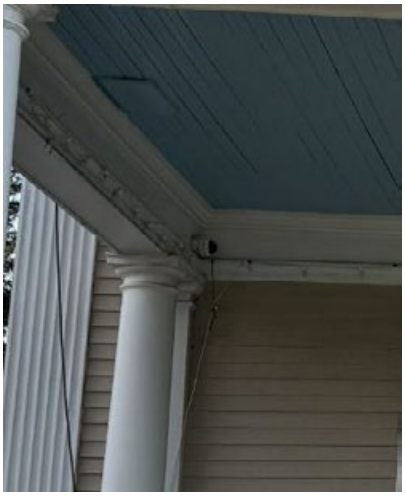




Security System

I did not observe a full intrusion system at the building. Security cameras are provide on the exterior of the building.





Communication Systems:

Phone and internet services enter the building underground and terminate at a demarcation wall in the basement space. Data connection points are sparsely located throughout the building.





Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Elimination of obsolete equipment abandoned in place should be considered for removal along with upgrade of panels that are in poor condition. Additionally, panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

Fire alarm system is an addressable type system that is code compliant. Provide additional fire alarm devices where required. The system appears to have been upgraded recently.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Lastly, A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

Provide additional receptacle locations to assist in elimination of extension cord usage. It is recommended that all receptacles be replaced within the building and that tamper resistant receptacles be installed in any public areas of the building.

Security System:

It is recommended that the current intrusion system installed be replaced and expanded to provide door contacts at all points of accessible entry to the building as well as a full coverage of motion sensing devices within the building at grade level.

A CCTV (Closed Circuit Television) system should be provided with cameras providing coverage to the exterior building and throughout all public areas of the library. The town of Dedham to confirm the town wide security access system prior to any work.

A card access system should also be provided to secure, track, and monitor access to all entry points of the building.

Communication Systems:

New phone and internet services should be provided to the site. The demarcation point for the phone and internet services should be re-located to a dedicated room within the building. The room should be fitted with appropriate data rack with spaces for all systems in use data, security, phone, etc. All systems shall be fed with color coded cabling for ease of identification and maintenance when necessary. The room should be conditioned and provided with rack mounted UPS (Uninterruptible Power Supply) for back up during power loss situations.

Additional telephone/data ports and wireless access points should be provided in all offices and finished areas throughout the building.

PLUMBING- ENDICOTT ESTATE

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 serve the building.

Fixtures:

The water closets are floor mounted vitreous china with flush tanks.

Lavatories are wall hung vitreous china with manual faucets.

Bathtubs are provided in the upper floor bathrooms.

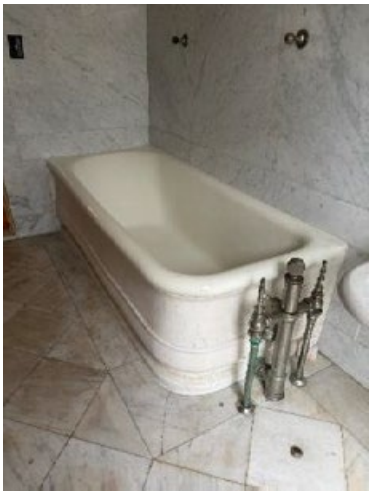
Kitchen has a 3-bowl scullery sink with pre-rinse faucet. Sink is connected to a floor mounted grease interceptor.

Clothes washer is located in the basement.

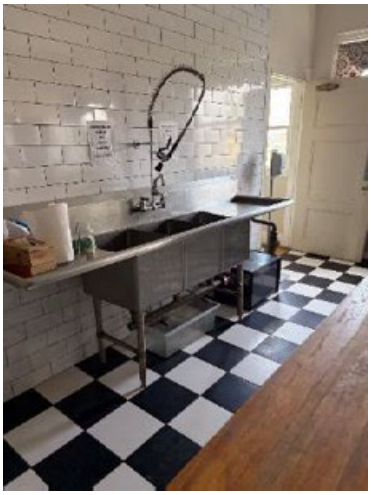
There is no drinking water station



Typical bathroom fixtures



Typical bathtub



Kitchen 3-compartment sink



Glass washer/clothes washer

Water Systems:

The domestic water service appears to be 1-inch in size and includes a water meter. There is no backflow preventer on the main service. The main water distribution size is 1-1/4".

Piping, where exposed, is copper tubing with sweat joints. Where modifications have been made copper press fitting have been used. The domestic water piping is not insulated.

Domestic hot water is provided by a gas-fired tank type water heater. The water heater has a natural gas input of 40,000 BTUH and 40 gallons of storage. Water heater appears to be in good condition. There is no mixing valve and the hot water is not recirculated.



Domestic water service & meter



Domestic water heater

Gas:

Natural gas is provided to the building. The gas meter on the exterior. Natural gas is provided to the heating boiler, domestic water heater, and kitchen cooking equipment. Gas piping is black steel with threaded joints and fittings.



Exterior gas meter



Gas fired boiler



Kitchen cooking equipment

Drainage Systems:

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







Drainage piping

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Repair PVC drainage piping with cast iron.
- Install thermostatic mixing valve and hot water recirculation system at existing domestic water heater.
- Insulate domestic water piping.

FIRE PROTECTION – Endicott Estate:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

STRUCTURAL EXISTING CONDITIONS (Endicott Estate and Outbuildings)

OVERVIEW

1. Existing conditions based on floor plans, and a site visit by RSE on March 26, 2026.
2. The building is a historic structure.

FOUNDATIONS

1. Observed foundations are rubble and brick basement walls. Brick piers and interior walls in basement.
2. No known modifications to foundations since original construction.
3. Peeling paint in some areas indicates moisture issues, either humidity or moisture infiltrating through the brick.
4. Recommendations: none

SUPERSTRUCTURE

1. Wood framed building with hipped roofs.
2. Condition/Known Issues: wood trim at roof eaves and porches show signs of rot and deterioration. If not addressed, these can lead to water infiltration and rot of structural elements within the building.
3. Recommendations: Rotted elements should be repaired to prevent deterioration of building structure.

PHOTOS

	Photo: Peeling paint at brick wall in basement.
	Photo: Rot at trim at roof eave

Fire Station (East Dedham)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: PS-2 | Fire Station (East Dedham)

SELECT BUILDING: PS-2 | Fire Station (East Dedham)

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	PS-2	**Flood Zone:**	Zone AE (100-yr)
Address:	230 Bussey Street	**Wetlands:**	No
Year Built:	1897	**Historic:**	None
Last Renovated:	2009	**Lot Size (ac):**	0.17
Gross Sq Ft (GSF):	6,092	**Building Use:**	Public Safety
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Wood Frame	**Assessed Value:**	$1,262,200
Roof Year:	2009	**Deferred Maint. ($):**	tbd
Window Year:	Unknown	**Est. Renovation Cost:**	tbd
No. of Floors:	2	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	~43
Electrification Potential:	2030 – Ductless ASHP	**GHG Emissions:**	26
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	High

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	3.23	Critical

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.1	• Poor
Structure (Avg):	2.7	• Poor
MEP / FP (Avg):	3.3	• Critical
Life Safety / Code:	3.9	• Critical

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	4.0
HVAC – Heat:	3.2	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

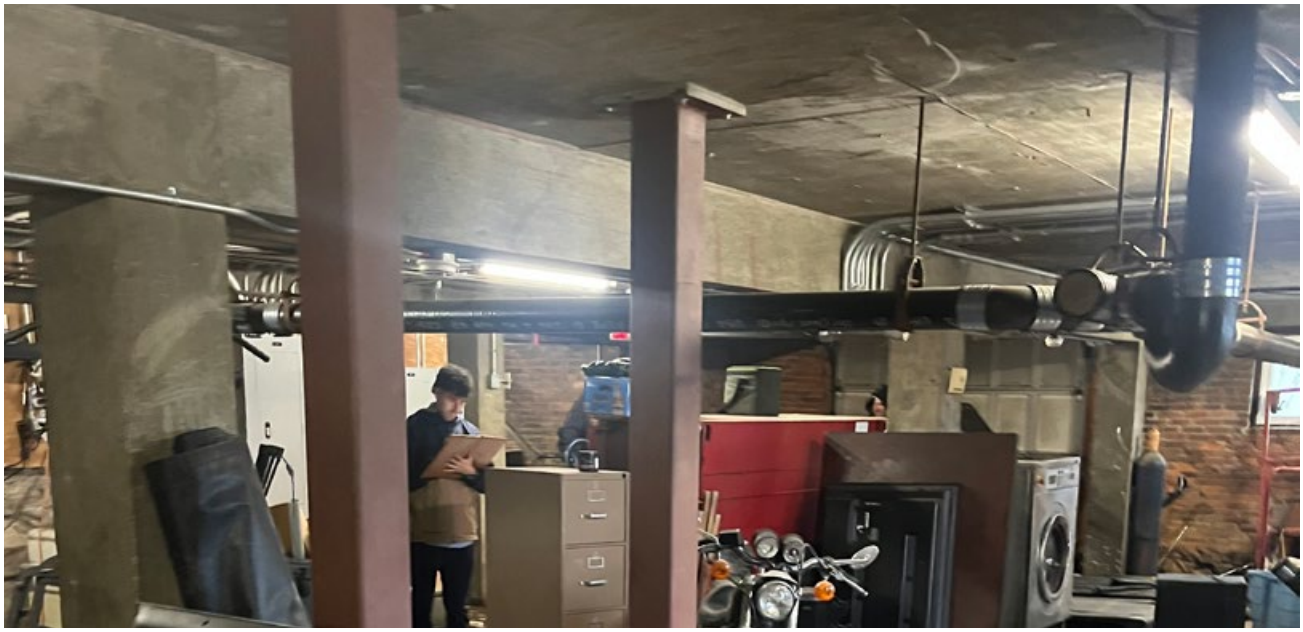
OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Structural Reinforcing below Engine Bays

The East Dedham Fire Station is over 100 years old and, while partially updated in recent years, retains aging systems and operational limitations that raise questions about its long-term adequacy as an emergency response facility.

The East Dedham Fire Station on Bussey Street is a historic structure over 100 years old with approximately 6,092 SF and two vehicle bays. The station accommodates approximately three to four personnel at a time. The 2035 Master Plan notes the building 'is in need of updates.' Systems were found to be antiquated and well beyond their serviceable life expectancy. The single boiler is in fair condition, the majority of terminal devices are at end of life. A critical life safety deficiency exists in the apparatus bay: no carbon monoxide or exhaust sensors are present.

The building is heated by a single Peerless gas-fired boiler producing low-pressure steam (~82% efficient, atmospherically vented into existing chimney). The boiler is in fair to good condition and expected to have many more years of serviceable life. However, the majority of terminal devices are beyond serviceable life. Bunk rooms have steam cast iron radiators for heat plus through-wall AC units and the apparatus bay is heated only by bare steam pipe running the perimeter (no dedicated HVAC). Office areas received new VRF heat pump systems (installed 2025, good condition). An ERV (Renew Aire, 1,100 CFM) serves offices and the locker room.

The apparatus bay has no carbon monoxide or vehicle exhaust detection sensors and vehicles left running could create dangerous CO buildup with no alarm. Replacing all terminal devices is recommended. Electrical condition is generally fair, but in need of upgrade. Domestic plumbing is in fair condition.

Building Structure & Exterior

The East Dedham Fire Station is a two-bay fire sub-station, which supports emergency response to the east side of the town. The substation is a two-story, 6,000 SF structure built in 1897 and was designed as a fire station, supported by horses.

The building is a wood framed structure which is installed over rubble and brick basement foundation walls. Brick piers and interior walls are located in basement. Peeling ceilings and paint indicates moisture issues, specifically noted as infiltrating at the apparatus bay apron. Above the foundation is a wood framed building with hipped roofs. Extensive steel reinforcing is installed in the basement to support the right side apparatus bay, due to previous settling and movement of the first floor framing. It is noted that this is not a long term solution and continued observation and monitoring is recommended.

The exterior of the building is clad with painted wood clapboard with simple trim. Two large vehicle doors face the street. Punched openings are double hung wood sash windows, generally with a6 over 2 pattern. The roof is pitched, with asphalt shingles. Generally the exterior facade was observed to be in fair condition.



Infiltration into basement under the apron has been persisent

Interior Environment

The East Dedham Fire Station is a two-bay fire sub-station. The first floor contains two fire trucks (notably, the left bay is used to store a reserve vehicle) and a small office. Informal workout space is located behind the vehicles and a small 'turn down' area is adjacent to the vehicle bay and open to other occupied spaces.



Interior stairs are not fit for purpose

The second floor contains a small kitchen and individual bunk rooms. The interior spaces are very dated and well worn and in poor condition. The living quarters are moderately lit with fair access to natural daylight. The interior air quality is likely poor, there is little separation between the vehicle bay and living quarters and the turndown area does not meet contemporary standards for cleanliness and separation from living quarters.

Programmatic Suitability

The 6,000 SF structure is used as a fire sub-station, supporting a one fire engine crew. The station is extremely small, with only two vehicle bays, and only one bay is active. The station lacks dedicated space for turn-down and storage of fire fighting equipment, separate space for fitness and office functions. There is no accessible access to each floor and there are accessibility issues with bathrooms and entry spaces. The living spaces are closer to a residential type construction while the high-intenisity use type of fire fighting should have commercial grade finishes. The living quarters are also undersized and in poor condition.

The site is very small, with only .17 acres. Trucks enter directly out onto Bussey Street, but there is no space on site to maneuver vehicles and parking is limited. Further, the site backs up on the Mother Book, which is a flood risk to a critical facility.

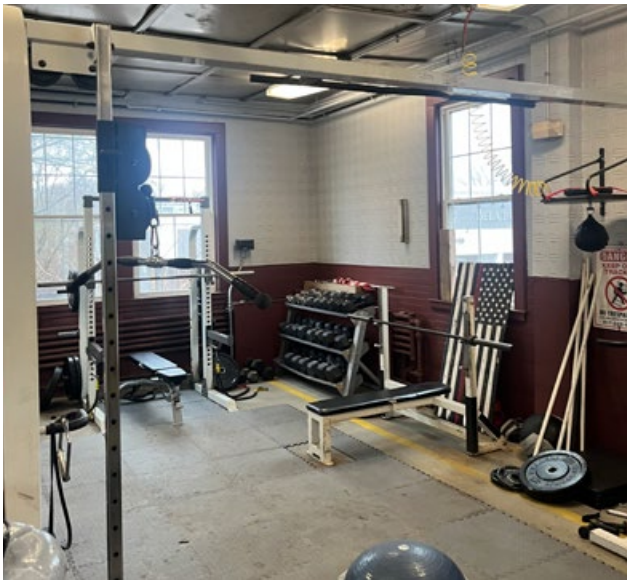
Due its size, site, critical use and condition, it is recommended that planning begin for a new fire-substaiton if its use is required by a response time study.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The East Dedham Fire station is accessed off of Bussey Street, and surrounded by bordered in the rear by the Mother Brook. Parking is located in the rear and side of the station, although it is very informal. The site is very small and bordered closely on each side.

The site contains paved parking and walkways, which are in poor condition. The building is not within the FEMA Flood Zone, but does abut the Mother Brook, which increases risk. Wetlands are not present on the parcel.



Makeshift gym at rear of vehicle bay

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- INSTALL CO/EXHAUST SENSORS IN APPARATUS BAY — immediate life safety deficiency; no protection from vehicle exhaust CO
- Assess smoke and CO detection coverage throughout building for code compliance

10-Year Capital Improvements

- Long-term planning: evaluate whether a 100+ year old, 6,000 SF station adequately serves East Dedham's emergency response needs
- Replace all original steam terminal devices — cast iron radiators, bare steam piping in apparatus bay — all beyond serviceable life
- Boiler replacement — atmospheric venting into existing chimney limits future high-efficiency options; evaluate chimney condition
- Full station renovation or replacement feasibility study
- Apparatus bay ventilation system — dedicated exhaust capture system for vehicle emissions
- LED lighting upgrade throughout
- Bussey St. corridor improvements adjacent to station (active TIP project) may create access and staging constraints

Capital Investment History

FY	Project / Capital Improvement	Amount
FY25	VRF Office Retrofit	Confirmed installed

Sustainability & Decarbonization

FY2022 GHG emissions: 26 MT CO_2e (0.72% of portfolio). Natural gas (steam boiler) accounts for approximately 69% of emissions. The 2025 VRF office retrofit reduces fossil fuel dependence in the office zones. Decarbonization would require boiler replacement with heat pump systems — constrained by the historic building and chimney infrastructure.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The CO/exhaust sensor deficiency in the apparatus bay is the most urgent life safety issue at this facility and must be addressed immediately. The East Dedham Fire Station is the Town's oldest operational facility and raises fundamental questions about its long-term adequacy as an emergency response station. A programming and feasibility study should assess whether renovation of the existing building or replacement is the appropriate long-term strategy, particularly in the context of the Bussey Street corridor improvements underway. The facility no longer serves its fire fighters or its community adequately.

(Note: see the Volume 2 report for usage analysis and planning studies).



Fire Equipment Storage, Not Stored Separately from Living Quarters

HVAC - Heating, Ventilation and Air Conditioning: East Dedham Fire Station

Executive Summary:

The East Dedham Fire Station is a very old building, The systems in the building are antiquated and well beyond their serviceable life expectancy. While the boiler is in fair condition, the majority of the terminal devices and systems in the building are well beyond their serviceable life expectancy.

Existing Conditions

Central Heating Plant:

The building is heated by a single Peerless boiler producing low pressure steam. The boiler is natural gas fired, approximately 82% Efficient. The boiler is atmospherically vented with the breeching run into the existing chimney. The boiler appears in fair to good condition and would be anticipated to have many more years of serviceable life expectancy.



Boiler

Kitchen:

The cooking area has some residential type appliances with a microwave oven hood range over the hood. The kitchen equipment appears in good operating condition with many years of serviceable life.



Kitchen Exhaust System

Bunk Rooms:

Bunk rooms have steam cast iron radiators for heat and through wall AC units.



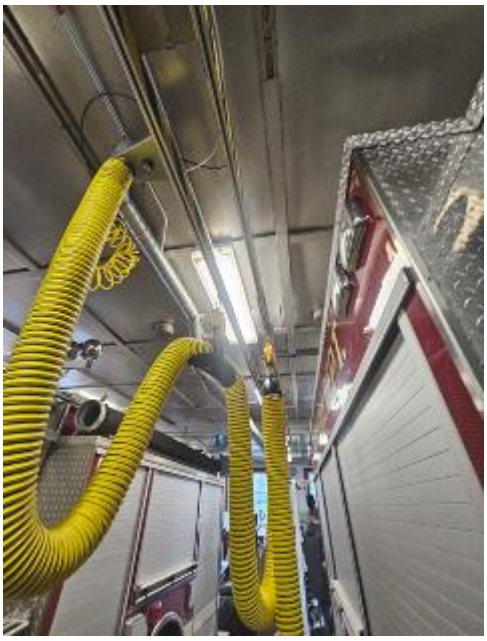
Bunk Room

Apparatus Bay:

The Apparatus Bay is heated by bare steam pipe that wraps the perimeter of the building. It is our understanding that only one truck at the FS is actively utilized and one truck is mostly stored at the site. The app bay is also utilized as a work out area and for storage.



Steam Pipe Heat in App Bay



Vehicle Exhaust Capture System



Vehicle Exhaust Capture System Exhaust Stack

Terminal Heat:

Radiators throughout the building are utilized as terminal heat sources.



Steam Radiator

Air Conditioning:

Through window AC units are utilized in the bunk rooms and there is a ductless split system heat pump.



Ductless HP Indoor Unit



Ductless HP Outdoor Unit

Toilet Rooms:

The Toilet rooms have a wall mounted exhaust fan and cast iron radiator for heat.



Exhaust Fans

Automatic Temperature Controls:

All controls throughout the building are stand-alone in nature. These include both low voltage thermostats For the air handling units and line voltage for terminal electric heat and switches for exhaust fans. There are some Siemens sensors, but these may be for temperature monitoring and have limited capacity for temperature adjustment.



Standalone Controls



Steam Radiator Controls

Recommendations:

Based on site observations of the existing equipment and systems at the site, we offer the following recommendations.

- The low-pressure steam heating system and terminal devices are well beyond their serviceable life expectancy and should be considered to be replaced with modern systems which will provide more energy efficiency and improved thermal comfort in the building.
- The low-pressure steam boiler that has an approximate efficiency of 82% would be recommended to be replaced with a high efficiency condensing boiler with outdoor temperature reset.
- Terminal heating devices would be recommended to be replaced. The cast iron radiators would be recommended to be replaced with heating terminals such as convectors, fin tube radiation or radiant heat panels.
- Mechanical ventilation is recommended to be provided throughout the building for code compliant ventilation rates.
- Additional heat pump systems could be added throughout the building to reduce dependency on fossil fuel appliances.
- The Siemens building management system would be recommended to be expanded to incorporate of all new equipment for the BMS system.

ELECTRICAL – East Dedham Fire Station

Executive Summary:

On April 2nd, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the East Dedham Fire Station. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings' systems are in fair to good condition. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's electrical utility service is provided by Eversource and fed overhead from a utility pole located on the fire department's side of Bussey St. The building's main service is rated for 200 Amperes 120/208V, 3 Phase, 4 Wire and is terminated into a Siemens distribution panelboard located in the station's basement. The main distribution panelboard feeds the other various electrical panelboards throughout the building.

The secondary service is hot sequence metered utilizing a Class 320 utility meter located on the exterior of the building. Distribution equipment found within the building varies in manufacturer and have recently been upgraded as part of a renovation project.











Emergency Power System:

The building has a 20kW, 120/208V, 3 Phase, 4 Wire Kohler natural gas standby generator. The standby generator backs up Panel OPB via an Automatic Transfer Switch. The generator backs up station lighting circuits, technology/security loads, and mechanical/plumbing loads for freeze protection. Many of the emergency systems currently installed are code compliant to today's standards and have been upgraded in recent renovation projects.

The existing 20kw generator given its condition and model number is estimated to be roughly 25 years old. Given the age, the generator itself is nearing the end of its serviceable life and should be replaced within the next 5 years.

Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to new. There was a concern overall that the paths of egress within the building were not adequately covered to meet the requirements for illumination of the paths of egress as described in NFPA 101.

Exit signs within the building are all thermoplastic type and vary in condition from fair to good. Some exit signs did not appear to have a test switch typically indicating that a sign is not provided with an integral battery back-up which would be required for a building with emergency life safety lighting not backed up to the generator.







Fire Alarm System:

The existing building is equipped with an older Simplex 4010 fire alarm control panel (FACP) with 4030 voice side car cabinet that are both located within the main entrance vestibule. A red beacon and hardwired master box are located adjacent to the front entrance door.

This fire alarm system is generally considered to be obsolete with the scarcity of parts for routine maintenance and conventional wired zone type architecture. Fire alarm notification and initiation devices located throughout the building are in fair condition and differ between a white and red color finish. As part of any fire alarm upgrade project the existing system panels and all devices should be replaced and a standard should be put in place for all notification device color finishes.







Exterior Lighting System:

Exterior lighting is accomplished via building mounted wall packs that are backed up by the emergency generator and controlled via a mechanical Intermatic time clock. Flagpole lighting is provided via a wall mounted dual head fixture that appears to utilize halogen bulbs and controlled via a building mounted photocell. Exterior lighting appears to utilize a mix of LED and fluorescent type fixtures but given fixture locations there is an overall concern for the illumination of the site.

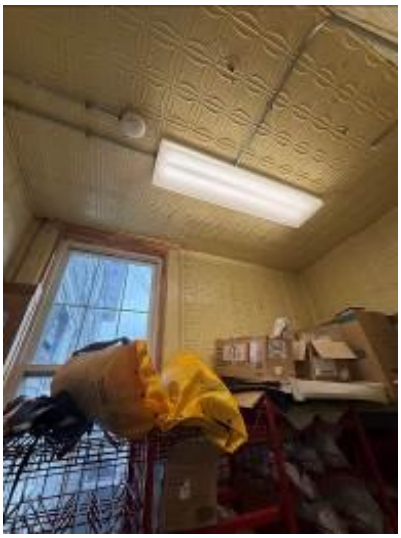




Interior Lighting:

Interior lighting within the existing fire station ranged from poor to fair condition with a majority of fixtures being surface mounted. Fixtures within the apparatus bay and utility spaces utilized linear strip fixtures. While at the second-floor recessed troffer fixtures which were no longer operational had recessed troffers and other surface mounted fixtures mounted over the existing fixtures. Existing fixtures ranged from outdated fluorescents to fixtures with retrofitted LED bulbs.

There was no centralized control system within the building, with occupants relying on manual switches in individual spaces for room lighting control.









Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in poor to fair condition throughout.

During our building walkthrough several violations of the NEC (National Electrical Code) were identified. These include the routing of extension cords above ceilings, through walls and through windows. Receptacles and switches were found to be installed above accessible ceiling which is also not permitted by code. Additionally, nonmetallic sheathed cable (Romex) was used for branch circuit wiring, which is not compliant within a commercial installation. All identified violations should be corrected to ensure compliance with applicable electrical codes and safety standards.









Security System

There were no security systems visible within the existing fire station.

Communication Systems:

Communication and fiber services enter the building from overhead and terminate at a demarcation wall within the fire station's basement. There are very few data connection points and wireless access points located throughout the building. As part of a recent renovation project, it appears that all communication systems were neatly run and now managed out of the station's basement demarcation area. Town fiber, which is networked back to the town hall, is neatly managed and runs to the station's wall mounted data rack where CAT 6 cabling is utilized for all station data cabling.





Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment was recently upgraded and is generally in good condition. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Emergency Power System:

It is recommended that the existing 20kW natural gas generator be replaced in kind due to the age and condition of the existing unit. All existing transfer equipment and emergency distribution equipment would remain as this equipment was recently upgraded.

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement.

Fire Alarm System:

Provide and install a new addressable fire alarm system with all new notification and initiation devices. The new system shall comply with all applicable codes and standards and tested for full operation.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Lastly, a lighting control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while keeping in mind the station's operations.

Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

It is recommended that all existing code violations be reviewed and addressed. It is recommended that additional receptacle locations are provided to assist in the elimination of extension cord use.

Security System:

Provide an intrusion detection system to protect and secure the building. Providing door contacts at all building entry points and garage doors. Also provide motion sensing devices that provide full coverage of the interior of the building with access from grade level.

A CCTV (Closed Circuit Television) system should be provided with cameras providing coverage to the exterior of the building.

PLUMBING- EAST DEDHAM FIRE STATION

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and natural gas. Municipal sewer and municipal water serve the building.

Fixtures:

The water closets are floor mounted vitreous china with flush tanks.

Lavatories are wall hung vitreous china with manual faucets.

Shower on Second Floor is a fiberglass enclosure with concealed shower valve and standard shower head.

There is a laundry tub with manual faucet located in the Apparatus Bay.

Kitchen sink is stainless steel, under mounted, single bowl sink with gooseneck faucet.

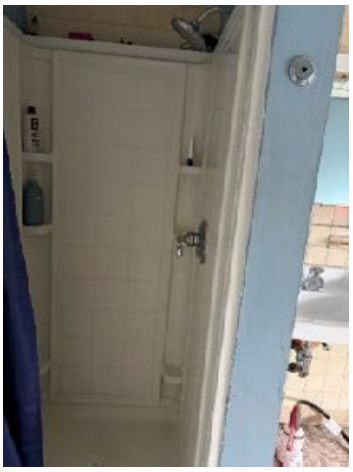
There is a bottled water dispenser. There is no plumbed drinking water station.



First Floor bathroom



Second Floor bathroom fixtures



Shower

TEL 508-998-5700 FAX 508-998-0883 email: info@g-g-d.com



Service sink



Kitchen sink



Water dispenser

Water Systems:

The main domestic water service is located in the basement. The service appears to be 1-inch in size with a 5/8" water meter. There is no backflow preventer on the service.

Piping, where exposed, is copper tubing with sweat joints. The piping is not insulated.

Domestic hot water is provided by a tank type electric water heater. One water heater is located in the basement Mechanical Room. The water heater is 240-volt, single phase, with 4.5 kW heating elements and 50 gallons of storage. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank. The water heater was installed in September 2025 and is in good condition.



Domestic water service



Domestic water heater



Water piping

Gas:

A natural gas service is supplied to the building. The gas meter is located on the exterior of the building. Natural gas is provided to the heating boiler, generator, and kitchen stove. Gas piping is black steel with threaded joints and fittings.



Gas service & meter



Gas piping to heating boiler

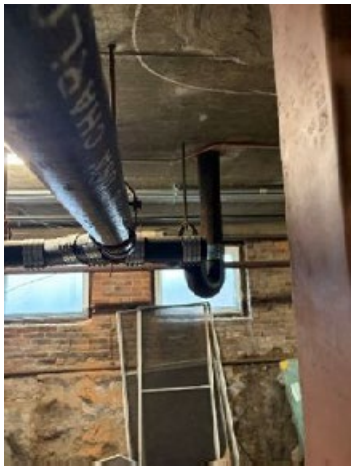


Gas stove

Drainage Systems:

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. Apparatus floor drains are run independently through an oil water separator located in the Basement.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Cast iron drain



Oil separator

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Provide one mop sink on every floor.
- Provide drinking water station.
- Install thermostatic mixing valve, expansion tank, and hot water recirculation loop at existing water heater.

FIRE PROTECTION – East Dedham Fire Station:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

Gonzalez Field

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: PR-4 | Gonzalez Field – Concession Stand & Restrooms

SELECT BUILDING: PR-4 | Gonzalez Field – Concession Stand & Restrooms

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	PR-4	**Flood Zone:**	None
Address:	500 High Street	**Wetlands:**	No
Year Built:	tbd	**Historic:**	None
Last Renovated:	2026	**Lot Size (ac):**	2.33
Gross Sq Ft (GSF):	0	**Building Use:**	Parks / Recreation
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Wood Frame	**Assessed Value:**	$501,600
Roof Year:	2026	**Deferred Maint. ($):**	tbd
Window Year:	tbd	**Est. Renovation Cost:**	tbd
No. of Floors:	1	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Electric only	**Energy Use Intensity (EUI):**	~8
Electrification Potential:	N/A – Electric only	**GHG Emissions:**	5
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	1.00	Excellent

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.0	• Excellent
Structure (Avg):	1.0	• Excellent
MEP / FP (Avg):	1.0	• Excellent
Life Safety / Code:	1.0	• Excellent

KEY COMPONENT SCORES

Roof:	1.0	Electrical:	1.0
HVAC – Heat:	1.0	HVAC – Cooling:	1.0
Fire Prot.:	n/a	Plumbing:	1.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Soccer Fields are Turf Surface

The Gonzalez Field concession stand is a seasonal facility similar to the other Parks concession buildings, serving a well used synthetic turf athletic complex on High Street. Capital improvements across all three Town concession facilities are best addressed as a coordinated program.

The Gonzalez Field Concession Stand and Restrooms serves the 6.30-acre Gonzalez Field complex at 500 High Street, which features one synthetic turf field, a quarter-mile walking path, sports lighting, benches, and improved handicapped access. This is a seasonal facility similar in character to the Barnes and Rustcraft concession stands. The stand flooded in late 2025 and was in the process of being fully renovated at time of study. The building serves as the electrical feed point for the Gonzalez Field sports lighting (Musco lighting control cabinets located within the concession storage area).

Concession Stand & Restrooms

The Gonzalez Concession stand and restroom is a small, clapboard-clad structure, generally in excellent condition due to its total renovation. The building is made up of one area for small concessions and restrooms.

There is no heating or cooling as the building is seasonal use only. Kitchen cooking area has residential appliances with no mechanical exhaust hood. CCTV cameras (Vivotek) with Altronix power supply are installed. Electrical panels also feed sports field lighting. At time of study, the stand was under construction and all systems are assumed new and in excellent condition.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Complete stand replacement project

10-Year Capital Improvements

- Evaluate synthetic turf field replacement timeline — typically 8–12 year lifecycle

Capital Investment History

FY	Project / Capital Improvement	Amount
FY26	Stand Replacement Project (Current)	$tbd

Sustainability & Decarbonization

GHG emissions were not separately identified in the Climate Roadmap; estimated ~5 MT CO_2e from electricity (sports lighting). Musco lighting at Gonzalez Field uses LED technology — efficient for field illumination.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The Gonzalez Field concession stand is similar to the Barnes and Rustcraft facilities — seasonal, minimal systems, no fire alarm or emergency lighting. These three concession stands should be addressed as a coordinated program for consistency and efficiency. The synthetic turf field at Gonzalez is an asset requiring its own lifecycle planning.

The site is raised above the surrounding areas which limits its use as an alternative site for any relocated facilities.

(Note: see the Volume 2 report for usage analysis and planning studies).



Concession Stand Under Construction After FLooding

Greenlodge Elementary School

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: S-3 | Greenlodge Elementary School

SELECT BUILDING: S-3 | Greenlodge Elementary School

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	S-3	**Flood Zone:**	None
Address:	191 Greenlodge Street	**Wetlands:**	No
Year Built:	1955	**Historic:**	None
Last Renovated:	1961 & 1970	**Lot Size (ac):**	16.74
Gross Sq Ft (GSF):	51,084	**Building Use:**	Educational
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Masonry/Wood	**Assessed Value:**	$11,216,700
Roof Year:	2000	**Deferred Maint. ($):**	tbd
Window Year:	1950	**Est. Renovation Cost:**	tbd
No. of Floors:	1	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	65
Electrification Potential:	2032 – VRF	**GHG Emissions:**	198
Solar Potential (kW):	168.4	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.92	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.2	• Poor
Structure (Avg):	3.0	• Poor
MEP / FP (Avg):	3.4	• Critical
Life Safety / Code:	2.1	• Fair

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	4.0
HVAC – Heat:	3.5	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	2.66	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	3.0	• Poor
EPI-2 Academic Suffic.:	2.2	• Fair
EPI-3 Program Suffic.:	3.3	• Critical
EPI-4 Universal Access:	3.0	• Poor
EPI-5 Building Safety:	2.5	• Poor
EPI-6 Tech. Readiness:	2.0	• Fair

Grade Config.:	1–5
Enrollment:	297
SF per Student:	172

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Rear Courtyard with Bridge Beyond

Built in 1955 with additions in 1961 and 1970, Greenlodge Elementary has accumulated significant deferred maintenance across its building envelope, mechanical, and life safety systems. Active capital investment is underway to address the most critical needs, and the building is identified as a mid-term replacement priority in the district's facilities program.

Greenlodge Elementary School was constructed in 1955 with additions in 1961 and 1970, and serves grades 1–5. The 51,084 SF facility sits on a constrained urban site on Greenlodge Street. The building was identified as the third-highest priority school for renovation or replacement in the 2020 Dedham Public Schools Facilities Master Plan. The building lacks a cafeteria (meals served in classrooms), has an undersized gymnasium, limited accessibility accommodations, and no fire suppression system in the original structure. The rear (secondary) wing is connected to the original building by a bridge corridor that has chronic water infiltration and thermal performance issues.

The original 1955 structure is masonry construction; the 1961 addition added classroom space, and the 1970 addition expanded the west wing. The building's 1950s-era electrical panels are beyond their useful life and present a reliability and safety risk. Single-pane metal-frame windows throughout the original building are in poor condition and highly energy-inefficient. The building bridge between the original building and the rear wing leaks water, is drafty, has holes in the walls, and creates significant moisture and comfort issues. Natural gas space and water heating systems were updated in 2011. The school's roof has required significant repairs, and a complete replacement design was funded in FY26.

Building Structure & Exterior

The Greenlodge Elementary School is a one-story steel and concrete structure, originally built in 1954 and expanded in 1960 and 1970. The building structure is a concrete slab and foundation with varying superstructure in various additions. Besides minimal shrinkage cracks in the slab on grade that extends up through the floor finish, and minor cracking in permi9eter frost walls, no other structural foundation issues observed in the 1954 and 1060 portions were observed. At the 1970 portion, there is significant settlement in the slab at grade in the north-west building. This has created trip hazards at the door and failure of some floor finishes. There is also cracking in some foundation walls in this area. Slab settlement should be addressed. Further investigation, including test pits to determine bottom of footing elevations and suitability of sub-grade at foundations and extent of failure should be undertaken.

First floor of the 1954 portion is an elevated concrete slab and the roof consists of steel columns and steel and wood beams with sawn lumber infill. Lateral stability is assumed to be provided by unreinforced masonry walls. Roof at the 1960 portion consists of steel beams and columns with a poured gypsum roof deck reinforced with steel mesh and supported on bulb tees. Lateral stability is assumed to be provided by unreinforced masonry walls. Roof at the 1970 portion consists of wood trusses with plywood sheathing. Lateral stability is provided by wood shear walls. Water damage was observed at ceilings and any water infiltration should be addressed to prevent deterioration of building structure.

The exterior of the building is predominantly tan brick masonry with metal ribbon windows. There is a raised bridge connecting the northwest wing, which is a source of leaks. The bridge and windows are a source of maintenance issues, with reports of leaking and are original to the building. Generally the facade is observed to be in fair to poor condition. The roof is a single-ply low-slope membrane roof. The roof was not directly observed due to snow cover but water damage was observed in ceiling tiles in certain areas. The roof was most recently replaced in 2000 and at the end of its useful life. The roof is generally in poor condition. Overall, the exterior is in fair to poor



Cracking from slab settlement at rear of addition



Ribbon glazing at classrooms in poor condtion

condition. The exterior should continue to be monitored and replacements for windows and roof should be studied.

Interior Environment

The Greenlodge Elementary School is a purpose built elementary school, containing classrooms for typical and special instruction, administration spaces, a kitchen, gym and stage, and support spaces. Building spaces are purpose built and generally fit for purpose although classrooms are undersized compared to more modern classrooms. Floor finish is typically a resilient tile floor in most student spaces. Tile floor is located in bathrooms and the gym has a wood floor. Walls are generally painted wall board, with masonry in the corridors. Tile is installed in restrooms and at drinking fountain locations.

Floor finish shows various replacements and vintages and is in poor condition with multiple areas of cracking and failure. Walls are in fair condition, but the finishes are generally dated and past their service life. The school is dim and while classrooms should one well lit with good access to natural daylight, many windows are covered. Finishes are generally in poor condition and have past their typical service life. While classrooms have operable windows, indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply.

Programmatic Suitability

The Greenlodge Elementary School sits within the Greenldoge neighborhood, a low-density residential neighborhood. The building is a purpose built elementary school, ans was built over three decades. There is a central main office with three classroom wings, accessed off of a central hallway. The school has dedicated gym, but lacks a cafeteria and special instruction spaces such as Art and Music.

The school is 51,000SF and its current enrollment is slightly under 300. This averages approximately 172 square foot per student, which is in line with MSBA standards. While this does not specifically identify any space deficiencies, it shows that the Greenlodge school is generally an appropriate size for its enrollment.

While overall the school is appropriately sized, classrooms are smaller than a comparable school and lack sufficient storage space, dedicated special instruction space, and support space, such as a kitchen and cafeteria to adequately support elementary level instruction.

The main office is adjacent to the main entry, with good sight lines for approaching visitors, as well as remote unlocking. But the main entry lacks a controlled vestibule so visitors can be checked in prior to entry into the main building. The facility is one-story, and so has relatively minor accessible issues in the bathrooms.

(Note: see the Volume 2 report for usage analysis and planning studies).



Main entry is not design as secure, lacks locking vestibule

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Full replacement of single-pane metal-frame windows (poor condition, highly energy-inefficient)
- Rebuilding of the building bridge (hallway) walls and roof — chronic water infiltration and thermal failure
- Electrical panel replacement: panels beyond end of useful life, replacement parts obsolete
- Installation of complete fire suppression (sprinkler) system
- Installation of a backflow preventer on the domestic water supply line
- Accessibility improvements including wheelchair lift renovation and playground ground cover

10-Year Capital Improvements

- Roof membrane replacement (sections of low-slope roof approaching end of life)
- Continued interior painting program
- Replacement of underground fuel oil tank or removal of fuel oil infrastructure
- Stone/concrete retaining wall refurbishment
- Complete parking lot resurfacing and restriping
- Camera security system upgrade

Capital Investment History

FY	Project / Capital Improvement	Amount
FY23	HVAC Improvements — Greenlodge	$120,000
FY24	Door Replacements — Greenlodge (Band room)	$60,000
FY24	District Wide Roof Repairs — Infrared Scan & Design/Repairs (shared)	Shared
FY26	Controlled Entry / Access & Front Office Reconfiguration — Design & Bid	$200,000
FY26	Exterior Door Replacement and Electronic Access Control	$429,000
FY26	Interior Security Camera System — Phase I Design & Infrastructure	$50,000
FY26	Roof Replacement Design — Riverdale / Greenlodge / Oakdale	$350,000
FY26	Electrical Infrastructure Modernization Study (System-wide)	$125,000

Site Conditions

The Greenldoge school is nestled into a residential neighborhood. The school is accessed from Greenlodge Street, with parking along front and sides. The site is quite large, at nearly 17 acres, but much of this is observed to be wooded, with ledge outcroppings and steep topography. Small playground areas are located at each north and south sides of the building and appear in good to fair condition. There are two softball fields to the north of the school.

The site contains paved parking and walkways, which are in fair condition.
The site is classified as FEMA Flood Zone X, reflecting minimal flood risk. No wetlands are present on the parcel per GIS review.

Sustainability & Decarbonization

FY2022 GHG emissions were 198 MT CO_2e (5.6% of portfolio). Fossil fuels account for 68% of total emissions. Primary space heating via 2011 natural gas boilers; EUI 65 kBtu/ft². Decarbonization Roadmap proposes VRF heat pump electrification in 2032, heat pump water heaters in 2032, and 168.4 kW solar in 2030. Near-term energy efficiency measures include monitoring temperature setpoints, ventilation rate improvements, and window replacement.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The School Building Rehabilitation Committee (SBRC) has identified Greenlodge as Priority 3 in the district's phased replacement program. The building is a candidate for renovation or replacement in the mid-term, but should be included in studies with Oakdale and Riverdale.

The site is large, but contains significant topography and observed ledge at the west and rear of the site, limiting future buildable area.

(Note: see the Volume 2 report for usage analysis and planning studies).



Interior stair, not accessible

HVAC - Heating, Ventilation and Air Conditioning: Greenlodge Elementary School

Executive Summary:

Greenlodge School was part of the Siemens unit ventilator and building controls upgrade project. The boilers were upgraded years prior to the Siemens projects. The rest of the building remains unchanged since the 2003 Master Plan Study. Refer to 2003 Master Plan Study.

Existing Conditions

Central Heating Plant

The School is heated by two cast iron sectional boilers which were manufactured by Weil McLain model number 1088. The boilers are natural gas fired boilers have a CFH input of 3.1 with an output of 2.5 MBH. The boiler burners were manufactured by Johnzink Company. The systems were set for dual fuel which means they could utilize natural gas and number 2 heating oil. The boiler plant provides low pressure steam throughout the building



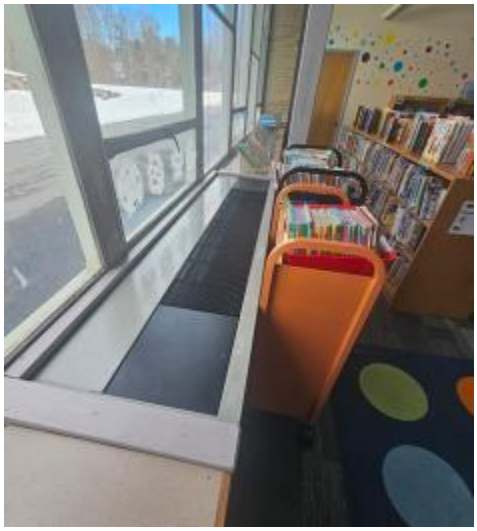
Boilers



Oil Pump Set

Classroom Heating

Classrooms have unit ventilators providing heat and ventilation to each space. The unit ventilators appear to be approximately 15 years old and appear to be operating in good condition for their age. The UVs utilize the low pressure steam from the central boiler plant.



Unit Ventilator

Terminal Heating Equipment

Throughout the building there are terminal heat devices such as convectors, unit heaters and fin tube radiation in areas where supplemental heat is required. Most of the terminal heat devices are well beyond their anticipated serviceable life and should be considered to be replaced.







Steam Unit Heater *Steam Fin Tube Radiation* *Typical Convector*

Boiler Plant in IT Room:

Located in the back of an storage room with IT Equipment, there is a small boiler plant which serves the addition, higher level of the school providing heating hot water as a heat source. There are two Lochinvar boilers model FTXL-100N. The boilers each have a CFH input of 399 providing an out MBH of 363. The boiler plant utilizes two Grunfoss inline circulator pumps with ECM motors which can vary speed based on demand. The boilers and pumps are in good condition, energy efficient and should have many years of serviceable anticipated life expectancy. The location of the boilers is questionable as it shares space with IT equipment which has a wall mounted ductless cooling unit to maintain space temperature for the IT equipment. IT spaces and boiler room equipment should not share space. The boilers will produce heat adding a heating load to the space where temperature is already a concern for the IT equipment. Also, in the event of an equipment failure, the water could be introduced to a space where expensive critical equipment is operating in the same proximity.



Boilers



ECM Pumps

Toilet Rooms:

Toilet rooms have wall mounted grilles in proximity to the fixtures. Many of the grilles appear original and likely connected to original ductwork. Existing systems would be recommended to have ductwork and existing grilles cleaned in accordance with industry duct cleaning standards and insure fans are operating at design CFMs



Exhaust Fans

Automatic Temperature Controls:

Controls throughout the building are a mixture of pneumatic controls and Siemens Direct Digital Control. The equipment which is on the DDC system is the Central boiler plant and the Unit Ventilators throughout the school. Existing pneumatic controls which still serve existing steam equipment such as terminal units like unit heaters, fin tube radiation and convectors. The pneumatic compressor is located in the mechanical room in the basement.



Siemens DDC Controller



Pneumatic Compressor

Recommendations:

Based on the conditions observed of the existing HVAC systems and equipment, We recommend the following improvements to the HVAC system.

- Consider replacing the existing natural gas fired low pressure steam central boiler plant with a high efficiency gas fired condensing boiler plant. The Steam boilers are approaching the end of their serviceable life expectancy and controls are antiquated. A gas fired condensing boiler plant would increase energy efficiency and provide improved controls to serve the building. Converting the Steam boiler plant to heating hot water would also require hydronic heating pumps to be added to the mechanical room. These pumps would likely be base mounted end suction pumps which would distribute the heating hot water throughout the building.
- Confirm with the owner that Oil is no longer utilized at the school as a fuel source and if so, remove fuel oil pumps and any associated equipment that is no longer needed. Confirm that exterior oil tanks have been removed.
- If steam heat source was converted to a hot water plant, then any associated terminal heating devices downstream would need to be converted for the heating coils to be changed from steam to hot water. Coil size would increase in each unit to ensure that adequate heat discharge would come form each unit ventilator, unit heater, fin tube radiation and convector. While the unit ventilators are approaching the end of their anticipated serviceable life, the unit heaters, fin tube radiation and convectors are all well beyond their serviceable life and in need of replacement at this time.
- Replace any remaining pneumatic controls throughout the building with a full direct digital control (DDC) system. A full DDC system will provide improved energy efficiency, thermal occupant comfort, alarm notification, scheduling and an improved operating system. A building management control system would have all spaces and HVAC equipment integrated into graphics which will be reporting live data to the front end user.

ELECTRICAL – Greenlodge Elementary School

Executive Summary:

On February 19th, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Greenlodge Elementary School. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The Greenlodge Elementary School is provided with (3) overhead services from Eversource and are all rated at 120/240V single phase with amperage ratings of 600 Amperes, 400 Amperes and 400 Amperes. All secondary services are cold sequence metered, terminating within a main service rated disconnect switch before running to a C.T. (current transformer) cabinet. All utility meters are located adjacent to the main service disconnects at each location. All distribution equipment found within the building's electrical room would be described as in poor to fair condition and nearing or at capacity.

Electrical sub-panels vary in manufacturer and vary in age and condition, but all equipment is nearing its serviceable life expectancy or past it.

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment. Two of the electrical closets are located within classrooms spaces and both closets have been utilized for storage.













Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in fair condition throughout. Receptacles located at some sinks and electric water coolers are provided with ground fault protection, but the NEC has also expanded many of the required areas under NEC 210.8.B, C, and D that are not present within the building. A renovation would trigger these added required GFCI conditions located within NEC 210.8.B, C, and D.





Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs) and remote heads. Emergency lighting is also provided with emergency lighting heads on exit signs

Exit signs within the building are all thermoplastic type and vary with red and green lettering. Some exterior doors did not have emergency lighting or any light fixtures.








Fire Alarm System:

The existing building is equipped with an Auto Call 4007 addressable fire alarm control panel (FACP) located within the main office. Fire alarm notification and initiation devices located throughout the building are mostly in good condition. Most heat detectors are the old bell type and should be replaced.

No smoke detectors were located in the corridors. Building does not have sprinkler system.






Exterior Lighting System:

Pole mounted flood lights are provided in the parking lot. Canopy lighting at the main building entry lobby consists of surface 12”x12” square LED fixtures. Building mounted lighting primarily consists of traditional style wall pack lighting with clear glass lens. Some exterior doors do not have any lighting. No emergency lighting is provided on exterior door entrance. Some wall packs are not LED type, and should be replaced.











Interior Lighting:

Interior lighting within the building consisted of more traditional style 2x2 center basket mounted lighting. Classrooms consist of pendant mounted wrap around fixtures and surface mounted wrap around fixtures.

In the addition portion of the library more commodity-style lighting products have been noted. Recessed downlighting, suspended 12" linear fixtures with prismatic lensing, surface mounted 6" linear product with prismatic lensing, and surface mounted dome with frosted lensing. Fixtures are primarily fluorescent source with some using LED bulbs.

Utility lighting primarily consisted of linear wrap around fixtures some with prismatic lensing others with no lens. The only exception to these were some porcelain socket style lighting fixtures with screw-in lamps were located found in basement in the MDF/IDF.

No centralized control system was found but some areas were outfitted with line voltage occupancy sensors. No daylight harvesting sensors were found.













Security System:

There was no intrusion detection or card access system installed within the school. The school utilizes a CCTV system to monitor the building main entry and data closets. Cameras look to be a mix of Vivotek and Axis cameras with an Exaqvision NVR. Existing cameras that are no longer in use have been abandoned in place along with the existing NVR.







Communication Systems:

Communication services enter the building overhead and terminate at a demarcation wall within the school's MDF Room. Data connection points are located adequately throughout the building for operational needs. The school utilizes a combination of pedestal mounted projectors and short throw projectors within classroom spaces.

For the school's phone system, a modern Avaya VoIP system is utilized. The Greenlodge school is networked back to the town's school fiber hub at the high school with single mode fiber.

The MDF room uses utilizes no data racks and instead all patch panels and network switches are vertically wall mounted. The school utilizes CAT6 cabling which have been color coded blue and white. Network cabling is not neatly managed with any cable management systems or ladder tray. The MDF room connects back to an IDF Room with a fiber backbone and town fiber connection that connects the Greenlodge school to the town's school fiber network hub at the high school.

For it's PA (Public Address) system the school utilizes a Telecor XL system with a combination of surface mounted and recessed ceiling speakers for announcements. The school's existing simplex 2350 Master Time System has been replaced with an American Time & Signal IQ All-Sync head end while utilizing the existing Simplex clocks. In areas where existing simplex clocks were no longer functional a new American Time & Signal clock replaced those clocks at their existing location.







Recommendations:

Electrical Distribution System:

Although not a code violation as part of any electrical distribution upgrade, the three electrical services should be reduced to a single electrical service for safety purposes.

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Additionally, panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

Fire alarm system should be replaced with a new addressable type system with voice evacuation. All existing fire alarm devices to be replaced to comply with current codes.

Exterior Lighting System:

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices:

Provide additional receptacle locations to assist in elimination of extension cord usage. All receptacles should be replaced within the building and be replaced with tamper resistant type receptacles.

Security System:

Provide and install an intrusion detection system with door contacts at all points of accessible entry to the building as well as a full coverage of motion sensing devices within the building at grade level.

A card access system should also be provided to secure, track, and monitor access to all entry points of the building as well as higher security areas such as the building's data closets.

Communication Systems:

Provide a small data rack to mount all network equipment with proper cable management.

Provide additional telephone/data ports and wireless access points as needed throughout the building to accommodate daily operations in a 21st century learning environment.

PLUMBING – Greenlodge Elementary School:

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 serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in fair condition and are nearing their life expectancy.

The plumbing fixtures are in fair condition. Some of the bathroom fixtures appear to have been modified to make them accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the drainage piping is nearing or has exceeded its life expectancy.

Fixtures:

The water closets are wall or floor mounted, vitreous china with manually operated flush valves.

Urinals are wall hung, vitreous china with manually operated flush valves.

Lavatories are wall hung, vitreous china with manually operated, holt and cold water faucets.

Drinking fountains are stainless steel, dual height, surface mounted.

Electric water cooler is single height, surface mounted, single unit bubbler, with bottle filler.

Janitor's sink is a enameled, wall mounted, cast iron sink with 3-inch trap standard and wall mount faucet and is not equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with pull out spray faucets, with single lever type hot and cold-water faucet.

Exterior wall hydrants include loose key operation and threaded connection with no vacuum breaker.

The Kitchen equipment and sinks are in fair condition.



Water Closet



Urinals



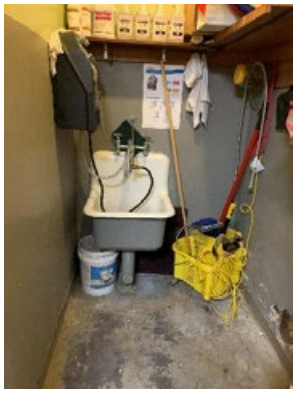
Lavatories



Drinking Fountain



EWC with Bottle Filler



Janitor's Sink



Staff Sink



Kitchen Sink

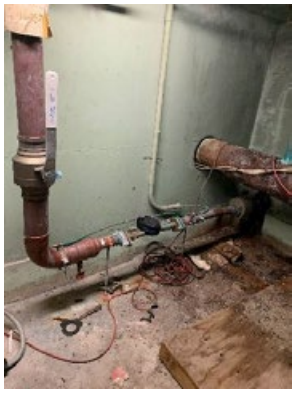


Wall Hydrant

Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 4-inch in size. There is a water meter but there is no reduced pressure backflow preventer on the domestic service piping arrangement.

The domestic water piping, where exposed, is copper tubing with sweat joints. The majority of the domestic water piping includes original insulated but much of the insulation is missing. The valves used for isolation purposes are either full port ball valves or original gate valves.



Water Service



Water Piping

The majority of the domestic hot water is provided by an electrical, storage tank type water heater, located in the Mechanical Room. The water heater has a storage capacity of 75 gallons and a power input of 4.5 kW. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank installed. The water heater appears to be in fair condition.

The Kitchen domestic hot water is provided by an electrical, storage tank type water heater. The water heater has a storage capacity of 40 gallons and a power input of 4.5 kW. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated but there is no expansion tank installed. The water heater appears to be in fair condition.

At Janitor's sinks and at 3 pot kitchen sink, domestic hot water at each location is provided by an electrical, storage tank type water heater. The water heater has a storage capacity of 19 gallons and a power input of 1.5 kW. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank installed. The water heaters appear to be in fair condition.



Electric Water Heater



Kitchen Water Heater



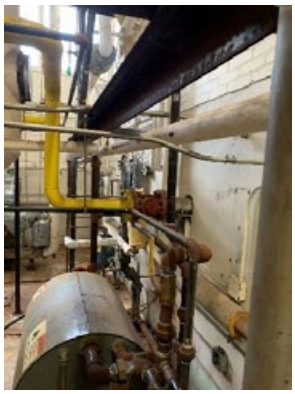
Janitor's 3 Pot Sink Water Heater

Gas:

An elevated pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the exterior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating boilers, heating equipment and kitchen equipment. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.



Gas Meter



Gas Piping

Drainage Systems:

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 are no interior or exterior grease interceptors installed for the Kitchen Waste piping.

There is a duplex sewage ejector in the Mechanical Room floor, picking up Mechanical Room Floor Drains. The ejector appears to be in poor condition and is likely not operational.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Cast iron Pipe



Sewage Ejector

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)
- Provide new high-efficiency, water conserving, plumbing fixtures. (Low Priority 5+ years)
- Provide accessible fixtures where required. (Low Priority 5+ years)
- Install thermostatic mixing valves, expansion tanks, and hot water recirculation loops at existing water heaters. (High Priority 1-2 years)
- Provide all new domestic water piping including insulation, pipe labels and full port ball valves for isolation purposes. (Low Priority 5+ years)
- Provide all new sanitary, waste and vent piping throughout the building. (Low Priority 5+ years)
- Install Code Required grease interceptors at 3 pot sink, dishwasher and all Code required fixtures. (High Priority 1-2 years)
- Provide Code required vacuum breakers on all wall hydrants. (High Priority 1-2 years)

FIRE PROTECTION – Greenlodge Elementary School:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

STRUCTURAL EXISTING CONDITIONS (Greenlodge Elementary School)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated November 26, 1954, June 20, 1960, January 22, 1970, and a site visit by RSE on February 19, 2026.

FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls at the perimeter.
    a. 1954 Portion: Allowable soil bearing pressure is 3 TSF. Crawl space with concrete footings and piers on an approximately 10-foot grid. 6" concrete slab on grade in the crawl space. Bottom of exterior footings are 4 feet minimum below grade. Interior footings are up to a minimum of 10 feet below the first floor level with notes indicating that they are to be deeper if required to obtain the required bearing capacity.
    b. 1960 Portion: Allowable soil bearing pressure is 2 TSF. 5" slab on grade. Bottom of exterior footings are 4 feet minimum below grade. Interior footings are up to 8 feet below top of slab.
    c. 1970 Portion: Allowable bearing pressure is not provided. 4" slab on grade reinforced with mesh. Exterior footings are 4 feet minimum below grade. There is no indication in the drawings of foundations extending lower than the minimum.
2. No known modifications to foundations since original construction.
3. Besides minimal shrinkage cracks in the slab on grade that extend up through floor finishes, and minor cracking in perimeter frost walls, no other structural foundation issues observed in the 1954 and 1960 portions.

    At the 1970 portions, there is significant settlement in the slab on grade at the north-west building. This has created trip hazards at the door and failure of some floor finishes. There is also cracking in some foundation walls in this area.
4. Recommendations: slab settlement should be addressed. Further investigation including test pits to determine bottom of footing elevations and suitability of subgrade at foundations. If wall foundations are adequately supported, remove and replace slab. Prior to placing new slab, remove and recompact soil below the slab. A geotechnical engineer should be consulted to ensure proper preparation of subgrade.

SUPERSTRUCTURE

1. First floor of the 1954 portion is an elevated concrete slab and the roof consists of steel columns and steel and wood beams with sawn lumber infill. Lateral stability is assumed to be provided by unreinforced masonry walls. Roof at the 1960 portion consists of steel beams and columns with a poured gypsum roof deck reinforced with steel mesh and supported on bulb tees. Lateral stability is

assumed to be provided by unreinforced masonry walls. Roof at the 1970 portion consists of wood trusses with plywood sheathing. Lateral stability is provided by wood shear walls.

2. Condition/Known Issues: some indications of water damage in ceilings.
3. Recommendations: Any water infiltration should be addressed to prevent deterioration of building structure.

PHOTOS

	Photo: Slab settlement at door threshold.
	Photo: Additional slab settlement.
	Photo: Cracking in foundation wall.

Mother Brook Arts and Community Center

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: T-5 | Mother Brook Arts and Community Center

SELECT BUILDING: T-5 | Mother Brook Arts and Community Center

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	T-5	**Flood Zone:**	Zone AE (100-yr)
Address:	123 High Street	**Wetlands:**	Buffer Zone (100 ft)
Year Built:	1921	**Historic:**	Local Historic District
Last Renovated:	None	**Lot Size (ac):**	3.88
Gross Sq Ft (GSF):	38,964	**Building Use:**	Cultural / Community
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Masonry	**Assessed Value:**	$7,703,800
Roof Year:	unknown	**Deferred Maint. ($):**	tbd
Window Year:	tbd	**Est. Renovation Cost:**	tbd
No. of Floors:	2	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	~1
Electrification Potential:	2034 – VRF	**GHG Emissions:**	2
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	High

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.48	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	2.4	• Fair
Structure (Avg):	2.3	• Fair
MEP / FP (Avg):	3.1	• Poor
Life Safety / Code:	2.1	• Fair

KEY COMPONENT SCORES

Roof:	2.0	Electrical:	3.0
HVAC – Heat:	3.0	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Auditorium is a Well Used Asset

The Town-owned former Avery School building at 123 High Street is leased to the Mother Brook Arts and Community Center and has aging fire alarm, electrical, and HVAC systems that require attention. Capital responsibilities between the Town and the nonprofit tenant should be clearly defined.

The Mother Brook Arts and Community Center (MBACC) occupies the former Avery School building at 123 High Street. MBACC is a nonprofit organization that leases the building from the Town and serves as a community arts hub featuring studio space for artists, ceramics and silversmithing studios, an arts education program, indoor and outdoor gathering spaces, and regular performances. Building systems are in fair to good overall condition but with several code violations and a legacy fire alarm system requiring replacement.

The electrical service is 600A 3-phase service (fair to good) fed underground from an exterior utility pole. The building's distribution equipment varies in age and manufacturer, with most in fair to good condition. Panelboards are found in corridor spaces and within tenant spaces rather than dedicated electrical rooms, a violation of NEC 110.26 working clearance requirements. There is no emergency generator and EBUs vary in condition from poor to new. Exit signs are thermoplastic and vary from poor to good; some exit signs are not self-illuminated (NFPA violation), and some may lack integral battery backup. The existing Harrington FACP is a legacy conventional wired-zone system considered generally obsolete and is located within a tenant's space (the former principal's office). A hardwired master box for alarm transmission is located in a separate tenant space in the basement. The mix of original and new devices is in fair to good condition. This system requires full replacement with a modern addressable panel. Natural gas serves the heating boilers with gas meters on the exterior. Electric water heater (55-gallon, 240V, 4.5 kW) is in fair condition without TMV. Cast iron drainage in fair condition. Accessible bathrooms in renovated areas are in good condition, but original bathrooms have older pedestal urinals and manual fixtures and are in poor condition.

Building Structure & Exterior

The Mother Brooks Art Center is a three-story wood and masonry structure, originally built in 1921 as an elementary school and occupied by the Avery School until it moved in 2011. Foundation walls were observed to be rubble below grade with masonry above. Basement floor appears to be a concrete slab on grade with a brick portion in some of the mechanical areas. Besides minimal shrinkage cracks in the slab on grade that extents up through the floor finish, and minor cracking in perimeter frost walls. Load bearing masonry exterior and interior walls with wood floor framing. Roof is also wood framed. Brick chimneys extend above roof. Lateral stability is assumed to be provided by unreinforced masonry walls.

The exterior of the building is predominantly tan brick masonry with metal ribbon windows. There is a raised bridge connecting the northwest wing, which is a source of leaks. The bridge and windows are a source of maintenance issues, with reports of leaking and are original to the building. Generally the facade is observed to be in fair to poor condition. The roof is a single-ply low-slope membrane roof. The roof was not directly observed due to snow cover but water damage was observed in ceiling tiles in certain areas. The roof was most recently replaced in 2000 and at the end of its useful life. The roof is generally in poor condition. Overall, the exterior is in fair to poor condition. The exterior should continue to be monitored and replacements for windows and roof should be studied.

Interior Environment

The Mother Brook Arts Center occupies the former Avery School. Building spaces are have been converted from the former classrooms. Floor finish is mix of resilient tile floor and wood in most spaces. Tile floor is located in bathrooms and the gym has a wood floor. Walls are generally painted plaster board, with some areas of brick masonry in the corridors. Tile is installed in restrooms and at drinking fountain locations.

Floor finish shows various replacements and vintages and is in fair condition with a few areas of cracking. Walls are in fair condition, and the finishes are



Pottery studio, converted from fromer classroom



Stage viewed from upper seating area, not accessible

generally dated and past their service life. The center is bright and well lite and most spaces are well lit with good access to natural daylight. Finishes are generally in fair condition and have past their typical service life. While most rooms have operable windows, indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply.

Programmatic Suitability

The Mother Brook Arts Centers sits along high street and backs up on the Mother Brook and is near the academic campus and town center. The building was originally a purpose built elementary school, and has been converted to an arts center. The building is organized around a central corridor with a gym and stage extending north behind. Classrooms have been converted to art rooms and artist studios with some display space. The gym and stage remain well used and important community assets.

Since the non-profit has a long-term triple net lease, a specific programmatic analysis was not undertaken to assess suitability or scale of programs. The adaptive reuse of the former school does relieve financial burden of maintenance on the town and provides a unique and treasured community asset. The building appears to function well and is a pleasant place to be.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Mother Brook Arts Center cited along High Street, a main through fair near the dedham academic campus. Parking along front and rear. The site is large, at nearly 4 acres, and some of this is observed to be wooded, with ledge outcroppings and steep topography down to the Mother Brook on the north side. A small outdoor gathering area is located at north, between the parking area and brook.

The site contains paved parking and walkways, which are in poor condition. The site is classified as FEMA Flood Zone AE, reflecting some flood risk, although the building is significantly upland from the brook and no flooding issues were reported. No wetlands are present on the parcel per GIS review although the site is within river setbacks.



Rear entry

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Replace legacy Harrington FACP with modern addressable system — current system is obsolete
- Relocate panelboards from corridors and tenant spaces to dedicated electrical rooms — NEC 110.26 violations
- Replace non-illuminated exit signs with LED edge-lit type — NFPA code violation
- Install battery backup on all exit signs lacking it — required where no generator is present
- Test all EBUs for egress illumination adequacy per NFPA 101
- Install TMV at electric water heater

10-Year Capital Improvements

- Full LED lighting upgrade throughout building — current fluorescent and mixed-age fixtures
- Comprehensive Accessibility review — original bathrooms remain non-accessible in parts of building and there is no elevator service to the second floor.
- Emergency generator or enhanced EBU coverage
- Structural and envelope assessment — building is approximately 95 years old with no recent FCA
- Coordination with MBACC on long-term lease and capital responsibility allocation

Capital Investment History

FY	Project / Capital Improvement	Amount
N/A	None	None

Sustainability & Decarbonization

FY2022 GHG emissions: 2 MT CO_2e (0.06% of portfolio) — one of the lowest in the entire portfolio, primarily electricity. This low figure likely reflects limited year-round occupancy and minimal heating/ cooling loads. LED upgrade would further reduce consumption. The building's sustainability profile is not a planning priority relative to its code compliance and fire safety needs..

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

As a Town-owned building leased to a nonprofit tenant, the capital responsibility division between the Town and MBACC should be clearly defined in the lease. The current lease is long term, through the mid-2030's, and the arts center provides a unique community benefit.

The obsolete fire alarm system and NEC panel clearance violations are the most pressing issues as well as providing full accessibility. A comprehensive condition assessment of the building envelope and structural systems has not been conducted and is recommended to preserve the town asset.

(Note: see the Volume 2 report for usage analysis and planning studies).



Learning Spaces have been Transformed to Various Art Studios

HVAC - Heating, Ventilation and Air Conditioning: Motherbrook Arts and Community Center

Executive Summary:

Existing Conditions

The School is an aged building with many systems which have been updated throughout the years. Condition of equipment overall is in fair condition for the many different types of HVAC systems utilized throughout the building.

Central Heating Plant

The school has two high-efficiency condensing boilers. Each boiler was manufactured by Lochinvar model SBN1300. The boilers each have a natural gas input rating of 1300 CFH, providing a heating output of 1238 MBH output. The boilers appear to be in good condition for their anticipated age and should have many more years of serviceable life expectancy remaining.



Boilers

Hydronic heating is distributed with base mounted end suction pumps. The pumps appear to be at the end of their anticipated serviceable life expectancy and would be recommended to be replaced with energy efficient new pumps and Variable Frequency Drives (VFDs)



Heating System Pumps

Classroom Heating

Classrooms have been retrofit with hydronic fan coil units with hot water coils in each space. The fan coil units are manufactured by First Company. Each fan coil is model 12VMB, 120 volts, 1 phase, tested at 0.25" ESP, approximately 800-1100 CFM based on mode setting and ductwork distribution. The fan coils have hydronic heat coils and filters. Some of the closet units should be verified that they have adequate access for filter and service access.



Fam Coil Units in Closets



Fan Coil in Open Space

Terminal Heating Equipment

Throughout the building there are terminal heat devices such as convectors, unit heaters and radiation in areas where supplemental heat is required. Most of the terminal heat devices are well beyond their anticipated serviceable life and should be considered to be replaced.



Unit Heater



Steam Radiation



Typical Cabinet UH

Air Conditioning

There is no central cooling in the building.in few areas, portable AC units are utilized with hoes to outside to provide supplemental cooling as needed.



Typical Portable AC unit

Kilns

There is a Kiln room in the basement with approximately 3 Kilns. Each Kiln has connected exhaust to a wall cap. Typically, Kilns will have a capture exhaust hood to extract heat from the space, while there is no hood, there is a ceiling mounted fan in the area of the hoods. While this fan may help with removing heat from the space, its inefficient because there is no capture hood so residual heat will remain in the room before it can be exhausted.



Kilns



Kiln Discahrge Wallcaps

Abandoned Equipment

There is a mechanical room in the basement with an abandoned air handling unit and steam heating coil. Based on field observations all equipment in this room appears to be abandoned.



Abandoned AHU and Heat Coil

Auditorium

The Auditorium is heated and ventilated by two air handling units located near the exterior wall and provide heat and ventilation to the space. Supply air is distributed high and return from the system enters from the grilles below the stage. The AHUs were manufactured by York HVAC Equipment and have hydronic heating coils. The units and appear to be in fair conditiion.



Supply and Return Grilles



York AHUs

Welding Room:

The Welding room has individual welding stations with exhaust



Welding Stations



Exhaust Ductwork



Exhaust Fan and Discharge

Toilet Rooms:

Toilet rooms throughout the building lack proper exhaust rates. Toilets in common bathrooms have transfers above the doors and one ceiling mounted exhaust fan. The fan appears undersized for the amount of toilets which it serves.



Exhaust Fans

Automatic Temperature Controls:

Controls are all stand alone in nature. All fan coil units have low voltage stand alone thermostats. There does not appear to be a building management system or pneumatic controls systems. It's unclear if these thermostats are even programmable for scheduling or occupied and unoccupied setpoints.



Stand-Alone Controls

Recommendations:

Based on the conditions observed of the existing HVAC systems and equipment, We recommend the following improvements to the HVAC system.

- HVAC Equipment has been upgraded on and as needed basis. While equipment has been upgraded there are many steps that could be taken to improve energy efficiency and improved occupant comfort.
- Ventilation in the building appears to be through natural ventilation. Mechanical Ventilation does not appear to be incorporated into the fan coil units or air handling units.
- Air Conditioning could be added to the spaces where desired with Variable Refrigerant Flow (VRF) opposed to the portable AC units which are used in some locations.
- Replace standalone controls throughout the building with a full direct digital control (DDC) system. A full DDC system will provide improved energy efficiency, thermal occupant comfort, alarm notification, scheduling and an improved operating system. A building management control system would have all spaces and HVAC equipment integrated into graphics which will be reporting live data to the front-end user.
- Exhaust should be provided to code compliant rates in all exhaust and areas where required by code.

ELECTRICAL – Motherbrook Arts and Community Center

Executive Summary:

On April 2nd, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Motherbrook Arts and Community Center. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings' systems are in fair to good condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's electrical utility service is provided by Eversource and fed overhead to a utility pole located on the community center's property. The secondary service is then run underground to a pull box at the building's exterior and then run through the building to the main electric room. The building's main service is rated for 600 Amperes 120/208V, 3 Phase, 4 Wire and is terminated into a GE main switchboard section. The main switchboard section feeds a distribution switchboard section that then feeds the other various electrical panelboards throughout the building. Panelboards throughout the facility are not located within dedicated electric rooms and are typically located within corridor spaces or within rented tenant spaces.

The secondary service is hot sequence metered with the utility meter located on the exterior of the building. Distribution equipment found within the building varies in manufacturer and age with most equipment ranging from fair to good condition.

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.











Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to new.

Exit signs within the building are all thermoplastic type and vary in condition from poor to good. It was also noted that some exit signs were not self-illuminated which is violation of NFPA. Many of the buildings' exit signs have begun to yellow, a typical sign of aging in a thermoplastic sign. Some exit signs did not appear to have a test switch typically indicating that a sign is not provided with an integral battery back-up which would be required for a building with no emergency generator.






Fire Alarm System:

The existing building is equipped with a legacy Harrington fire alarm control panel (FACP) that was utilized when operating as the former Avery School. The fire alarm control panel is located within a tenant's space which was the existing principal's office. This system is generally considered to be obsolete with conventional wired zone type architecture. There are a mix of new and original fire alarm notification and initiation devices located throughout the building which range from fair to good condition.

The building utilizes a hardwired master box for the building's alarm transmission which is located within a separate tenant's space at the building's basement level.











Exterior Lighting System:

Exterior lighting is accomplished via building mounted wall packs and flood lights throughout the site that appear to be controlled via a mechanical timeclock. Back parking lot lighting seems to be owned and maintained by the utility company who utilize area floodlights with integrated photosensors for fixture control. Exterior lighting all looks to be of LED type but given fixture locations there is an overall concern for the illumination of the site.











Interior Lighting:

Interior lighting within the existing building consisted of various fixture types based upon space type. Fixtures within utility and tenant spaces typically consisted of surface/pendant mount fixtures with prismatic lens. Areas where fixtures were pendant mounted were typically installed in this manner to avoid other systems running through the space.

Stairwell fixtures were provided with integral occupancy sensors, but it was noted that fixtures were not operational although there was movement through the stairwell. Although stairwell illumination can be reduced when not in use, the stairwells cannot be reduced to zero output per NFPA and IBC standards.

Track fixtures were utilized within the building's corridors as many tenant's renting building space created artwork and these fixtures were utilized to highlight those pieces.

The existing gym space utilizes upgraded LED surface round fixtures with frosted acrylic lensing.

It was noted that there is no centralized control system utilized within the facility, but spaces did utilize occupancy sensors along with manual switches for fixture control within dedicated spaces.







Wiring Devices & Branch Circuitry:

In general receptacles are located throughout the building to support the individual space needs. Receptacles are typically in fair to good condition throughout the facility and are provided with proper protection as needed within the given spaces.





Security System

A security keypad for an intrusion detection system was located at the main vestibule but given the state of the device it was assumed the system has been abandoned in place. A Brivo access control system is currently utilized within the facility, although only a single card access location was noted at the main entry. A single CCTV camera was documented at the main entry although it may be part of an existing system that was abandoned in place given the condition and age of the camera.







Communication Systems:

Communication and fiber enter the building underground and terminate within a demarcation closet at the basement level. Data connection points and wireless access points are located throughout the building as necessary to support the needs of the facility.

It was noted that there is an incoming fiber connection to the building but as typically seen in other town buildings was a connection to either the high school or town hall's network which was not present while on site.

The facilities data cabling was routed back to a wall mounted data rack that contained the building's patch panels. Existing network cabling in some cases were cut back and abandoned in place and overall are not neatly managed when compared to other facilities throughout the town.





Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in fair to good condition. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. All non-self-illuminated exit signs are to be replaced with self-illuminated exit signs with integral battery back-up and self-diagnostics.

Fire Alarm System:

Provide and install a new addressable fire alarm system with all new notification and initiation devices. The new system shall comply with all applicable codes and standards and be tested for full operation.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Lastly, A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Security System:

It is recommended that the existing intrusion system be replaced and expanded to provide door contacts at all points of accessible entry to the building as well as full coverage of motion sensing devices within the building at grade level.

A CCTV (Closed Circuit Television) system should be provided with exterior cameras to monitor the exterior of the building and interior cameras to monitor all public areas.

A card access system should also be provided to secure, track, and monitor access to all entry points of the building as well as higher security areas such as the building's data closet.

Communication Systems:

The demarcation room should be fitted with appropriate data racks and spaces for all systems in use data, security, phone, etc. All systems shall be fed with color coded cabling for ease of identification and maintenance when necessary. All existing cables no longer in use should be removed back to the point of origin.

Additional telephone/data ports and wireless access points should be provided as required to facilitate the needs of tenant operations.

PLUMBING- MOTHER BROOK ARTS & COMMUNITY CENTER

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 serve the building.

Portions of the plumbing systems have been updated as part of building renovation and upgrade projects.

Fixtures:

The water closets are either wall hung or floor mounted vitreous china with manually operated flush valves.

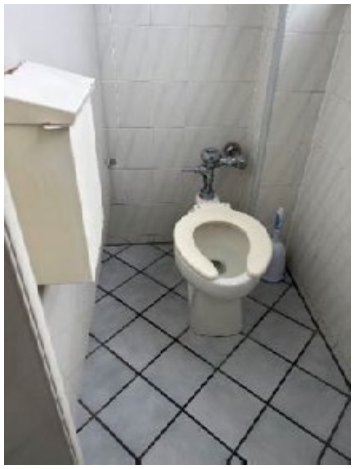
Urinals in renovated accessible bathrooms are wall hung vitreous china with manually operated flush valves. Urinals in original building are pedestal type.

Lavatories in renovated accessible bathrooms are undermount sinks with sensor faucets. Lavatories in original building are wall hung vitreous china with either manual or metering type faucets.

Janitor's sink is trap standard mounted, enameled cast iron sink with wall mount faucet equipped with vacuum breaker.

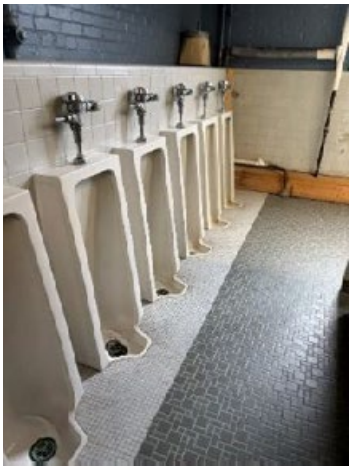
Studio sinks are generally stainless steel with manual faucets. Studio sinks are fitted with sediment traps.



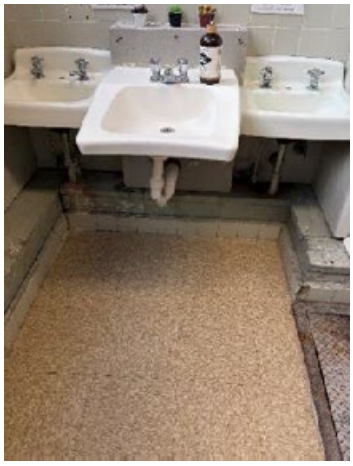




Typical bathroom fixtures







Typical bathroom fixtures



Service sink



Studio sink

<u>Water Systems</u>:

Piping, where exposed, is copper tubing with sweat joints. Where modifications have been made copper press fitting have been used. The majority of the piping is insulated.

Domestic hot water is provided by a tank type electric water heater. One water heater is located in the basement Mechanical Room. The water heater is 240-volt, single phase, with 4.5 kW heating element and 55 gallons of storage. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated. The water heater appears to be in fair condition.



Domestic water heater

Gas:

A natural gas service is supplied to the building. The gas meters are located on the exterior of the building. Natural gas is provided to the heating boilers. Gas piping is black steel with threaded joints and fittings.



Gas service & meter

Drainage Systems:

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.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Provide one mop sink on every floor.
- Provide drinking water station at each group of bathrooms.
- Install thermostatic mixing valves at existing water heaters.

FIRE PROTECTION – Motherbrook Arts and Community Center:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

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Oakdale Elementary School

TOWN OF DEDHAM | FACILITIES MASTER PLAN

BUILDING SUMMARY

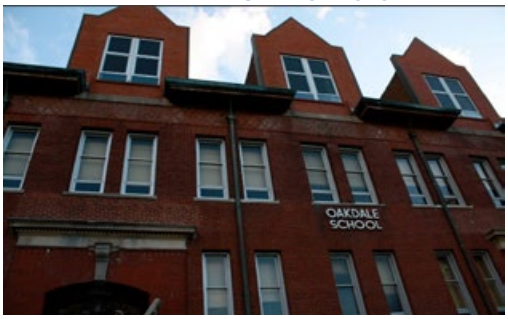
Building: S-4 | Oakdale Elementary School

SELECT BUILDING: S-4 | Oakdale Elementary School

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	S-4	**Flood Zone:**	None
Address:	147 Cedar Street	**Wetlands:**	No
Year Built:	1902	**Historic:**	None
Last Renovated:	1952, 1960	**Lot Size (ac):**	6.9
Gross Sq Ft (GSF):	48,909	**Building Use:**	Educational
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Masonry/Wood	**Assessed Value:**	$15,295,100
Roof Year:	2010/2000	**Deferred Maint. ($):**	tbd
Window Year:	1902	**Est. Renovation Cost:**	tbd
No. of Floors:	4	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Fuel Oil	**Energy Use Intensity (EUI):**	101
Electrification Potential:	2030 – GSHP or VRF	**GHG Emissions:**	363
Solar Potential (kW):	168.4	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	3.01	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.2	• Critical
Structure (Avg):	2.3	• Fair
MEP / FP (Avg):	3.4	• Critical
Life Safety / Code:	3.1	• Poor

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	4.0
HVAC – Heat:	2.0	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	3.01	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	3.0	• Poor
EPI-2 Academic Suffic.:	2.2	• Fair
EPI-3 Program Suffic.:	3.8	• Critical
EPI-4 Universal Access:	3.6	• Critical
EPI-5 Building Safety:	3.0	• Poor
EPI-6 Tech. Readiness:	2.5	• Poor

Grade Config.:	1–5
Enrollment:	243
SF per Student:	201

Arrowstreet Inc. | Code Red | GGD Consultants | RSE

DRAFT — For Planning Purposes Only



Existing Gym with Stage Beyond

At 123 years old, Oakdale Elementary is the district's oldest building and carries the most severe combination of physical deficiencies and educational adequacy limitations of any school in the portfolio.

Oakdale Elementary School, built in 1902 with additions in 1951 and 1970, is the oldest school building in the Dedham Public Schools portfolio and was identified as the top replacement priority in the 2020 Dedham Public Schools Facilities Master Plan. The 48,909 SF building serves grades K–5 and is characterized by severely undersized classrooms in the original 1902 structure, no cafeteria (meals served in classrooms), an undersized gymnasium, and multiple life safety, accessibility, and code compliance deficiencies. In 2024, the Massachusetts School Building Authority (MSBA) accepted the Oakdale Elementary School into its funding program to assist in replacing the facility; however, the project has been temporarily paused by the Town.

The original 1902 masonry building retains its original fuel oil-fired heating infrastructure (1950s and 2011 equipment) and single-pane windows throughout, which are drafty, thermally inefficient, and cannot be maintained. The 1970 addition's exterior pavement and west courtyard areas are significantly deteriorated. The building has no automatic fire protection/sprinkler system, which is a high-cost immediate repair item. The antiquated electrical systems lack modern capacity, and the building automation system requires upgrade to enable zone-level heating control. Interior vinyl tile finishes in the original building are worn and cannot be refinished. Access to significant portions of the building for persons with disabilities is not provided. An engineering study related to foundation cracking and site drainage deficiencies is also required.

Building Structure & Exterior

The Oakdale Elementary School is a four-story wood and masonry structure, originally built in 1902 and expanded in 1951 and 1970. The building structure is a concrete slab and foundation with varying superstructure in various additions. The foundation walls were observed to be rubble below grade with masonry above in the 1902 portion. Basement floor appears to be a concrete slab on grade with a brick portion in some of the mechanical areas. In the 1951 portion no documentation is available, but visual review suggests perimeter concrete frost walls and concrete slab on grade. In the 1970 portion has a 4" slab on grade reinforced with mesh. Exterior footings are 4 feet minimum below grade. There is no indication in the drawings of foundations extending lower than the minimum. The foundation was observed to be in fair to good condition and structural recommendation for foundation work includes repointing of brick walls where there is mortar loss

The original 1902 building is load bearing masonry exterior and interior walls with wood floor framing. The roof is also wood framed. Brick chimneys extend above roof, and there is an exterior egress stair. The 1950s addition structure includes steel beams and columns at the gym. CMU walls along the corridors are assumed to be load bearing. The 1970s addition are one-story with load bearing CMU walls and wood roof trusses. Observed structural issues include water damage, efflorescence and deterioration of the trim from leak at connection between different portions of the building. Chimneys are in poor condition with cracking and mortar loss. Broken bricks at corners of windows were observed and exposed lintels showing signs of rust and the beginning of rust jacking. There were also some cracking in some of the load bearing CMU walls.

The exterior of the building is predominantly red brick masonry with punched opening, double hung windows. Windows are metal and not original to the building, but observed to be beyond their service life. Windows in the addition sections are metal ribbon glazing, original to their vintage of construction and leaks and deterioration has been observed. Generally the facade is observed to be in poor condition. The



Exterior egress stair at original section of the Oakdale school



Water intrusion and rot observed at soffit

roof is a pitched shingle roof over the original building and a single-ply low-slope membrane roof over the addition. The roof had limited observation due to snow cover but water damage was observed in ceiling tiles in certain areas, particularly in the additions. The roof was most recently replaced in 2000 and at the end of its useful life. The roof is generally in poor condition. Overall, the exterior is in poor condition. The exterior should continue to be monitored and replacements for windows and roof should be studied.

Interior Environment

The Oakdale Elementary School is a purpose built elementary school, containing classrooms for typical and special instruction, administration spaces, a gym and stage, library, and support spaces. Building spaces are purpose built and generally fit for purpose although classrooms are undersized compared to more modern classrooms. Floor finish is typically a resilient tile floor in most student spaces, with areas of wood floor in the 1902 building. Tile floor or sealed concrete is located in bathrooms and the gym has a wood floor. Walls are generally painted wall board, with masonry in the corridors. Tile is installed in restrooms and at drinking fountain locations.

Floor finish shows various replacements and vintages and is in poor condition with multiple areas of cracking and failure. Walls are in poor condition, and the finishes are dated and past their service life. The school is dim and while classrooms should be well lit with good access to natural daylight, many windows are covered. Many spaces are cluttered and lack dedicated storage. While classrooms have operable windows, indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply.

Programmatic Suitability

The Oakdale Elementary School sits within the Oakdale neighborhood, a low-density residential neighborhood. The building is a purpose built elementary school, and was built over multiple decades. The original building and main entry face Cedar Street, with additions extending toward the rear. The school has dedicated gym, but lacks a cafeteria and special instruction spaces such as Art and Music.

The school is 47,000SF and its current enrollment is approximatly 240. This averages approximately 200 square foot per student, which is slightly larger than MSBA standards. While this does not specifically identify any space deficiencies, it shows that the Oakdale school is generally an appropriate size for its enrollment.

While overall the school is appropriately sized, classrooms are smaller than a comparable school and lack sufficient storage space, dedicated special instruction space, and support space, such as a kitchen and cafeteria to adequately support elementary level instruction. The building is not efficiently organized, with the three story main building (with basement) connected to the one story additions. The current layout does not support current teaching and learning methods.



WIndows are in poor condition

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Installation of a new automatic fire suppression (sprinkler) system
- Plumbing system upgrades — domestic water supply and waste lines
- Exterior window replacement throughout (single-pane, drafty, energy-inefficient) — high-cost immediate repair
- Replacement of worn interior vinyl tile finishes in the 1902 original building (ACM)
- Accessibility accessibility upgrades throughout
- Electrical distribution panel replacement
- Engineering study — foundation cracking, exterior wall cracking, site drainage

10-Year Capital Improvements

- Complete roof replacement on all sections (design funded in FY26)
- West courtyard and exterior pavement — cut and patch or full mill and overlay
- Exterior masonry repointing
- Interior ceiling replacement in portions of the building
- Replacement of interior finishes, casework, and doors

Capital Investment History

FY	Project / Capital Improvement	Amount
FY22	Office Accessibility Renovations	$150,000
FY22	Asbestos Abatement (shared)	Shared
FY23	HVAC Improvements (shared)	Shared
FY24	District Wide Roof Repairs — Infrared Scan & Design/Repairs (shared)	Shared
FY25	Door Replacements — Oakdale	$60,000
FY26	Exterior Door Replacement and Electronic Access Control (w/ Greenlodge ES)	$429,000
FY26	Interior Security Camera System — Phase I Design & Infrastructure	$50,000
FY26	Roof Replacement Design — Riverdale / Greenlodge / Oakdale	$350,000
FY26	Electrical Infrastructure Modernization Study (System-wide)	$125,000

The main office is adjacent to the main entry, with poor sight lines for approaching visitors. The main entry lacks a controlled vestibule so visitors can be checked in prior to entry into the main building. The facility is four-story, and lacks an elevator and fully accessible restrooms, which limit the equity of educational delivery.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Oakdale school sites along Cedar Street tot he west and Madison Street to the south. Parking along front and side, although extremely limited. The site is large, at nearly 7 acres, and is largely flat and developed. A playground and two ball fields are also located on site.

The site contains paved parking and walkways, which are in poor condition. The site is classified as FEMA Flood Zone x, reflecting low flood risk. No wetlands are present on the parcel per GIS review.

Sustainability & Decarbonization

FY2022 GHG emissions were 363 MT CO_2e (10.3% of portfolio) — highest EUI of all schools at 101 kBtu/ft². Primary heating via fuel oil boilers dating to 1950 and 2011. Decarbonization Roadmap proposes GSHP or VRF electrification in 2030 (aligned with planned replacement/renovation), and 168.4 kW solar in 2030. New facility schematic design specifications call for geothermal or air source heat pumps for heating and cooling, consistent with the Roadmap.

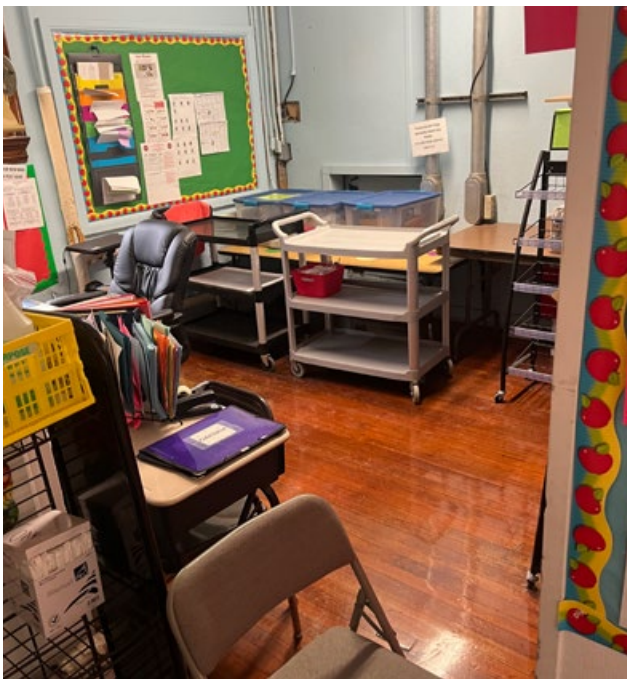
(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

Oakdale is the highest-priority school facility in the district by age, condition, and educational adequacy. The MSBA accepted the school into its program, but the project did not move forward. The school remains a near-term priority. The volume of immediate and near-term capital needs makes continued deferred maintenance fiscally untenable. The building lacks a cafeteria, has no sprinkler system, and fails to meet Accessibility requirements in significant portions of the facility. A consolidated plan should be pursued to replace the current school immediately and a major renovation would be difficult as the district lacks adequate swing space.

The site is moderately sized, at almost 7 acres, which suggests development potential, although the building layout is unique, which may limit certain types of reuse.*(*

Note: see the Volume 2 report for usage analysis and planning studies).



Offices and Instruction Spaces Lack Storage

HVAC - Heating, Ventilation and Air Conditioning: Oakdale Elementary School

Executive Summary:

Existing Conditions

The Oakdale Elementary School is an historic building with many dated and antiquated systems. Many of the HVAC systems are beyond their serviceable life expectancy.

Heating Plant

The School has two heating plants with cast iron steam boilers. Both boiler plants produce low pressure steam which is distributed to heating equipment in the building. The boilers are cast iron sectional boilers with #2 heating oil with a Webster Cyclonetic with a maximum GPH of 18.8 and a minimum GPH of 11 GPH, although it is handwritten note on boiler 1 states the nozzle is at 8 GPH



Boilers

In the basement level there is another boiler plant which appears to be the original boiler plant of the building. The original boilers are still in place but appear to be decommissioned they are dated 1902. The active boiler in the original boiler room is a Weil-McLain, Series 88 Boiler with a Powerflame burner. The boiler model number at 1488, the oil input labeled on the boiler is 31 GPH, which converts to approximately 4464 MBH input and 3709 MBH heating output.



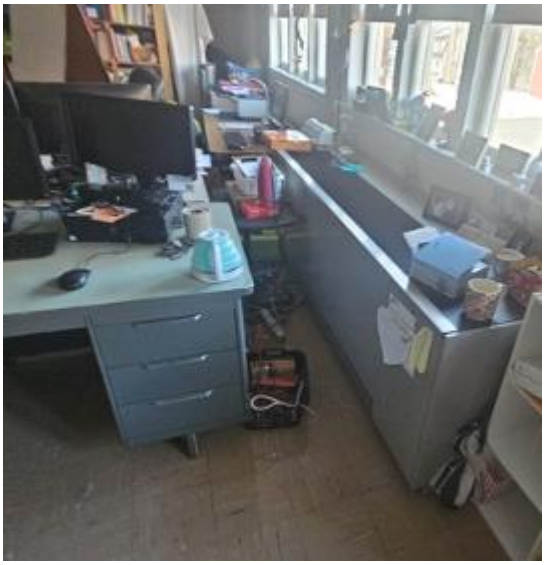
Boilers in original boiler room



Original Boilers

Classroom Heating

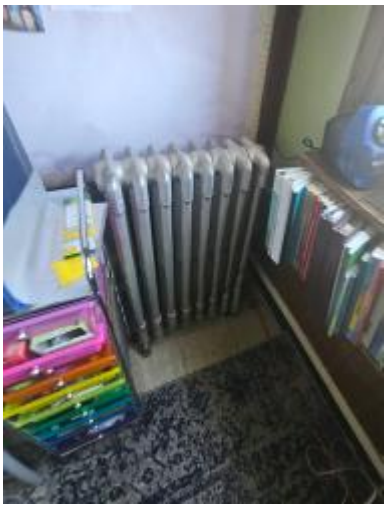
Classrooms have unit ventilators providing heat and ventilation to each space. The unit ventilators appear to be approximately 15 years old and appear to be operating in good condition for their age. The UVs utilize the low pressure steam from the central boiler plant.



Unit Ventilator

Terminal Heating Equipment

Throughout the building there are terminal heat devices such as convectors, unit heaters and fin tube radiation in areas where supplemental heat is required. Most of the terminal heat devices are well beyond their anticipated serviceable life and should be considered to be replaced.



Steam Unit Heater



Steam Fin Tube Radiation



Typical Convector

Air Conditioning

In some areas such as the administrative area and the Library there are wall mounted ductless cooling units. The wall mounted AC units appear in good condition should have many years of serviceable life.



Typical Wall mounted cooling unit

Cafetorium

The Cafetorium is heated and ventilated by two air handling units located in the front of the space near the stage and provide supply air high and return air grilles are located below the stage.



Typical Convector

Toilet Rooms:

Toilet rooms have wall mounted grilles in proximity to the fixtures. Many of the grilles appear original and likely connected to original ductwork. Existing systems would be recommended to have ductwork and existing grilles cleaned in accordance with industry duct cleaning standards and insure fans are operating at design CFMs



Exhaust Fans

Automatic Temperature Controls:

Controls throughout the building are a mixture of pneumatic controls and stand-alone electric/electronic. Existing pneumatic controls which still serve existing steam equipment such as terminal units like unit heaters, fin tube radiation and convectors. The pneumatic compressor is in the mechanical room in the basement.



Stand-Alone Controls



Pneumatic Controls

Recommendations:

Based on the conditions observed of the existing HVAC systems and equipment, We recommend the following improvements to the HVAC system.

- The majority of the HVAC systems and equipment have exceeded their serviceable life expectancy.
- With Oil being the primary fuel source at the building it would be recommended to see if natural gas would be in the area so the building could be converted to reduce fuel consumption and improve energy efficiency. If natural gas isn't an option, then other alternative sources of heat could be reviewed such as heat pumps and the implications of what would be required of an upgrade to the electrical provisions at the site.
- If steam heat source was converted to a hot water plant, then any associated terminal heating devices downstream would need to be converted for the heating coils to be changed from steam to hot water. Coil size would increase in each unit to ensure that adequate heat discharge would come form each unit ventilator, unit heater, fin tube radiation and convector. While the unit ventilators are approaching the end of their anticipated serviceable life, the unit heaters, fin tube radiation and convectors are all well beyond their serviceable life and in need of replacement at this time.
- Replace any remaining pneumatic controls throughout the building with a full direct digital control (DDC) system. A full DDC system will provide improved energy efficiency, thermal occupant comfort, alarm notification, scheduling and an improved operating system. A building management control system would have all spaces and HVAC equipment integrated into graphics which will be reporting live data to the front-end user.
- In the basement level there is condensate return pipe in boxed in enclosures above the slab that are required to return the condensate low. These enclosures create obstructions at the floor level which impedes on serviceability and access.

ELECTRICAL – Oakdale Elementary School

Executive Summary:

On February 19th, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Oakdale Elementary School. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The Oakdale Elementary School is provided with (4) overhead services from Eversource and are all rated at 120/240V single phase with amperage ratings of 400 Amperes. All secondary services are cold sequence metered terminating within a main service rated disconnect switch before running to a C.T. (current transformer) cabinet. All utility meters are located adjacent the main service disconnects at each location. All distribution equipment found within the building's electrical room would be described as in poor to fair condition and nearing or at capacity.

Electrical sub-panels vary in manufacturer and vary in age and condition, but all equipment is nearing its serviceable life expectancy or has passed it. There are existing fuse box panels in use within the historical portion of the existing building which should be replaced.

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment. Two sub electrical closets are located within classrooms spaces and closets have been converted to be utilized for storage as well. The main boiler room service has no safe working area to stand on in front of the CT Cabinet.


















Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in poor condition throughout. GFCI is not provided at all code required locations. Exposed wiring terminations were found in areas of the building.







Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs) and remote heads. These units vary widely in condition and age from poor to new.

Exit signs within the building are thermoplastic type and vary in condition from poor to good. Some of the buildings' exit signs are non-lit type.







Fire Alarm System:

The existing building is equipped with a Harrington addressable fire alarm control panel (FACP) located within the main office. This system is generally considered to be obsolete. Fire alarm notification and initiation devices located throughout the building are in fair condition.

A key repository box was located at the buildings main entry. No fire alarm annunciator or graphical map was found during the visit to the site. The method of transmission is via surface mounted local energy master box.









Exterior Lighting System:

Traditional style pendant lighting fixture is located at the main entrance. Canopy lighting at the building entrance consists of 12” square surface fixture. Building mounted lighting primarily consists of traditional style wall pack lighting with prismatic lens. Parking lot lighting is comprised of dual head flood style fixtures mounted to utility pole. Some exterior doors so not have any lighting.








Interior Lighting:

Interior lighting within the Main Lobby consisted of recessed downlights. Corridors consists of surface linear wrap around fixtures. Classrooms have pendant mounted linear wrap around fixtures. Some classrooms have surface linear wrap around fixtures.

Gym lighting consisted of surface High Bay 2x4 fixtures with prismatic lensing. Some areas have recessed LED 2X4 fixtures.

No centralized control system was found but some areas were outfitted with line voltage occupancy sensors. No daylight harvesting sensors were found.















Security System

An Ademco intrusion system is currently installed to protect and monitor the building utilizing door contacts and motion sensors located throughout the building corridors.

An access control system is provided at main entry points into the building utilizing card readers, keys can door controllers and a dormakaba key scan management software.

The use of a CCTV (Closed Circuit Television) system is utilized with Axis cameras to monitor the building perimeter and data closets with video storage to an Exaqvision NVR. A security monitor is located in an administration office for live video monitoring.

An Aiphone Video Intercom is utilized at the main entrance that provides two-way talk communication with visitors and remote door release.






KEYSCAN
ACCESS
CONTROL
SYSTEMS

Communication Systems:

Communication services enter the building overhead and terminate at a demarcation wall within the school's MDF Room. It was noted that service cables entered through the mullion of an existing window located within the MDF Room. Data connection points and wireless access points are located adequately throughout the building for operational needs. The use of short throw projectors are utilized within classrooms.

The MDF room connects back to an IDF Room with a fiber backbone and town fiber connection that connects the Oakdale school to the town's school fiber network hub at the high school.

There is no PA (Public Address) system within the school and it is assumed that the school's VOiP Avaya phone system is utilized for this purpose. The school's existing clock system has recently been upgraded and utilizes a wireless Sapling clock system.









Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Any panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that the existing older battery units be replaced with new. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Non-lit exit signs within the building should be replaced. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

Fire alarm system should be replaced with a new addressable type and voice evacuation up to date system. New devices shall be provided as required coverage to meet current codes.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. Wall mounted LED fixtures should be provided at all exterior doors.

A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

Provide additional receptacle locations to assist in elimination of extension cord usage.

Security System:

The card access system should be expanded to secure, track, and monitor access to all entry points of the building as well as higher security areas such as the building's data closet or library directors' office.

Communication Systems:

To ensure optimal performance and safety, existing data closets should be neatened and reconfigured, with all stored items relocated to a separate area to maintain necessary clearance and proper airflow for the existing equipment.

Provide additional telephone/data ports and wireless access points as needed throughout the building to accommodate daily operations in a 21st century learning environment.

PLUMBING– Oakdale Elementary School:

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping, and natural gas. The natural gas service has been abandoned and the gas meter removed from the gas service. Municipal sewer and municipal water serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in fair condition and are nearing their life expectancy.

The plumbing fixtures are in fair condition. Some of the bathroom fixtures appear to have been modified to make them accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the drainage piping is nearing or has exceeded its life expectancy.

Fixtures:

The water closets are floor mounted, vitreous china with manually operated flush valves.

Urinals are pedestal, vitreous china with manually operated flush valves and are non-Compliant or wall mounted, vitreous china with manually operated flush valves.

Lavatories are wall hung, vitreous china with manually operated, holt and cold-water faucets.

Drinking fountains are stainless steel, dual height, surface mounted. There are vitreous china, original drinking fountains which do not appear to be operable.

Electric water cooler is surface, wall mounted, single unit with bottle filler.

Janitor's sink is a enameled, wall mounted, cast iron sink with 3-inch trap standard and wall mount faucet and is equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucets, with dual lever type, hot and cold-water faucet.

Exterior wall hydrants include loose key operation and threaded connection with no vacuum breaker.



Water Closet



Urinals



Urinals



Lavatories



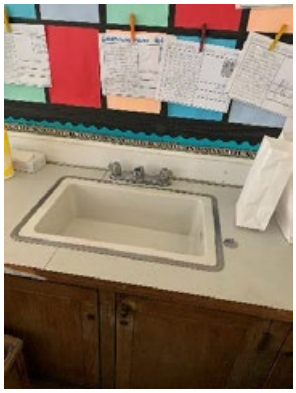
Drinking Fountain



EWC with Bottle Filler



Janitor's Sink



Sink



Wall Hydrant



Drinking Fountain

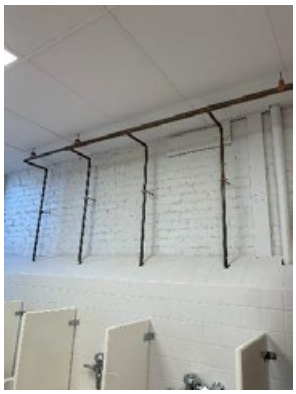
Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 4-inch in size. There is a water meter but there is no reduced pressure backflow preventer on the domestic service piping arrangement.

The domestic water piping, where exposed, is copper tubing with sweat joints. The majority of the domestic water piping includes original insulated but much of the insulation is missing. The valves used for isolation purposes are either full port ball valves or original gate valves.



Water Meter



Water Piping



Water Piping

The majority of the domestic hot water is provided by an electrical, storage tank type water heater, located in the Mechanical Room. The water heater has a storage capacity of 75 gallons and a power input of 4.5 kW. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank installed. The water heater appears to be in fair condition.

At Janitor's sinks, domestic hot water is provided by an electrical, storage tank type water heater. The water heater has a storage capacity of 19 gallons and a power input of 1.5 kW. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank installed. The water heaters appear to be in fair condition.



Water Heater



Water Heater

Gas:

A low-pressure natural gas service is supplied to the building exterior. The gas meter has been removed and the gas piping has been abandoned.



Gas Service

Drainage Systems:

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 a duplex sewage ejector in the Mechanical Room floor, picking up Mechanical Room Floor Drains. The ejector appears to be in poor condition and is likely not operational.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Sewage Ejector



Cast Iron

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)
- Provide new high-efficiency, water conserving, plumbing fixtures. (Low Priority 5+ years)
- Provide accessible fixtures where required. (Low Priority 5+ years)
- Install thermostatic mixing valves, expansion tanks, and hot water recirculation loops at existing water heaters. (High Priority 1-2 years)
- Provide all new domestic water piping including insulation, pipe labels and full port ball valves for isolation purposes. (Low Priority 5+ years)
- Provide all new sanitary, waste and vent piping throughout the building. (Low Priority 5+ years)
- Provide Code required vacuum breakers on all wall hydrants. (High Priority 1-2 years)

FIRE PROTECTION – Oakdale Elementary School:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

STRUCTURAL EXISTING CONDITIONS (Oakdale Elementary School)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated 04-28-1924, Jan 4, 1951, Jan. 22, 1970, and 4/21 & 22/1970, January 7,1999, and a site visit by RSE on February 19, 2026.

FOUNDATIONS

1. Existing Elements:
    a. Historic portion: No documentation is available. Foundation walls were observed to be rubble below grade with masonry above. Basement floor appears to be a concrete slab on grade with a brick portion in some of the mechanical areas.
    b. 1951 Portion: No documentation is available. Visual review suggests perimeter concrete frost walls and concrete slab on grade.
    c. 1970 Portion: Allowable bearing pressure is not provided. 4" slab on grade reinforced with mesh. Exterior footings are 4 feet minimum below grade. There is no indication in the drawings of foundations extending lower than the minimum.
2. Modifications appear to be limited to connections between additions, for example modified door openings in basement walls.
3. The inside face of several exterior basement walls, and several interior brick bearing walls have lost substantial amounts of mortar. No other structural foundation issues were observed.
4. Recommendations: repoint brick walls where there is mortar loss.

SUPERSTRUCTURE

1. Historic portion: load bearing masonry exterior and interior walls with wood floor framing. Roof is also wood framed. Brick chimneys extend above roof, and there is an exterior egress stair.
2. 1950s addition structure includes steel beams and columns at the gym. CMU walls along the corridors are assumed to be load bearing.
3. 1970s addition are one-story with load bearing CMU walls and wood roof trusses.
4. Condition/Known Issues:
    - Water damage, efflorescence and deterioration of the trim from leak at connection between different portions of the building.
    - Chimneys are in poor condition with cracking and mortar loss.
    - Broken bricks at corners of windows.
    - Exposed lintels showing signs of rust and the beginning of rust jacking.
    - Cracking in some of the load bearing CMU walls.

5. Recommendations:

    - Eliminate leaks and reconnect all downspouts.
    - Repoint and rebuild chimneys to restore structural integrity.
    - Monitor lintels and bricks over windows. Repair may be necessary at a later date.

PHOTOS

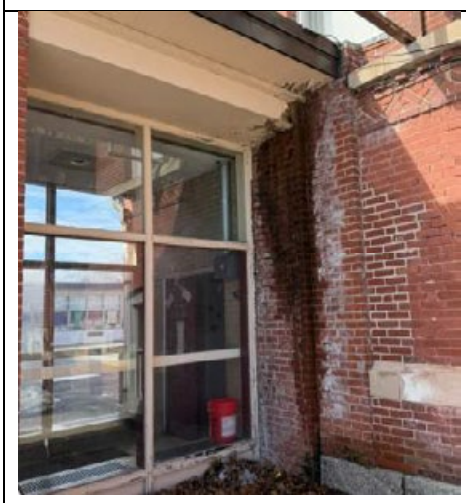
	Photo: Mortar loss at interior brick wall.
	Photo: Mortar loss at exterior brick wall.
	Photo: Water damage from leak.

	Photo: Damage at top of chimney.
	Photo: Cracking at chimney.
	Photo: Damaged brick around window.
	Photo: Cracking in CMU wall

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Parks & Recreation (Frmr Capen School)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: S-8 | Parks and Recreation Offices (former Capen School)

SELECT BUILDING: S-8 | Parks and Recreation Offices (former Capen School)

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	S-8	**Flood Zone:**	Zone AE (100-yr)
Address:	310 Sprague Street	**Wetlands:**	Within Wetland
Year Built:	1930	**Historic:**	None
Last Renovated:	1970	**Lot Size (ac):**	4
Gross Sq Ft (GSF):	37,026	**Building Use:**	Administrative / Adaptive Reuse
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Wood Frame	**Assessed Value:**	$7,324,100
Roof Year:	tbd	**Deferred Maint. ($):**	tbd
Window Year:	tbd	**Est. Renovation Cost:**	tbd
No. of Floors:	2	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Fuel Oil	**Energy Use Intensity (EUI):**	~43
Electrification Potential:	2035 – VRF	**GHG Emissions:**	106
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	High

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.96	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	3.9	• Critical
Structure (Avg):	2.0	• Fair
MEP / FP (Avg):	3.4	• Critical
Life Safety / Code:	2.6	• Poor

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	3.5
HVAC – Heat:	4.0	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	n/a	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	n/a	• N/A
EPI-2 Academic Suffic.:	n/a	• N/A
EPI-3 Program Suffic.:	n/a	• N/A
EPI-4 Universal Access:	n/a	• N/A
EPI-5 Building Safety:	n/a	• N/A
EPI-6 Tech. Readiness:	n/a	• N/A

Grade Config.:	n/a
Enrollment:	n/a
SF per Student:	n/a

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Basement and Addition Spaces used by Parks and Recreation

The 1930 Capen School building currently serves as temporary offices for the Parks and Recreation Department following their relocation from the Dolan Center, and carries deferred maintenance across site, mechanical, electrical, and fire safety systems.

The former Capen School at 310 Sprague Street was built in 1930 and currently serves as the Parks and Recreation Department's administrative offices and programming space as well as leased classrooms. The Parks and Recreation Department relocated here following the deterioration of the Dolan Center. The 37,026 SF building was assessed as being in poor overall condition with significant deferred maintenance across site, HVAC, plumbing, electrical, and fire safety systems. The building is not served by an elevator and has significant accessibility limitations.

The building is a traditional masonry school construction on a constrained urban site. Site conditions at the time of assessment were rated Poor, with a deteriorated asphalt parking surface and deferred landscaping. The roof membrane is aging and in need of replacement. Exterior paint is failing, exterior stairs require repair, and exterior doors are in deteriorated condition. The fuel oil heating system is aging and in need of replacement; condensing units, exhaust fans, and the building automation system are all flagged for replacement. Plumbing deficiencies include deteriorated piping and backflow prevention issues. Fire system deficiencies include the need to replace the fire pump, fire department connections, jockey pump, and sprinkler heads. Interior finishes, floors, ceilings, doors, and bathroom partitions require comprehensive replacement.

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Building Structure & Exterior

The Parks & Recreation building is a two-story wood and masonry structure with a basement, originally built and occupied as the Capen school in 1930 and expanded in 1970. The building foundation is concrete foundation walls, interior spread footings and concrete slab on grade. Bottom of wall footing varies to accommodate the extent of basements and is 4 feet minimum below grade. At the 1970 portion, a 4" slab on grade reinforced with mesh was installed. Exterior footings are 4 feet minimum below grade. No significant issues were observed.

The original 1930 building is load bearing, unreinforced masonry exterior and basement walls with wood floor framing. Steel beams and lally columns with wood infill under most floors. Concrete flat slabs at corridors and bathrooms. The roof is also wood framed. At the 1970 portion, CMU bearing walls with wood roof trusses were constructed. Known issues include water from roof scuppers which has eroded some of the brick mortar. In the gym, reports of ceiling tiles falling. Netting has been installed to catch loose materials and signs of potential moisture issues where beams frame into exterior walls on the inside, and some mortar loss on the outside. Some minor cracking in corridor slabs, parallel to the direction of slab span. Floor tiles at the second floor are "popping", possibly due moisture issues and cracking in exterior brick was observed. Recommendations include repoint brick where mortar has been eroded by water and monitor gym ceiling condition.

The exterior of the building is predominantly red brick masonry with punched openings, metal double hung windows. Windows are metal and not original to the building, but observed to be beyond their service life. Windows in the addition sections are also metal punched windows, original to their vintage of construction. Generally the facade is observed to be in fair to poor condition. The roof is a single-ply low-slope membrane with a pitched shingle roof on the rear addition. The roof beyond the end of its useful life. The roof is generally in poor condition. Overall, the exterior is in poor condition. The exterior should continue to be monitored and replacements for windows and roof should be studied.



Wood structure above ceiling



Pavement is in poor condition

Interior Environment

The Parks and Recreation building was originally built as an elementary school, and previously occupied by the Dedham ECEC prior to their moving into a new school. An interior renovation project was conducted at the time of the departments move into the Capen building to refit spaces for administrative function and programs offered by the department. The interior renovations were primarily to the rear addition and basement areas. The original school is leased for adult education purposes and is largely original to its construction. Building spaces are generally fit for purpose.

Floor finish at the parks and recreation areas are a resilient plank floor, carpet and resilient tile floor. The original first and second floors of the school has older resilient tile floor. Tile floor or sealed concrete is located in bathrooms. Walls are generally painted wall board, with masonry in the corridors. Tile is installed in restrooms and at drinking fountain locations. The parks and recreation spaces are in good condition, the original first and second floor school spaces are in poor condition.

Floor finish in the original school shows various replacements and vintages and is in poor condition with multiple areas of cracking and failure. Walls are in fair condition, but finishes are dated and past their service life. The school is pleasant and classrooms are well lit with good access to natural daylight. While classrooms have operable windows, indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply.

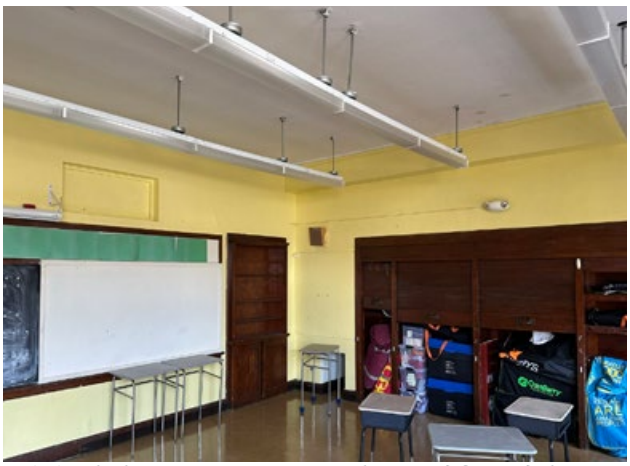
Programmatic Suitability

The Capen building sits within a low-density residential neighborhood, with a large park and industrial use to the north west. The building was originally built as an elementary school, with one small addition. The original school contained 12 classrooms and an auditorium/gym with stage. The 1970 addition added three classrooms.

The spaces which have been remodeled for the Parks and Recreation department appear to function at an acceptable level and the site has outdoor program space with a playground and ball field.

The first floor classrooms are currently being used for adult education under a short-term lease agreement. The lease does bring in some revue for the town, while preserving use of an underutilized asset. The second floor is no longer allowed to be used for public use. There is no elevator, and the buildings 'grandfather' status was lost when the ECEC moved to its new home. The second floor is now used for town storage. The second floor cannot be used without the addition of an elevator to provide compliant accessible access.

(Note: see the Volume 2 report for usage analysis and planning studies).



Original classrooms, currently used for adult education under a short-term lease

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Accessibility compliance upgrades — full accessibility assessment required
- Window & curtain wall replacement throughout

10-Year Capital Improvements

- Mill and overlay of deteriorated asphalt parking areas,repair of sunken catch basins and site drainage
- Interior finish replacement (floors, ceilings, doors, bathroom partitions) at original school portions
- improvements, replacement of damaged granite curbs and concrete sidewalks
- Modernization of antiquated main electrical service and distribution panels
- Lighting assessment and LED upgrades
- Roof membrane replacement
- Replacement of galvanized iron domestic water supply piping & cast-iron sanitary waste piping infrastructure
- Full installation of fire suppression (sprinkler) system
- Building automation system replacement
- Replacement of exterior wood doors and interior fire doors
- Security upgrades - camera system and remote entry controls requested by user

Capital Investment History

FY	Project / Capital Improvement	Amount
FY22	Parks & Rec Move — Capen Renovations (wood floor, bathroom)	$60,000
FY25	Capen Renovation	$175,000

Site Conditions

The former Capen school sites along Sprague Street to the south and Etna Road Street to the west. Parking along front and side and the site includes a playground area and ball fields. The site is moderately sized, at nearly 4 acres, and is largely flat and developed.

The site contains paved parking and walkways, which are in poor condition. The site is not within FEMA Flood Zones, reflecting low flood risk. No wetlands are present on the parcel per GIS review.

Sustainability & Decarbonization

FY2022 GHG emissions were 106 MT CO_2e (3.0% of portfolio). Oil-based heating with aging condensing units (1990-era); EUI data not available. The Decarbonization Roadmap proposes VRF electrification and heat pump water heaters in 2035. No solar potential identified given roof age and condition.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The building has accumulated a significant log of deferred maintenance. The long-term use of this building by the Parks and Recreation Department should be evaluated as part of the broader Facilities Master Plan strategy, particularly in light of the status of the Dolan Center. A comprehensive programming and space needs analysis for Parks and Recreation functions is recommended to find a permanent home for that department.

The site itself is larger than most town-owned parcels, at 4 acres. Further, there are two adjacent town-owned parcels which take the total site, when combined to over 9 acres. There are wetlands present on the west end of the 408 Sprague Street parcel, which also abuts the Manor Estates Park, but the combined sites are large enough that the site should be considered under replacement and relocation strategies for other town facilities.

(Note: see the Volume 2 report for usage analysis and planning studies).



Original Classrooms Used as Leased Education Space

HVAC - Heating, Ventilation and Air Conditioning – Parks and Recreation Offices:

Executive Summary:

The Dedham Parks and Recreation Offices, formerly known as the Capen Early Childhood Education Center, was originally built in 1931 with some more recent upgrades and replacements within the past 20 years. Spaces are heated and ventilated by unit ventilators served by a central boiler plant. Previous pneumatic controls have more recently been replaced by direct digital controls (DDC).

Existing Conditions

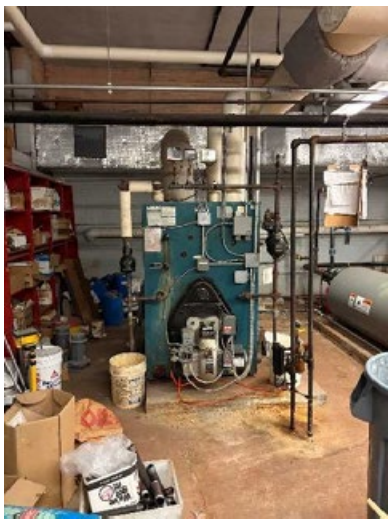
Heating Plant:

The original boilers were replaced in the past 28 years. One in 2011 and the second in 1998. In their present state both Burnham manufactured boilers appear to be in fair working condition. Each boiler has a capacity of approximately 1,281 MBH. The boilers are oil fired and standard 80% efficiency. The hot water is distributed to terminal units such as unit ventilators through a 2-pipe steel hot water system. Insulated breeching is run to a common header and ducted to the existing brick chimney.

Heating hot water is pumped throughout the building by two (2) 1/2 horsepower pumps. The pumps are in fair condition. Typical hydronic accessories such as an expansion tank and air separator are also provided.



Boiler #1



Boiler #2



Existing Chimney

Space Level Heating and Cooling:

Normally occupied spaces are heated and ventilated by unit ventilators that have more recently been replaced. There are approximately fourteen (14) unit ventilators ranging in size from 750 to 1500 MBH. Transient spaces such as corridors and stairwells, or storage spaces, are served with steam radiators that have been converted for heating hot water use with updated digital control valves with a 1963 addition that

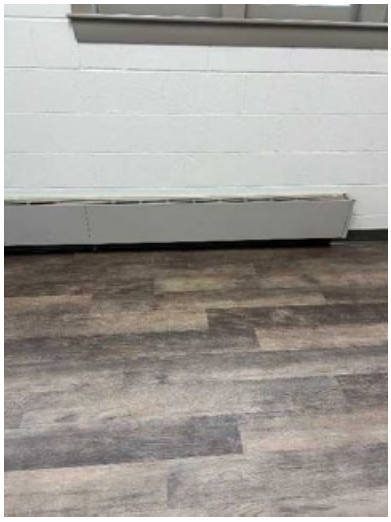
is furnished with electric terminal heating. The Gymnasium/Auditorium space is provided with steam radiators and would not have code require ventilation as the unit that provided ventilation has since been removed.



Typical Hot Water Unit Ventilator



Typical Hot Water Radiator



Typical Electric Fin Tube (Addition)



Removed Gym/Auditorium Ventilation Unit



Abandoned Ventilation Diffuser

Toilet rooms:

Toilet rooms have utility fans mounted in the space and are discharged to the exterior via a galvanized steel exhaust duct system. Make-up air is provided from the adjacent corridors.



Typical Bathroom Utility Exhaust Fan

Automatic Temperature Controls (ATC):

The ATC system is a stand alone digital control system that was provided in an upgrade from previous pneumatic controls.



Typical Hot Water DDC Actuator

Recommendations:

Based upon our review and observations of the building HVAC systems, we offer the following systems recommendations.

Option 1 – Code Upgrade/Renovation:

- Replace the boiler plant with high efficiency condensing boilers.
- Provide new hydronic piping throughout the building.
- Provide new hydronic terminal unit heaters, convectors, unit ventilators.
- Provide new heating and ventilation units.
- Provide CO2 monitoring sensors and controls to provide appropriate ventilation to the space.
- If cooling is desired, incorporate direct expansion coils into the new unit ventilators and heating and ventilation units.
- Provide full DDC system with central building management system for overall building management, troubleshooting, scheduling, and maintenance.

Option 2: Complete HVAC Replacement:

- Demolish all existing HVAC systems.
- Provide new central heat pump air handling unit with energy recovery to provide ventilation throughout the building.
- Provide a variable refrigerant flow (VRF) terminal unit system to provide heating and cooling control to individual spaces.
- Provide full DDC system with central building management system for overall building management, troubleshooting, scheduling, and maintenance.

ELECTRICAL – Parks & Rec Offices

Executive Summary:

On March 26, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Dedham Parks and Recreation Offices. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

The report details several code violations present within the building along with recommendation on how to correct them.

Electrical Distribution System:

The building has two separate electrical services, one for each tenant. The first electrical system for the Parks & Recreation office area. This service is rated for 600A (amperes) at 120/240V (volts). The service originates from an existing utility pole #4 located on Edna Road. The service enters a main CT Cabinet inside a small electrical/storage closet. The utility meter is also located in this closet adjacent to the main CT cabinet.

The Second electrical system for the Blue Hills Regional Technical School. The service is rated for 400A (amperes) at 120/240V (volts). The service comes in underground to a small switchboard section. The service originates from an overhead service and transitions to underground from an existing utility pole located on Edna Road.

Each service equipment and provides feeds to electrical sub-panels located throughout the building. All distribution equipment found within the buildings electrical room would be described as being in fair condition and nearing or at capacity.

Electrical sub-panels were found within the buildings main electrical room, mechanical room, and within corridors. All sub-panels would be described as being in fair to poor condition. There is select panels that have been installed recently that are in good condition.

Some panel locations were found to be in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.




Main

TYPE
AMP
POLE
VOLTS









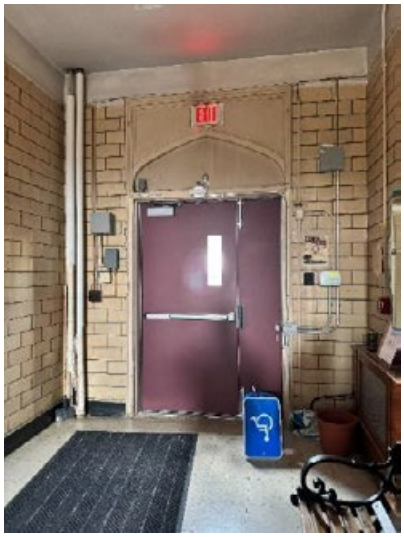



Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to new. There was a concern overall that the paths of egress within the building were not adequately covered to meet the requirements for illumination of the paths of egress as described in NFPA 101.

Exit signs within the building are all thermoplastic type and vary in condition from poor to good. Many of the buildings' exit signs have begun to yellow, a typical sign of aging in a thermoplastic sign. Some exit signs did not appear to have a test switch typically indicating that a sign is not provided with an integral battery back-up which would be required for a building with no emergency generator.





Fire Alarm System:

The existing building is equipped with a Harrington fire alarm control panel (FACP) located within the closet in the administration office.. This system is generally considered to be obsolete with conventional wired zone type architecture. Battery back-up for the system is installed batteries within the fire alarm control panel. Fire alarm notification and initiation devices located throughout the building are also in poor condition and in need of replacement. Audio/Visual notification not up to current codes for specific spaces in the building.

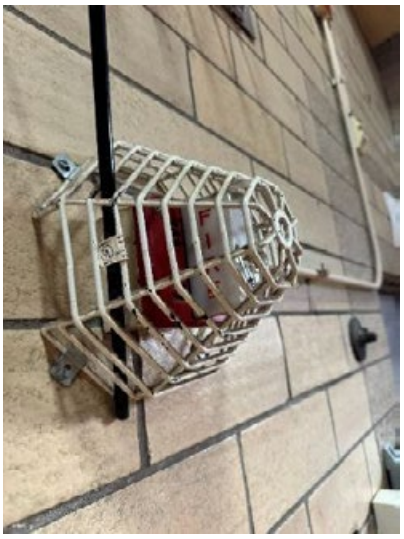
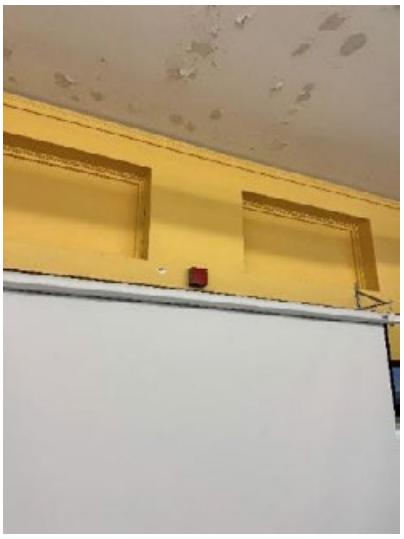
No fire alarm annunciator or graphical map was found during the visit to the site. The method of transmission appears to be via a master box located on the exterior of the building. This appears to not be functioning at the time of the site visit. It appears that audio visual devices were removed from the classrooms and the corridors. A red blank plate over the junction box has been provided.









Exterior Lighting System:

Exterior lighting is provided by building mounted light fixtures. Traditional style wall packs mounted up higher on the building. There is a wall pack wall sconce at the main entrance to the school part of the building. There are no parking lot pole light fixtures. it was unclear what light source the exterior building lighting is utilizing.







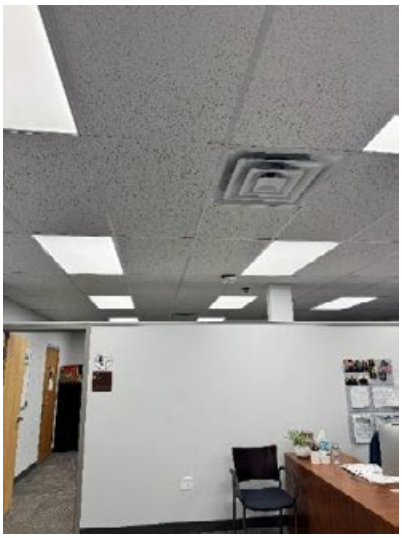


Interior Lighting:

Interior lighting consists of a combination of older fluorescent strip fixtures, pendant mounted fluorescent strip fixtures and recessed flat panel LED troffer type fixtures.

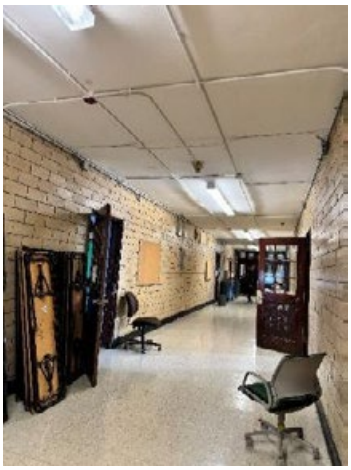
There are 2'x4' fluorescent fixtures in the gymnasium with wire guards. Utility lighting primarily consisted of linear wrap around fixtures some with prismatic lensing others with only a cage but all fluorescent sourced. The only exception to these were some porcelain socket style lighting fixtures found in basement area located under the stage.

No centralized control system was found, the majority of the switching is obtained by local switching , and no daylight harvesting sensors were found.








Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in poor condition throughout. Receptacles are fed via surface mounted wiremold throughout. Some receptacles have been painted this is generally considered a code violation as it alters the UL listing of the device and has the potential to negatively affect how the device functions. No receptacles were located at counters with sinks this is a typical code requirement that may need to be addressed in any sort of renovation. Receptacles do not appear to be tamper proof type which is required by code.







Security System

A keyscan system is currently installed within school are although not all entries were found to be secured. Card access station was present at the main entry only. CCTV cameras were installed at the exterior main entry of the school. There is also an Aiphone installed at the entrance to the Parks and Recreation office. There is alarm system keypads at various locations.







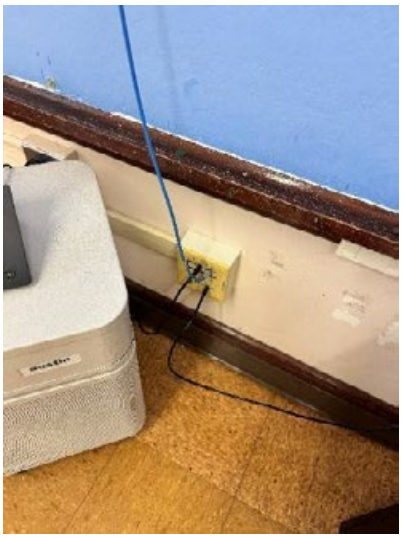




Communication Systems:

Phone and internet services enter the building via an overhead line from Edna Rd to basement utility room. Data connection points are sparsely located throughout the building. Very few access points were located during the walkthrough of the library.





Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Elimination of obsolete equipment abandoned in place should be considered for removal along with upgrade of panels that are in poor condition. Additionally, panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

Fire alarm system replacement with a new addressable type system is currently being designed and shall be installed and operational prior to the commencement of this projects scope of renovation. Therefore the scope for the renovation project shall be to add or modify the now existing system for any spaces altered.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Lastly, A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

It is recommended that all existing code violations be reviewed and addressed. Provide additional receptacle locations to assist in elimination of extension cord usage. It is recommended that all receptacles be replaced within the building and that tamper resistant receptacles be installed in any public and student areas.

Security System:

It is recommended that the current intrusion system installed be replaced and expanded to provide door contacts at all points of accessible entry to the building as well as a full coverage of motion sensing devices within the building at grade level.

A CCTV (Closed Circuit Television) system should be provided with cameras providing coverage to the exterior building and throughout all public areas of the library. The town standard Axis Camera Station Pro system should be provided and carried as a proprietary item.

A card access system should also be provided to secure, track, and monitor access to all entry points of the building as well as higher security areas such as the building's data closet or library directors' office. The town standard S2 system should be provided and carried as a proprietary item.

Communication Systems:

New phone and internet services should be provided to the site. The demarcation point for the phone and internet services should be re-located to a dedicated room within the building. The room should be fitted with appropriate data rack with spaces for all systems in use data, security, phone, etc. All systems shall be fed with color coded cabling for ease of identification and maintenance when necessary. The room should be conditioned and provided with rack mounted UPS (Uninterruptible Power Supply) for back up during power loss situations.

Additional telephone/data ports and wireless access points should be provided in all offices and finished areas throughout the building.

PLUMBING- PARKS & RECREATION (FORMER CAPEN SCHOOL)

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and storm drain piping. Municipal sewer and municipal water serve the building.

Portions of the plumbing systems have been updated as part of building renovation and upgrade projects.

Fixtures:

The water closets are floor mounted vitreous china with manually operated flush valves or flush tanks.

Lavatories are wall hung vitreous china with manual faucets.

Sinks in corridor of school building are wall mounted, enameled sinks with wall mount manual faucets.

Electric water coolers are wall mounted, single unit, with bottle filler.

Janitor's sinks are trap standard mounted enameled sinks with wall mounted faucets equipped with vacuum breakers.





Typical bathroom fixtures (Park & Rec)



Water closet (Capen School)



Capen School lavatory



Corridor sink



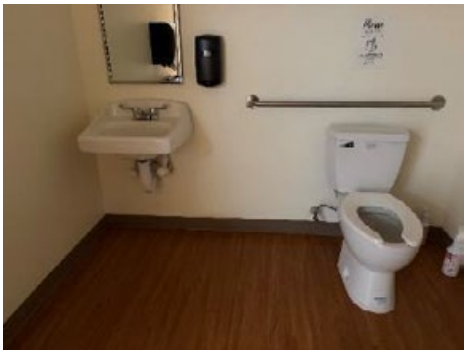
Electric water cooler



Water dispenser



Service sink



Dance Studio bathroom

Water Systems:

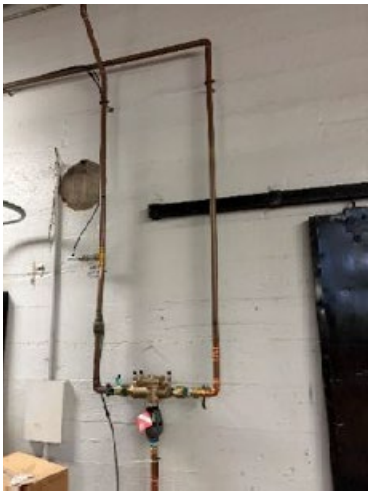
The domestic water service appears to be 3-inch in size and includes a 1-inch water meter. There is no backflow preventer on the main service. There is a 1-inch reduced pressure backflow preventer provided for HVAC boiler water make-up.

Piping, where exposed, is copper tubing with sweat joints. Where modifications have been made copper press fitting have been used. The majority of the piping that is exposed is not insulated.

Domestic hot water is provided by a tank type electric water heater. Water heater was installed in 2019 and appears to be in good condition. There is no mixing valve and the hot water is not recirculated.



Domestic water service



HVAC make-up water supply



Domestic water heater

Drainage Systems:

Cast iron is used for sanitary drainage and roof drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. Roof drains appear to be in poor condition.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Cast iron drainage piping



Typical roof drain

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Install thermostatic mixing valve and recirculation loop at existing domestic water heating system.
- Replace existing roof drains.
- Insulate domestic water piping.

FIRE PROTECTION – Parks & Rec Offices:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

STRUCTURAL EXISTING CONDITIONS (Capen)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated 6-6-30, and Jan. 21, 1970, and a site visit by RSE on March 26, 2026.

FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls at the perimeter.
    a. 1930 portion: Allowable bearing pressure is not provided. Concrete foundation walls, interior spread footings and concrete slab on grade. Bottom of wall footing varies to accommodate extent of basements and is 4 feet minimum below grade.
    b. 1970 Portion: Allowable bearing pressure is not provided. 4" slab on grade reinforced with mesh. Exterior footings are 4 feet minimum below grade. There is no indication in the drawings of foundations extending lower than the minimum.
2. No known modifications to foundations since original construction.
3. No damage to the foundations was observed.
4. Recommendations: None.

SUPERSTRUCTURE

1. Two portions of the existing building were constructed with different systems.
    - 1930 portion: Load bearing unreinforced brick exterior and basement walls. Steel beams and lally columns with wood infill under most floors. Concrete flat slabs at corridors and bathrooms and wood framed roof.
    - 1970 Portion: CMU bearing walls with wood roof trusses.
2. Condition/Known Issues:
    - Water from roof scuppers has eroded some of the brick mortar.
    - In the gym, reports of ceiling tiles falling. Netting has been installed to catch loose materials. Also signs of potential moisture issues where beams frame into exterior walls on the inside, and some mortar loss on the outside.
    - Some minor cracking in corridor slabs, parallel to the direction of slab span.
    - Floor tiles at the second floor are "popping", possibly due moisture issues.
    - Cracking in exterior brick.
3. Recommendations:
    - Repoint brick where mortar has been eroded by water.
    - Monitor gym ceiling condition.

PHOTOS

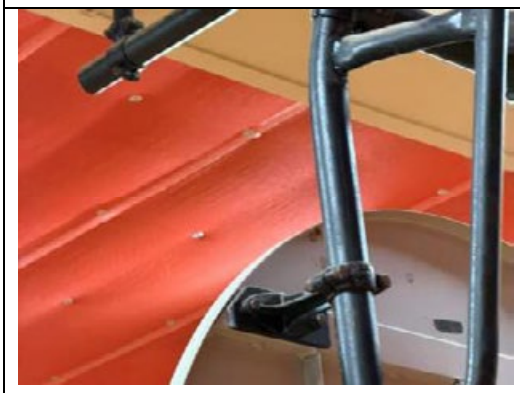
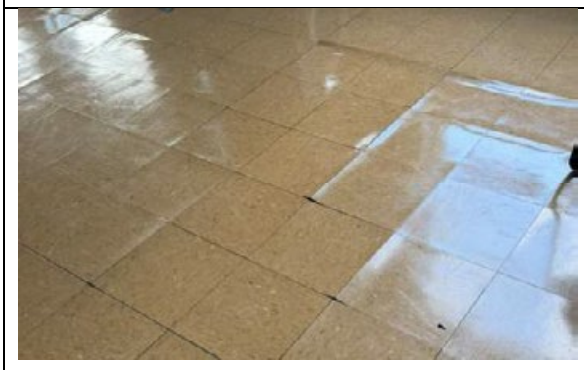
	Photo: Mortar loss at scupper.
	Photo: Material installed to catch loose ceiling tiles.
	Photo: Peeling paint possibly due to moisture infiltration at gym.

	Photo: Mortar loss on outside of wall at gym beam to wall connection location.
	Photo: Crack in underside of corridor slab.
	Photo: Popping floor tiles at second floor.
	Photo: Cracked brick at exterior

Public Library (Endicott Branch)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: T-3 | Public Library – Endicott Branch

SELECT BUILDING: T-3 | Public Library – Endicott Branch

BUILDING INFORMATION	
Building ID:	T-3
Address:	257 Mount Vernon Street
Year Built:	1904
Last Renovated:	1972
Gross Sq Ft (GSF):	4,276

SITE CONSTRAINTS & REGULATORY	
Flood Zone:	None
Wetlands:	No
Historic:	Listed – National Register
Lot Size (ac):	11.62
Building Use:	Library / Public

ROOF & ENVELOPE	
Construction Type:	Wood Frame
Roof Year:	unknown
Window Year:	tbd
No. of Floors:	1

CAPITAL COST ESTIMATES	
Assessed Value:	See Endicott Estate
Deferred Maint. ($):	tbd
Est. Renovation Cost:	tbd
Replacement Cost:	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	**Energy Use Intensity (EUI):**	~54
Electrification Potential:	2033 – Ducted ASHP	**GHG Emissions:**	23
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)		
OVERALL FCI:	**2.12**	**Fair**

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	**2.1**	• Fair
Structure (Avg):	**2.0**	• Fair
MEP / FP (Avg):	**3.0**	• Poor
Life Safety / Code:	**1.4**	• Good

KEY COMPONENT SCORES			
Roof:	**2.0**	Electrical:	**3.0**
HVAC – Heat:	**3.0**	HVAC – Cooling:	**3.0**
Fire Prot.:	**n/a**	Plumbing:	**3.1**

EDUCATIONAL ADEQUACY INDEX (EAI)		
OVERALL EAI:	**-**	**N/A**

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	**-**	• N/A
EPI-2 Academic Suffic.:	**-**	• N/A
EPI-3 Program Suffic.:	**-**	• N/A
EPI-4 Universal Access:	**-**	• N/A
EPI-5 Building Safety:	**-**	• N/A
EPI-6 Tech. Readiness:	**-**	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Rear Library Porch, Facing the Main Estate

The 1920 Endicott Library is a small single-story branch facility located on the Endicott Estate grounds with aging systems operating near capacity. Any future renovation should be planned in coordination with the Endicott Estate campus given the buildings' physical and operational interdependence.

The Endicott Branch Library is a one-story, approximately 4,100 SF building located on the Endicott Estate grounds at 257 Mount Vernon Street, accessed from Mount Vernon Street. Built in 1920 as an outbuilding (horse barn, then car garage) for the Endicott Estate, it was converted to library use and a library addition was added in 1972. It shares the Town's 130,020-item library holdings with the Main Library.

Electrical systems are generally in fair condition and service is provided by a 200A single-phase service at 120/240V, fed from an Eversource pole on Mt. Vernon Street. A 225A panelboard in the office area distributes to the building and all distribution is in fair condition, but nearing capacity. The panel is located in a storage area rather than a dedicated electrical room, creating working clearance violations. There is no emergency generator but EBUs in generally good condition. Additional egress path coverage may be required. A Silent Knight IFP-100 FACP is in good condition and provides fire alarm protection. There is no automatic sprinkler system. The library has a Gemini intrusion detection system and Keyscan card access at the main entry; CCTV cameras are installed but not all entries are secured. Interior lighting is provided by a 1'x4' wraparound fluorescent fixtures and full LED upgrade recommended. Receptacles are sparse and served by exposed surface conduit runs; data outlets are limited. Plumbing fixtures in fair condition. No TMV at water heater.

Building Structure & Exterior

The Endicott Branch Library is a one-story wood and masonry structure, originally built in 1920 and converted for library use in 1972. The building structure is a concrete slab-on-grade with wood framing. The foundation walls were observed to be rubble below grade where visible with predominantly slab on grade. No foundation issues were observed or reported. The existing building appears to have exterior masonry load-bearing walls with wood roof trusses. Overhangs at rear are supported on exterior wood posts and beams. The base of exterior posts are not raised above exterior sidewalk slab and are starting to deteriorate. It is recommended to replace exterior columns with pressure treated wood columns and stand off bases to protect from moisture, or use steel columns which are either galvanized or painted.

The exterior of the building is a tan stucco finish over masonry with punched opening, double hung windows. Windows are wood. Areas of rot and failures in the stucco were observed at the base of the facade in various places. Generally the facade is observed to be in fair to poor condition.

The roof is a pitched shingle tile roof. The roof is generally in fair condition and no issues were reported. The exterior should continue to be monitored and replacements for windows and stucco should be studied.

Interior Environment

The Endicott Branch Library is a former horse and car barn, which was converted for library use. It contains areas for book stacks and seating, a children area with book stacks and a group reading area, office and support spaces.

Floor finish is typically a carpet floor. Tile floor is located in bathrooms. Walls are generally painted wall board, with painted masonry finish on exterior and bearing walls. Tile is installed in restrooms.

Floor finish is consistent throughout the building and is in fair condition with some wear evident. Walls are in fair condition. The library is bright with good



Masonry bearing walls with timber structure



Deterioration of stucco visible at exterior of the library

access to natural daylight. Spaces are generally well organized and clean. Indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply.

Programmatic Suitability

The Endicott Branch Library is located on the Endicott Estate and located at the east end of the site, accessed from Mt Vernon Street. The building was originally constructed as a horse barn, later used as a vehicle garage.

The library is approximately 4,000SF and is organized as one long and linear space, broken into a number of open 'rooms' by bearing walls with large openings. This layout owes to its origin as a barn and appears to generally work well for the program of book stacks with scattered seating. There is no acoustic separation between spaces within the library, which may inhibit certain types of program as well as multiple concurrent uses within the library (i.e. quiet study during group reading time, multiple concurrent meetings).

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Endicott Branch Library sites along Mount Vernon Street to the east and is located on the Endicott Estate grounds. Parking is along the side of the building. As part of the Endicott Estates, the site is generally in good condition. The site contains paved parking and walkways, which are in poor condition. Further, it has been noted that the site is graded to drain towards the building. This contributes to observed rot to structure and failure observed to exterior stucco. The site should be regraded, or drainage mitigation measures installed to protect the building from excessive exterior water.

The site is not within FEMA Flood Zones, reflecting low flood risk. No wetlands are present on the parcel per GIS review.



The Endicott branch library is an important commiunity hub

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Relocate electrical panel from storage area to dedicated room — NEC 110.26 working clearance violation
- Expand security system to cover all entry points (currently only main entry has card access)
- Install surface-mount tamper-resistant receptacles — current receptacle coverage is sparse
- Install TMV and expansion tank at water heater
- Address site drainage issues, either regrade away from building or install drainage structures at building perimeter.

10-Year Capital Improvements

- Full LED lighting upgrade with dimming and occupancy controls
- Electrical service upgrade if any HVAC modification is added (currently at capacity)
- Fiber/data infrastructure upgrade — new dedicated MDF room with UPS, color-coded cabling
- Accessibility compliance survey and upgrades per 521 CMR
- Sprinkler system — required if major renovation cost exceeds threshold

Capital Investment History

FY	Project / Capital Improvement	Amount
FY24	Roof Replacements — DPW / Main Library / Endicott Library / East Dedham Fire (shared project)	$200,000 (shared)

Sustainability & Decarbonization

FY2022 GHG emissions were 23 MT CO_2e (0.64% of portfolio). The building has a small building footprint and fossil fuels account for approximately 74% of emissions. LED upgrade and heat pump water heater are primary efficiency opportunities. There is little solar potential given site and historic character.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The Endicott Branch Library is a small, aging building with limited electrical capacity and no emergency generator. Its location on the Endicott Estate grounds creates planning interdependencies with the Estate's own infrastructure deficiencies (particularly the sprinkler system and accessibility limitations). A joint study of the Endicott Estate campus should address both facilities together. Due to its small size and historic designation, alternate uses are limited.

(Note: see the Volume 2 report for usage analysis and planning studies).



Interior Library with Stacks

HVAC - Heating, Ventilation and Air Conditioning: Endicott Library

Executive Summary:

The Endicott Library HVAC systems which serve the building appear to have reached or are close to their end of their anticipated serviceable life expectancy and should be considered to be replaced with modern systems with improved energy efficiency and thermal improvement for occupant comfort.

Existing Conditions

Central Heating and Cooling Equipment:

The building is heated and Air Conditioned by two gas furnaces which work in tandem and are commonly ducted and vented. The furnaces were manufactured by Lennox Industries. The units have a common DX cooling coil connected to ductwork up through the ceiling in the mechanical room. These gas furnaces are standard efficiency at approximately 82% efficient.



Gas Furnaces



Cooling Coil mounted on Furnaces



Air Cooled Condensing Unit

Ductwork:

Supply and return ductwork is run both above the gypsum hard ceiling and exposed in the space. Supply diffusers and return grilles are throughout the building. Registers, grilles and diffusers (RGDs) are located in the ceiling and at the floor level of ductwork that is run exposed to the floor level.



RGDs



Floor level ductwork

Toilet Rooms:

The Toilet rooms have a wall mounted exhaust fan and cast iron radiator for heat.

Automatic Temperature Controls:

The building is on the Siemens building management system (BMS)



Siemens Controls

Recommendations:

Based on site observations of the existing equipment and systems at the site, we offer the following recommendations.

- The standard efficiency furnaces should be considered to be replaced with a high efficiency condensing furnaces which would consume less gas and improve energy efficiency.
- Air conditioning equipment should be considered to be replaced with new more efficient and reliable AC.

ELECTRICAL – Public Library Endicott Branch

Executive Summary:

On March 26, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Endicott Estate Library. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The buildings main service is rated for 200A (amperes) at a 1-phase service voltage of 120/240V (volts). The secondary service is brought from a Eversource utility pole #26 transformer located along Mt Vernon Street. Secondary service is hot sequence metered terminating at an 200A rated service disconnect located in the maintenance closet in the library. A panelboard rated for 225A was located in the office area which feeds additional electrical equipment/devices throughout. All distribution equipment found within the buildings electrical room would be described as being in fair condition and nearing or at capacity.

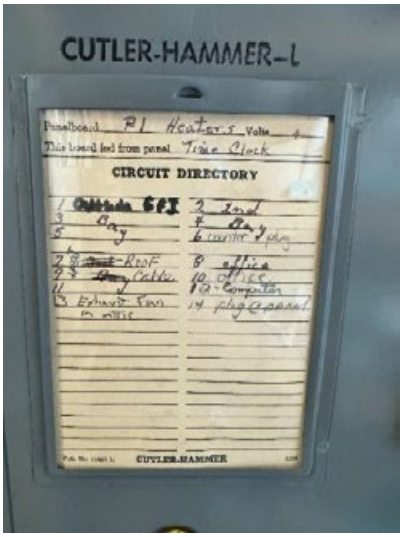
Panel locations should be in a dedicated electric room and not included within a storage area. This allows code violations of storing items in front of electrical panelboards.
















Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units condition are generally in good condition. There could be additional devices installed to cover the paths of egress within the building requirements for illumination of the paths of egress as described in NFPA 101.

Exit signs within the building are all thermoplastic type and vary in condition from fair to good..





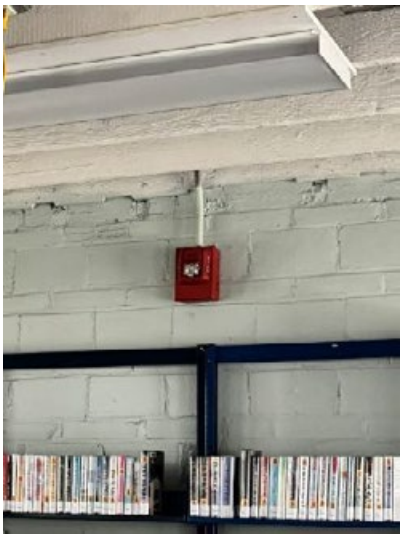
Fire Alarm System:

The existing building is equipped with Silent Knight IFP-100 fire alarm control panel (FACP) located within maintenance closet. This system is in good condition and is adequate for the building to provide fire alarm protection.

A key repository box was not observed at the time of survey. No fire alarm annunciator or graphical map was found during the visit to the site. The method of transmission is provided via AES Intellinet wireless system.







Exterior Lighting System:

Exterior lighting is limited an only provided via building mounted lighting. There is a arm mounted fixture over the entry door and some additional wall packs provided higher up on the building. There are no site poles



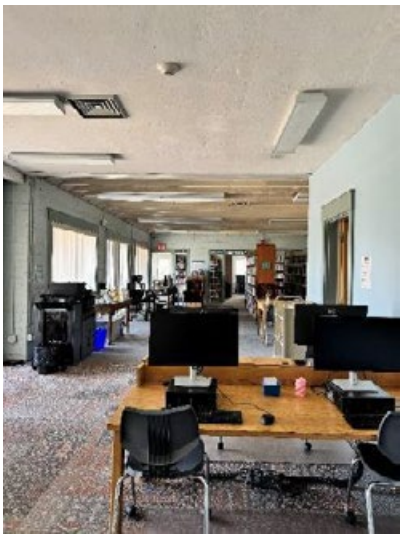




Interior Lighting:

Interior lighting within the existing library building consisted of traditional 1'x4' wraparound fixtures with prismatic lenses.

No centralized control system was found. Lighting is controlled via a bank of switches for different areas of the library.



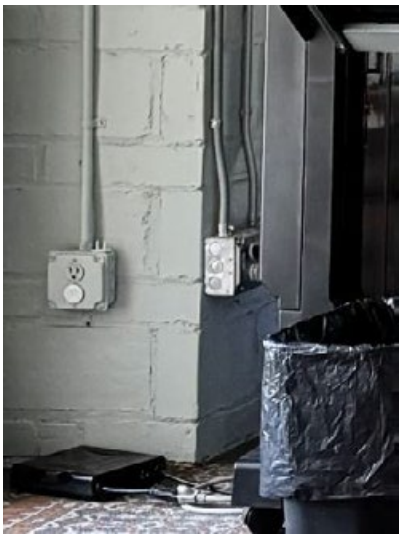


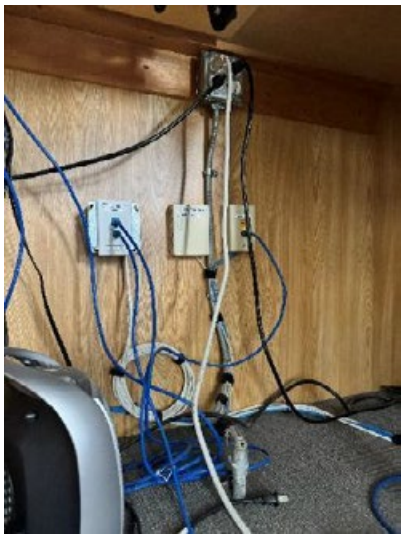


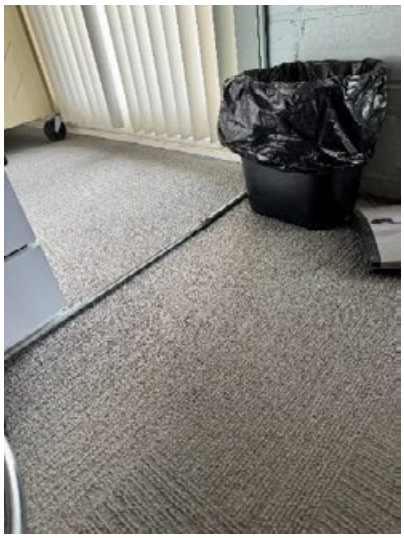
Wiring Devices & Branch Circuitry:

In general receptacles are provided sparsely throughout the space. They are provided via surface mounted conduits to junction boxes. There is an existing cord reel drop located over the book stacks.

There is exposed conduits running along the surface of the floor to provide data to the main desk location. There is also conduit stub up through the slab under the main desk location for power.





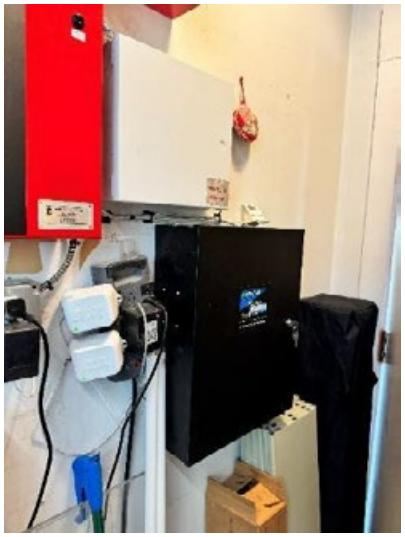






Security System

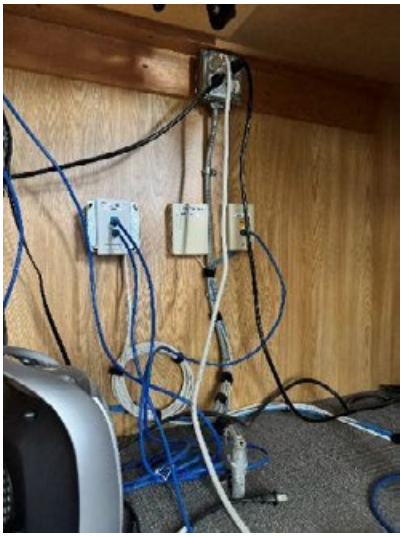
A Gemini intrusion system is currently installed within part of the library although not all entries were found to be secured. Keyscan Access Control Systems is currently installed.Card access station was present at the main entry only. CCTV cameras were installed within the library.





Communication Systems:

Phone and internet services enter the building underground and terminate at a demarcation wall in the libraries utility room. Data connection points are sparsely located throughout the building. Very few access points were located during the walkthrough of the library.

Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Elimination of obsolete equipment abandoned in place should be considered for removal along with upgrade of panels that are in poor condition. Additionally, panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

Fire alarm system is an addressable type system that is code compliant. Provide additional fire alarm devices where required. The system appears to have been upgraded recently.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

Lastly, A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

Provide additional receptacle locations to assist in elimination of extension cord usage. It is recommended that all receptacles be replaced within the building and that tamper resistant receptacles be installed in any public areas of the building.

Security System:

It is recommended that the current intrusion system installed be replaced and expanded to provide door contacts at all points of accessible entry to the building as well as a full coverage of motion sensing devices within the building at grade level.

A CCTV (Closed Circuit Television) system should be provided with cameras providing coverage to the exterior building and throughout all public areas of the library. The town of Dedham to confirm the town wide security access system prior to any work.

A card access system should also be expanded to secure, track, and monitor access to all entry points of the building

Communication Systems:

New phone and internet services should be provided to the site. The demarcation point for the phone and internet services should be re-located to a dedicated room within the building. The room should be fitted with appropriate data rack with spaces for all systems in use data, security, phone, etc. All systems shall be fed with color coded cabling for ease of identification and maintenance when necessary. The room should be conditioned and provided with rack mounted UPS (Uninterruptible Power Supply) for back up during power loss situations.

Additional telephone/data ports and wireless access points should be provided in all offices and finished areas throughout the building.

PLUMBING- ENDICOTT LIBRARY

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and natural gas. Municipal sewer and municipal water serve the building.

Fixtures:

The water closets are floor mounted vitreous china with flush tanks. Lavatories are wall hung vitreous china with manual faucets.

Electric water cooler is wall hung, single unit, with bottle filler. There is also a bottled water dispenser.

Janitor's sink is trap standard mounted, enameled cast iron sink with wall mount faucet equipped with vacuum breaker.





Typical bathroom fixtures



Electric water cooler



Water dispenser



Service sink

Water Systems:

The main domestic water service is 1-inch in size and includes a 5/8" water meter. Piping, where exposed, is copper tubing with sweat joints. Where modifications have been made copper press fitting have been used. The majority of the piping is insulated.

Domestic hot water is provided by a tank type electric water heater. The water heater is 120-volt, single phase, with 1.5 kW heating element and 19 gallons of storage. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank. The water heater appears to be in fair condition.



Domestic water service



Electric water heater

Gas:

A natural gas service is supplied to the building. The gas meter is located on the exterior of the building adjacent. Natural gas is provided to the heating furnaces. Gas piping is black steel with threaded joints and fittings.



Gas service & meter

Drainage Systems:

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. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Install thermostatic mixing valves, expansion tanks, and hot water recirculation loops at existing water heaters.

FIRE PROTECTION – Public Library Endicott Branch:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

OVERVIEW

1. Existing conditions based on limited architectural drawings for an alteration, dated 6-June 20, 1972, and a site visit by RSE on March 26, 2026. The building is reported to have been originally a carriage house on the estate.

FOUNDATIONS

1. No information is available regarding existing foundations, and nothing was visible on site.
2. No known modifications to foundations since original construction.
3. No damage to the foundations was observed.
4. Recommendations: None.

SUPERSTRUCTURE

1. Existing building appears to have exterior masonry load-bearing walls with wood roof trusses. Overhangs at rear are supported on exterior wood posts and beams.
2. Condition/Known Issues:
    - Base of exterior posts are not raised above exterior sidewalk slab and are starting to deteriorate.
3. Recommendations:
    - Replace exterior columns with pressure treated wood columns and stand off bases to protect from moisture, or use steel columns which are either galvanized or painted.

PHOTOS

	Photo: Exterior wood column and beams.

	Photo: Base of exterior wood column.

Public Library (Main Branch)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: T-2 | Public Library – Main Library

SELECT BUILDING: T-2 | Public Library – Main Library

BUILDING INFORMATION	
Building ID:	T-2
Address:	43 Church Street
Year Built:	1886
Last Renovated:	1951
Gross Sq Ft (GSF):	17,546

SITE CONSTRAINTS & REGULATORY	
Flood Zone:	None
Wetlands:	No
Historic:	Preservation Restriction
Lot Size (ac):	0.5
Building Use:	Library / Public

ROOF & ENVELOPE	
Construction Type:	Masonry
Roof Year:	unknown
Window Year:	tbd
No. of Floors:	2

CAPITAL COST ESTIMATES	
Assessed Value:	$4,064,300
Deferred Maint. ($):	tbd
Est. Renovation Cost:	tbd
Replacement Cost:	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas	Energy Use Intensity (EUI):	~26
Electrification Potential:	2033 – VRF	GHG Emissions:	46
Solar Potential (kW):	N/A	Climate Resilience Risk:	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.60	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	2.6	• Poor
Structure (Avg):	2.7	• Poor
MEP / FP (Avg):	3.0	• Poor
Life Safety / Code:	2.1	• Fair

KEY COMPONENT SCORES

Roof:	3.0	Electrical:	4.0
HVAC – Heat:	3.5	HVAC – Cooling:	4.0
Fire Prot.:	4.0	Plumbing:	2.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Main Book Stack Area

The 1886 Main Library is an architecturally significant Romanesque building in Dedham Square with aging electrical and mechanical systems that have reached or are approaching the end of their useful life.

Dedham's Main Library is an impressive Romanesque building with a pink granite and sandstone exterior, designed by Boston architects Van Brunt & Howe and built in 1886. A substantial addition was added in 1951, bringing the total area to approximately 13,000 SF. Situated on Church Street in Dedham Square, the library shares holdings of 130,020 items with the Endicott Branch.

Electrical systems are generally in fair condition and service is provided by a 400A single-phase at 120/240V which is in good condition in the main electrical room. However, a fuse panel in the original building and an old breaker panel with no cover on the wiring are both in poor condition and must be replaced. There is no emergency generator and emergency battery units (EBUs) vary in condition from poor to new and should be tested. Exit signs are thermoplastic and in good condition. The building is equipped with an addressable Honeywell FACP (good condition) and a key repository box at the main entry. Interior lighting is primarily fluorescent, primarily in the original building and a full LED upgrade is recommended.

There is no current sprinkler system so the renovation cost threshold for sprinkler requirements must be analyzed as part of any major upgrades. The building is also not fully accessible.

Building Structure & Exterior

The Dedham Public Library - main branch is a two-story masonry and wood structure, originally built in 1886 and renovated and added to in 1951. The building structure is a stone foundation with timber framing above. The foundation walls were observed to be rubble below grade where visible with predominantly slab on grade. No foundation issues were observed or reported. The existing building appears to have exterior masonry load-bearing walls with wood roof trusses. No structural issues were observed or reported.

The exterior of the building is a stone masonry finish over masonry with punched opening, double hung windows at the original historic portion, and red brick at the rear addition. Windows are wood and generally double-hung, 8 over 8 style. Windows are past the end of their service life. Areas of rust staining and general weathering of stone was observed. The facade has ornamental masonry details and the building is historic. The brick was observed to be in fair condition while the stone masonry was observed to be in good condition.

The roof is a pitched shingle tile roof. The roof has a variety of pitches and circular sections with a prominent coper clad turret feature. The roof has a metal fascia and gutter system. The roof is generally in fair condition and with some areas of leaking reported at the rear where the original building abuts the addition. The exterior should continue to be monitored and replacements for windows and roof should be studied.

Interior Environment

The Dedham Public Library is a purpose built and historic library. It contains three reading rooms, areas for book stacks, a teen room, and attic area with administration. , A children area with book stacks and a group reading area, office and support spaces.



Wood roof framing and storage within roof



Book stack area in childrens reading room

Floor finish is typically a carpet floor over wood plank or tile flooring below. Tile floor is located in bathrooms. Walls are generally painted plaster wall board with areas of ornate wood casework detailing at entry and reading room areas. Tile is installed in restrooms.

The carpet floor finish is inconstant throughout the building and is in fair to poor condition with wear evident. Walls are in fair condition. The library is bright with good access to natural daylight. Spaces are generally well organized and clean, but small. Areas of informal seating is set up within corridor spaces and furniture is dated and worn. Indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply.

Programmatic Suitability

The Dedham Library is located in the center of town, at the corner of Church Street and Norfolk Street. The building is a purpose built and historic library and a well used public asset.

The library is approximately 17,500SF and user space is primarily on the first floor, with three reading rooms (children, adults, and book storage stack) accessed off of the main entry. The teen room is located on the lower level, along with service spaces and administration is located in a small 'study' area on the second floor.

There is limited acoustic separation between spaces within the library, which may inhibit certain types of program as well as multiple concurrent uses within the library (i.e. quiet study during group reading time, multiple concurrent meetings). The library does not have dedicated computer areas or conference rooms which are common in modern public libraries. The teen room is dated and small. The library is smaller than comparable surrounding towns.

The building is not fully accessible and there is no elevator access. The main entry is not accessible, although a ramp is provided at the side entry. Bathrooms are also not accessible which limits equitable use of the library.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Dedham Library sites at the intersection of Church Street and Norfolk Street. Parking is along the rear of the building. The site contains paved parking and walkways, which are in fair condition. Parking is noted to be very limited, with only ~15 spaces, although the location is very walkable to Dedham center and other town parking lots. Small landscaped lawns, a ornamental fence, and mature trees, as well as small seating areas compliment the site. In general, the site is in good to fair condition.

The site is not within FEMA Flood Zones, reflecting low flood risk. No wetlands are present on the parcel per GIS review.



Rear stairs are narrow and not accessible

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Replace fuse panel (original building) — poor condition, obsolete
- Replace open breaker panel with no cover — poor condition, safety hazard
- Install thermostatic mixing valve and expansion tank at electric water heater
- Upgrade all non-grounding receptacles to grounded/tamper-resistant type
- Accessibility accessibility assessment per 521 CMR — full building compliance study recommended

10-Year Capital Improvements

- Sprinkler system installation
- Relocate demarcation to dedicated MDF room with UPS
- Exterior envelope assessment — granite/sandstone 1886 building approaching 140 year
- Lighting control system (dimming, occupancy, daylight harvesting)
- Full LED lighting upgrade — existing fluorescent fixtures in original building at end of life
- Expand security system: door contacts at all building entries, full motion sensor coverage, CCTV

Capital Investment History

FY	Project / Capital Improvement	Amount
FY24	Library Entrance Redesign / Window Repair / Gutters	$119,240
FY24	Front Entrance Step Repointing/Repair	$41,700
FY25	Ramp Repair/WIndow Repair?Gutter	$64,841
FY25	French Drain Replacment (Front Entry)	$26,000

Sustainability & Decarbonization

FY2022 GHG emissions were 46 MT CO_2e (1.30% of portfolio). Fossil fuels (natural gas/oil, 72%) dominate with electricity contributing 28%. There is no solar currently. A full LED lighting upgrade is the most immediately actionable energy measure. The decarbonization roadmap proposes heat pump water heating and electrification at the next HVAC replacement cycle. The building's age and historic character constrain envelope upgrades.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The Main Library requires immediate electrical panel replacement — the open breaker panel in the original building is a code violation and safety hazard. The renovation cost threshold to trigger sprinkler installation, accessibility upgrades and seismic upgrades is a critical planning constraint for any future major renovation. The historic nature of the building also limits future work to the building.

The library is undersized, but its historic designation and small site limit expansion potential.

(Note: see the Volume 2 report for usage analysis and planning studies).



Teen area on Lower Level

HVAC - Heating, Ventilation and Air Conditioning – Dedham Main Public Library

Executive Summary:

Dedham Main library Building was built from 1886 through 1888, opening in November of 1888. The building is provided with a central heating hot water boiler plant serving terminal heating units such as convectors and fan coils. Air conditioning to select spaces is provided via ductless cooling units. Ventilation throughout appears to be limited and provided through natural means as there is no central ventilation air handling unit. Building controls are standalone in nature and there is no building management system (BMS). While presently installed equipment appears to be well maintained and in operable condition, it would generally be considered as exceeding its serviceable life based on ASHRAE Equipment Life Expectancy tables.

Existing Conditions

Central Heating Plant:

The main library building is heated by a central heating hot water plant consisting of a two-module gas-fired boiler which produces hot water for terminal heating equipment located throughout the building. The boiler is standard efficiency, gas-fired, MultiTemp model MR-600B as manufactured by HydroTherm with a total rated input of 600 MBH, and a 480 MBH output. Combustion air for the boiler is provided by a wall mounted louver with allowing both high and low air into the space through a galvanized duct system. Boiler venting for the boiler is provided by a galvanized round duct to an existing chimney, terminating above roof.

Heating hot water is distributed throughout the building by an inline circulator through a steel piping system. Typical hydronic accessories such as an expansion tank, air separator, and chemical shot feeder are also provided. It appears the original piping system was a steam system and it was converted to hot water in more recent times. Steam traps still remain on some of the piping.



Standard Efficiency HydroTherm Boiler



Chemical Feeder



Combustion Air Intake Louver/Duct



Heating Hot Water Expansion Tank

Space Level Heating and Cooling:

Occupied spaces throughout the building are provided with heating via hot water terminal units such as convectors, unit heaters, or fin tube. Typical control of these units is provided through the use of manually operated dampers, or thermostatic control valves. Cooling is provided in select areas using ductless split systems along with horizontal or vertical fan coil air handling units with stand-alone thermostatic controls.



Convector with Manual Damper



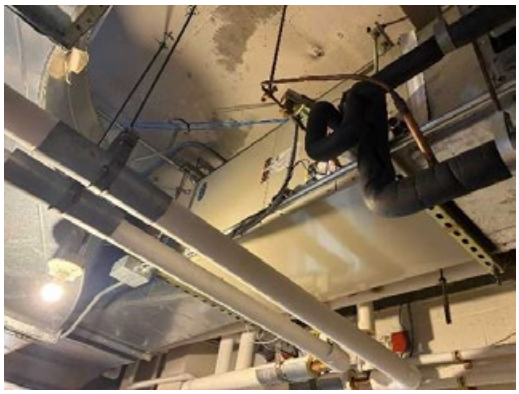
Fin Tube with Thermostatic Control Valve



Wall Mounted Ductless Cooling Unit



Vertical Air Handling Unit



Horizontal Fan Coil Air Handling Unit



Stand Alone Thermostat

Automatic Temperature Controls (ATC):

The temperature controls provided within the space are stand alone in nature and typically will not provide ideal thermal comfort throughout. Scheduling of operation, temperature setbacks, trending, and a central location for troubleshooting are not provided.

Recommendations:

Based upon our review and observations of the building HVAC systems, the relative age, and the non-compliance with current code, we offer the following recommendations.

- Given the age of the building and the installed systems, demolish all existing HVAC related equipment.
- Provide a new dedicated outdoor air handling unit with code compliant energy recovery, supply fan, return fan, direct expansion cooling with hot gas reheat capabilities, and an associated heat pump condensing unit at grade. This will provide conditioned, code required air to all occupied spaces throughout the building.
- Provide new terminal variable refrigerant flow units throughout the building to allow for direct heating and cooling of each space a fan coil is conditioning. This system will allow for energy recovery along with simultaneous heating and cooling throughout the building. This will maximize space level thermal comfort while maintaining ideal temperature and humidity levels for occupants and library media.
- Provide direct digital controls (DDC) on all new mechanical equipment and incorporate into a central building management system. The controls and central building management system will allow for appropriate scheduling, trending, monitoring and troubleshooting of the overall building and individual spaces within.

ELECTRICAL – Main Public Library

Executive Summary:

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In general, most of the buildings systems are in fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The buildings main service is rated for 400A (amperes) at a single-phase service voltage of 120/240V (volts). The secondary service is brought from a Eversource utility pole distribution. Secondary service is metered terminating at an 400A rated service main breaker/ C.T. (current transformer) cabinet located within the buildings main electrical room at the basement level. A distribution panel rated for 400A was located adjacent to the main service equipment and provided feeds to electrical sub-panels located throughout the building. All distribution equipment found within the buildings electrical room would be described as being in good condition.

Fuse panel was located in the original building along with an old breaker panel with no cover on the wiring. Both panels are in poor condition and need to be replaced.











Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to new.

Exit signs within the building are all thermoplastic type and are in good condition.









Fire Alarm System:

The existing building is equipped with a Honeywell fire alarm control panel (FACP) located within the main electrical room at the building basement level. This system is an addressable system. Fire alarm notification and initiation devices located throughout the building are in good condition.

A key repository box was located at the building's main entry next to the master box. Fire alarm annunciator is located at the lobby of the main entrance. The method of transmission is via a local energy master box.











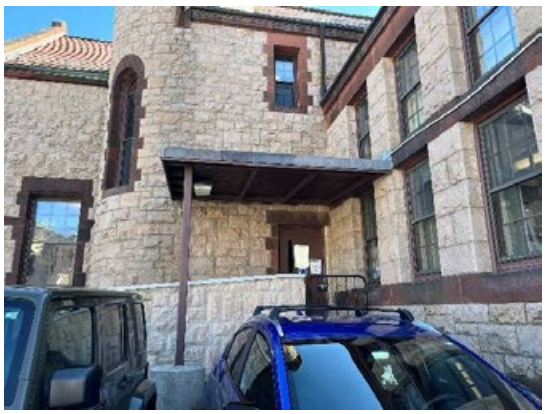
Exterior Lighting System:

Canopy lighting at the building entrance consists of surface square 12”x12” fixture. Building mounted lighting primarily consists of traditional style wall mounted LED lighting with clear glass lens.









Interior Lighting:

Interior lighting within the existing library addition consisted of more traditional style pendant mounted lighting with brass type finishes and frosted glass domes.

In the existing portion of the library more commodity-style lighting products have been noted. Suspended 6” linear fixtures with prismatic lensing, surface mounted 6” linear product with prismatic lensing, and porcelain sockets with screw-in lamp. Fixtures are primarily fluorescent source with some using LED bulbs.

Utility lighting primarily consisted of linear wrap around fixtures some with prismatic lensing.









Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building and some are the non-grounding type. Some receptacles are in poor condition. Floor boxes were found to be in fair condition.







Security System

A keyscan intrusion system is currently installed within the library. Card access station was present at the main entry. CCTV cameras were installed at the exterior and within the library. Keypad is located at the main entrance



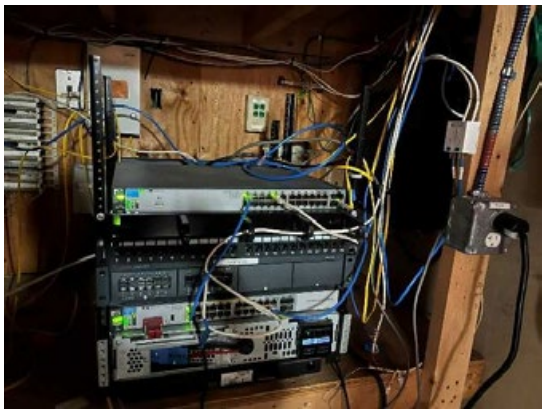




Communication Systems:

Phone and internet services enter the building underground and terminate at a demarcation wall in the libraries basement utility room. Data connection points are sparsely located throughout the building. Patch panels and routers are scattered throughout in offices with the main data rack located in the basement. Very few access points were located during the walkthrough of the library.







Recommendations:

Electrical Distribution System:

The existing electrical service appears sufficient for the existing building loads. Distribution equipment is generally in good condition. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

The existing fuse panel and old breaker panel that are in poor condition and should be upgraded. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up. Many exit signs within the building should also be considered for replacement. GGD recommends using LED edge-lit type exit signs.

Fire Alarm System:

Existing fire alarm system should be provided with additional devices to provide full coverage since the building does have a sprinkler system.

Exterior Lighting System:

It is recommended that a lighting level survey be conducted at the site to determine any areas that may be underlit. Specifically, it is recommended that parking areas, pedestrian walks, pedestrian ramps, and any entry to the building be illuminated to a minimum of .5fc (Foot Candle) average.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

It is recommended that all existing non-grounding receptacles be replaced. Provide additional receptacle locations are required to meet current needs. Finally, it is recommended that all receptacles be replaced within the building and that tamper resistant receptacles be installed in any public and children's areas of the library.

Security System:

It is recommended that the current intrusion system installed be replaced and expanded to provide door contacts at all points of accessible entry to the building as well as a full coverage of motion sensing devices within the building at grade level.

Communication Systems:

Additional telephone/data ports and wireless access points should be provided in all offices and finished areas throughout the building as needed.

PLUMBING- – Main Public Library:

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system and natural gas system. Municipal sewer and municipal water serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in good condition.

The plumbing fixtures are in good condition. Some of the bathroom fixtures appear to have been modified to make them accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from pitched roof areas is collected through gutters and downspouts, which are piped externally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the drainage piping is in fair condition.

Fixtures:

The water closets are floor mounted, vitreous china with flush tanks.

Urinals are vitreous china with manually operated flush valves.

Lavatories are wall hung, vitreous china with manually operated, holt and cold-water faucets.

Electric water cooler is surface, wall mounted, double unit with bottle filler.

There are no Janitor's sinks in the building.

Kitchen sink is vitreous china, double bowl, counter mounted, with gooseneck faucet, and dual knob type, hot and cold-water faucet.

Exterior wall hydrants include loose key operation and threaded connection with no vacuum breaker.



Water Closet



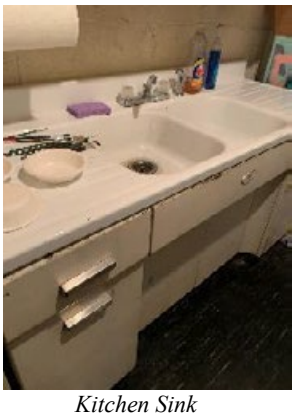
Urinals



Lavatory



EWC with Bottle Filler



Kitchen Sink



Wall Hydrant

Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 3/4-inch in size. There is a water meter but there is no reduced pressure backflow preventer on the domestic service piping arrangement.

The domestic water piping, where exposed, is copper tubing with sweat joints. The majority of the domestic water piping includes original insulated but much of the insulation is missing. The valves used for isolation purposes are either full port ball valves or original gate valves.



Water Meter

The majority of the domestic hot water is provided by a gas-fired, storage tank type water heater, located in the Mechanical Room. The water heater has a storage capacity of 40 gallons and a gas input of 40,000 Btu/hr. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank installed. The water heater appears to be in fair condition.



Water Heater

Drainage Systems:

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.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Gas:

A low-pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the interior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating furnace and the domestic water heater. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.



Gas Meter



Gas Furnace

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)
- Provide new high-efficiency, water conserving, plumbing fixtures. (Low Priority 5+ years)
- Provide accessible fixtures where required. (Low Priority 5+ years)
- Install thermostatic mixing valves, expansion tanks, and hot water recirculation loops at existing water heaters. (High Priority 1-2 years)
- Provide all new domestic water piping including insulation, pipe labels and full port ball valves for isolation purposes. (Low Priority 5+ years)
- Provide all new sanitary, waste and vent piping throughout the building. (Low Priority 5+ years)
- Provide Code required vacuum breakers on all wall hydrants. (High Priority 1-2 years)

FIRE PROTECTION – Main Public Library:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

Public Safety Building

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: PS-1 | Public Safety Building

SELECT BUILDING: PS-1 | Public Safety Building

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	PS-1	**Flood Zone:**	None
Address:	26 Bryant Street	**Wetlands:**	No
Year Built:	2024	**Historic:**	Local Historic District
Last Renovated:	None	**Lot Size (ac):**	1.07
Gross Sq Ft (GSF):	82,564	**Building Use:**	Public Safety
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Steel/Concrete	**Assessed Value:**	$45,000,000
Roof Year:	2024	**Deferred Maint. ($):**	tbd
Window Year:	2024	**Est. Renovation Cost:**	tbd
No. of Floors:	3	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Natural Gas / Electric (mixed)	**Energy Use Intensity (EUI):**	~1
Electrification Potential:	2045 – VRF	**GHG Emissions:**	69
Solar Potential (kW):	48.1	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	1.05	Excellent

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.0	• Excellent
Structure (Avg):	1.0	• Excellent
MEP / FP (Avg):	1.2	• Excellent
Life Safety / Code:	1.0	• Excellent

KEY COMPONENT SCORES

Roof:	1.3	Electrical:	1.3
HVAC – Heat:	1.5	HVAC – Cooling:	1.0
Fire Prot.:	1.0	Plumbing:	1.5

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Below ground parking for police vehicles

Completed in 2023, the 84,000 SF Public Safety Building is the Town's newest major facility and is in excellent condition across all building systems. No significant capital investment is anticipated for the next decade beyond routine maintenance and preventive care.

The new Dedham Public Safety Building, completed in 2023 at a cost of approximately $55 million, is an 84,000 SF consolidated facility housing Fire, Police, and Dispatch departments. It replaces two older Town buildings: the Police Station (built 1962, 600 High Street) and the Central Fire Station (built 1952, 436 Washington Street). All systems were found to be in very good to excellent condition consistent with the building's recent construction date. No significant deficiencies were identified.

Spaces are typically heated, cooled, and ventilated by induction units with hot and chilled water. The HVAC system reflects current best practices for a public safety facility. All equipment in excellent condition. Electrical service is provided by a 1200A 3-phase service at 277/480V in very good condition with ample capacity. PV solar panels are installed on the roof. Three automatic transfer switches (LS life safety, OS optional standby, COPS) connect to an emergency generator providing resilient backup power. Fire alarm, CCTV, access control, and communications systems are all very good condition. All plumbing systems in good condition including accessible fixtures, specialized systems for fire and police operations, and garage waste systems. Cast iron drainage, copper supply piping, and dual-height drinking fountains with bottle fillers are all properly installed and functioning.

Building Structure & Exterior

The Dedham Public Safety Building is a two-story steel and concrete built in 2024. The building structure is a concrete foundation with steel framing above and concrete and metal deck floor structure. The foundation walls are cast-in-place concrete with a slab on grade floor. No foundation issues were observed or reported. Structural framing is steel, with concrete and metal deck flooring. No structural issues were observed or reported.

The exterior of the building is a masonry veneer finish over metal stud with a mix of red brick and grey CMU. Windows are metal frames, both punched openings and glazed curtianwall systems are present. Metal panel detailing compliments the glazed openings. Metal and wood canopies cover the main entry and fire truck bays. The exterior of the building was observed to be in excellent condition.

The roof is a low-slope single ply roofing membrane with internal drainage. Photovoltaic panels are installed on the roof in limited quantities. The roof is generally in excellent condition.

Interior Environment

The Dedham Public safety building is a purpose built police and fire station. It contains vehicle bays, internal parking, offices, bunk rooms, holding rooms, and other support spaces for modern police and fire fighting duties.

Floor finish is varied and fit for purpose. Resilient flooring tile is present in corridors and workout rooms. Carpet tile is used in meeting spaces, bunk rooms and offices. Floor tile or sealed concrete is used in heavy wear spaces, such as vehicle bays, locker rooms, holding cells, and entry ways. Tile floor is located in bathrooms. Walls are generally painted wall board with areas of wood accent detailing at entry and conference rooms. Masonry walls are used at high wear areas such as holding cells.

Generally the interior finishes are in good condition. The spaces are clean and well organized and the building is pleasant with good lighting and access to natural daylight. Indoor air quality is likely good with dedicated mechanical outdoor air supply.



Main entry into public safety building



Lower level training room

Programmatic Suitability

The Dedham Public Safety building is located in the center of town, along Washington Street. The building is a purpose built public safety building, and was recently completed.

The public safety building is approximately 82,000SF and was built to house Dedham's police force and a majority of its fire department (East Dedham Fire Station has one active truck). This combined public safety approach is increasingly common in surrounding towns and typical of newly constructed public safety facilities, providing efficiencies in operations while replacing multiple obsolete facilities.

The facility includes a basement level with internal parking (primarily police), training, fitness and mechanical spaces. The first floor comprises the main public entry, as well as the large conference room (also used for public meetings). The vehicle bays (fire department), holding cells, sallyport, and police offices are also located on the first floor. Bunk rooms, day room, kitchen and other office spaces are located on the second floor.

The building is newly constructed and spaces are correctly sized and outfitted for their use and purpose. The building is fully accessible.

(Note: see the Volume 2 report for usage analysis and planning studies).

Site Conditions

The Dedham Public Safety Building shares a prominent civic site along Washington Street in Dedham Square. The site contains paved parking, paved walkways, and planted beds, all in good condition. Vehicular access is straightforward from Washington Street, with fire truck access directly out to Washington Street.

On-site parking is limited, with surface spaces along the building perimeter supplemented by the Town's shared parking areas within Dedham Square. ADA-compliant spaces are provided consistent with the recent new construction requirements. Vehicular access is provided around the entire building, shared with the adjacent Town Hall building.

The site is classified as FEMA Flood Zone X, reflecting minimal flood risk. No wetlands are present on the parcel.



Main public use conference and EOC room.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- No immediate repairs required — building is 2 years old

10-Year Capital Improvements

- Solar production monitoring and panel cleaning program
- First major capital reserve assessment at 10-year mark (~2033)

Capital Investment History

FY	Project / Capital Improvement	Amount
FY23	Building Construction Completion (project opened December 2023)	$55,000,000 total

Sustainability & Decarbonization

The new building incorporates rooftop solar PV and efficient mechanical systems. The Climate Roadmap identifies this building as having high potential for further electrification of HVAC systems as induction unit technology evolves. The presence of three ATSs and a robust generator also supports grid resilience goals.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The Public Safety Building is in excellent condition and will require minimal capital investment for the next 10–15 years beyond routine maintenance. This facility is a model for the Town's approach to major facility replacements, with the consolidated public safety model eliminating two aging, undersized buildings and replaced them with a single purpose-built, code-compliant, energy-efficient facility. Similar strategies should be considered for other aging portfolios.

(Note: see the Volume 2 report for usage analysis and planning studies).



Dedicated Kitchen for Fire Department Staff

HVAC - Heating, Ventilation and Air Conditioning - Dedham Public Safety Building

Executive Summary:

Dedham Public Safety Building was built in 2023. Spaces are typically heated, cooled, and ventilated by induction units with hot and chilled water provided to them. Storage and entry type spaces are typically provided with heating-only units such as unit heaters or radiant ceiling panels along the perimeter while Dispatch and MDF spaces are provided with terminal heat pump units. Radiant flooring and perimeter snow melting systems are provided in, and around, the apparatus and parking areas. The police and fire portions of the building are each served by 100% outside air rooftop air handling units with gas fired heating and direct expansion (DX) cooling. The building is provided with a direct digital controls (DDC) system and building management system (BMS). All equipment is original to the building and is in excellent condition.

Existing Conditions

Central Heating Plant:

The public safety building is heated by a central heating plant consisting of two (2) gas-fired boilers which produce hot water for terminal heating equipment located throughout the building. They are high efficiency condensing gas-fired model FBN1751 manufactured by Lochinvar with a rated input of 1750 MBH. The boilers appear to be in excellent condition. With regular preventative maintenance, the boilers are expected to last for another 25+ years. Combustion air for the boilers is provided by ductwork that is run directly to the outside. Boiler venting for both of the boilers is provided by insulated steel breeching vents.

Heating hot water is pumped throughout the building by two (2) base mounted end-suction pumps, piped in a lead/lag configuration. The pumps are manufactured by Bell & Gossett, with a capacity of 450 GPM and a 15 HP motor. The pumps are in excellent condition and are expected to last 15+ years per ASHRAE Equipment Life Expectancy. Typical hydronic accessories such as an expansion tank and air separator are also provided.



High Efficiency Lochinvar Boiler



Typical Base Mounted HHW Pump



Heating Hot Water Expansion Tank



Heating Hot Water Glycol Feeder



High Efficiency Lochinvar Boiler



Typical Base Mounted HHW Pump

Central Cooling Plant:

The building is furnished with a central chilled water plant consisting of a 30-ton air cooled chiller which produces chilled water for terminal induction units located throughout the building. The chiller is model AGZ030E manufactured by Daikin. The chiller appears to be in excellent condition. With regular preventative maintenance, the chiller is expected to last for another 20+ years.

Chilled water is pumped throughout the building by two (2) in-line pumps, piped in a lead/lag configuration. The pumps are manufactured by Bell & Gossett, with a capacity of 115 GPM and a 10 HP motor. The pumps are in excellent condition and are expected to last 15+ years per ASHRAE Equipment Life Expectancy. Typical hydronic accessories such as an expansion tank and air separator are also provided.



In-line Chilled Water Pumps



Pump Variable Frequency Drives



Chilled Water Expansion Tank



Chilled Water Glycol Feeder



Air Cooled Chiller

Packaged Rooftop Air Handling Units:

The building ventilation is provided by two (2) 100% outside air rooftop air handling units equipped with supply fan, return fan, direct expansion (DX) cooling section, hot gas reheat, gas fired heating section, energy recovery wheel section, and filter section. Rooftop air handling units are model VXE as manufactured by Valent. RTU-1 has a capacity of 5,000 CFM with a 240 MBH furnace and 17.5 tons of cooling. RTU-2 has a capacity of 8,000 CFM with a 400 MBH furnace and 35 tons of cooling. Supply air is distributed to the space induction units and supply diffusers through an insulated galvanized sheet metal

duct air distribution system. Return air is drawn back to the rooftop units utilizing a ducted return air distribution system. Each space is served by a Variable Air Volume (VAV) box which allows for individual space temperature control by modulating the volume of air delivered to the associated space based on space temperature.

The rooftop units are in excellent condition and are expected to last 15+ years per ASHRAE Equipment Life Expectancy.



Typical Packaged Rooftop Unit

Space Level Heating and Cooling:

Typically, occupied spaces throughout the building are provided with induction units for heating and cooling with hot and chilled water piping connections. Each unit is also connected to the supply air duct distribution system and provides the appropriate ventilation to the space.

Heating-only spaces such as the Turnout Gear, and transient spaces that aren't normally occupied, such as Storage, Entry Vestibules, or stairwells, are typically provided with heating only units such as radiant panels or unit heaters.



Ceiling Mounted Induction Unit



Radiant Heating Panel

Parking Garage, Apparatus Bays, Sallyport and Vehicle Process:

The parking garage, apparatus bays, sallyport, and vehicle processing are all provided with CO and NO2 monitoring systems, manufactured by Honeywell, with appropriate exhaust fan systems that operate upon sensing levels above appropriate thresholds. The apparatus bays are also provided with dedicated vehicle exhaust capture systems manufactured by Plymovent.

Heating to apparatus bays, sallyport, and vehicle processing is provided via both radiant slab heating and unit heaters throughout. The radiant heating is hydronic and dedicated radiant flooring heating hot water pumps are provided throughout the building to serve the appropriate locations. Radiant snow melt is also provided outside each of these spaces. The parking garage is also equipped with radiant snow melting systems incorporated into the entrance. However, there is no additional space level heating provided in the parking garage.



Radiant Floor/Snowmelt Manifold


Typical Inline Exhaust Fan


Typical CO2/NO Gas Detection Sensor


Typical Ceiling Suspended Unit Heater



Vehicle Exhaust Capture Hose



Vehicle Exhaust Capture System Fan

Toilet rooms:

Toilet rooms have overhead exhaust that are connected to an exhaust fan. Make up air is provided from the adjacent corridors. Toilet rooms with exterior perimeter exposure are also provided with heat by hydronic convectors.

Electrical, MDF, and Dispatch Rooms:

Electrical, MDF, and Dispatch rooms are typically cooled by ductless cooling units, consisting of an indoor evaporator and roof mounted condensers.



Typical DCU Wall Mounted Fan Coil Unit



Typical DCU Thermostat/Controller



Typical DCU Ceiling Mounted Coil Unit



Typical DCU Outdoor Unit(s)

Automatic Temperature Controls (ATC):

The ATC system is a full direct digital controls (DDC) controls system equipped with a Building Management System (BMS). The DDC controls system is provided by Siemens.



Typical Room Controller/Thermostat

Recommendations:

Based upon our review and observations of the building HVAC systems, we offer the following systems recommendations.

- Given the age of the building and the installed systems, provide proper maintenance to all equipment to meet or exceed ASHRAE Equipment Life Expectancy.
- Should the Town seek to further align the HVAC systems to align with the most energy codes, it would be recommended to replace the current air cooled chiller with an air-source heat recovery heat pump chiller to generate heating hot water, and chilled water, with simultaneous heating and cooling capabilities. The present gas fired boiler plant would be maintained as back up heat.

ELECTRICAL – Dedham Public Safety Building

Executive Summary:

On March 10, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Public Safety Building. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, the building systems is in very good condition since it was recently constructed.

Electrical Distribution System:

The building main service is rated for 1200A (amperes) at a 3-phase service voltage of 277/480V (volts). Secondary service terminating at an 1200A rated service main breaker cabinet is located within the buildings main electrical room at the basement level. A distribution panel rated for 1200A was located adjacent to the main service equipment and provides feeds to electrical sub-panels located throughout the building. All distribution equipment found within the buildings electrical rooms would be described as being in very good condition and with plenty of capacity.

The electrical service is fed from a pad-mounted transformer located on the site with adjacent meter.

A PV system is provided with panels and equipment located on the roof.











Emergency Power System:

The building is equipped with an emergency back-up generator. There are Three (3) automatic transfer switches. One for life safety (LS), A second for optional standby (OS), and the third for COPS.

Exit signs are provided throughout the building and are in good condition from poor to good.





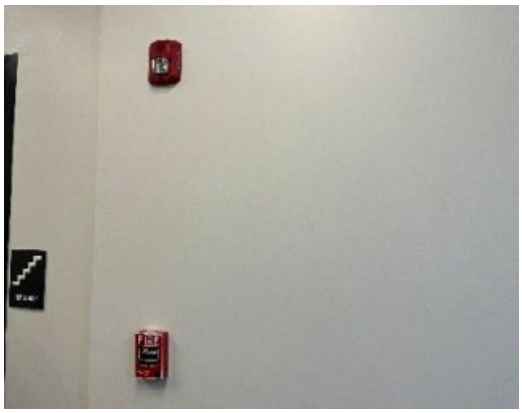




Fire Alarm System:

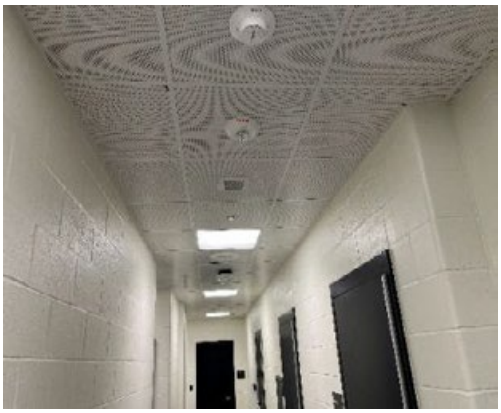
The building is equipped with a Notifier fire alarm control panel (FACP) located within the main electrical room at the basement level. Fire alarm notification and initiation devices located throughout the building are in good condition.

A key repository box with beacon was located at the buildings main entry. The method of transmission is via Sigcom radio box.









Emergency BDA system is provided in building.



Exterior Lighting System:

Exterior lighting fixtures consists of LED bollards along the walkway. Lighting at the main building entry consists of wall mounted globe type. Building mounted perimeter lighting consists of traditional style wall pack lighting.







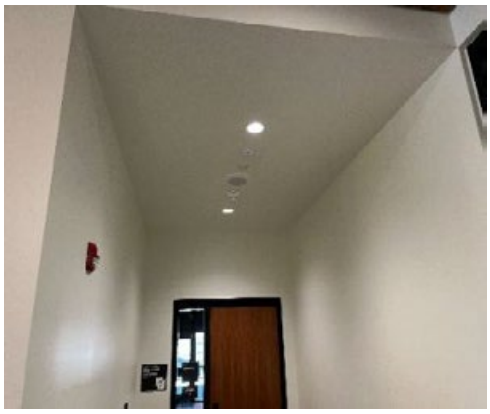
Interior Lighting:

Interior lighting within the building consisted of more traditional style pendant mounted lighting with brass type finishes and frosted glass domes.

In the addition, recessed downlighting, garage linear fixtures, surface mounted 6" linear product with prismatic lensing, and pendant mounted LED with frosted lensing in the apparatus bay.

Corridor lighting consisted of 2x2 flat panel fixtures.











Wiring Devices & Branch Circuitry:

In general receptacles are located throughout the building with GFI type where required.



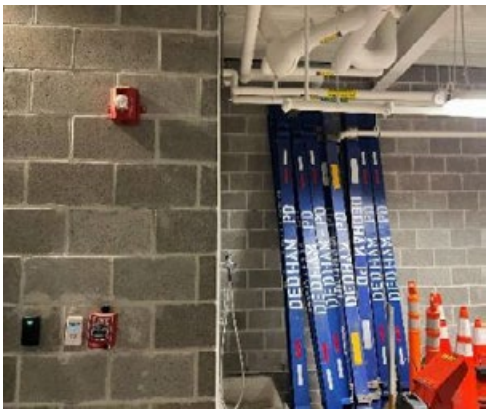


Security System

Security system includes exterior CCTV cameras, interior CCTV cameras, card readers, key pads, and control panels.

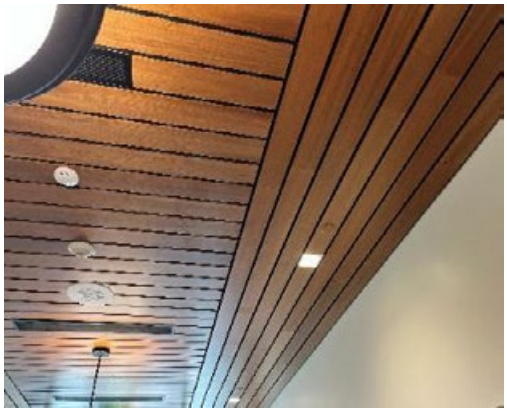






Communication Systems:

Communication systems include speakers, access points, server MDF/IDF room, fiber service, data racks, and data outlets.







Recommendations:

All systems are relatively new and no items need to be addressed at this time.

PLUMBING- - Dedham Public Safety Building

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, garage waste and vent system, storm drain piping, natural gas and compressed air system. Municipal sewer and municipal water serve the building.

The plumbing systems are in good condition and can continue to be used with scheduled maintenance.

The plumbing fixtures are in good condition. The bathroom fixtures appear to be accessible.

Cast iron is used for sanitary drainage. Rainwater from sloped roof areas is collected by exterior gutters and downspouts which appear to discharge to a below grade drainage system. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in good condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

Fixtures:

The water closets are wall mounted, vitreous china with battery powered, sensor operated valves.

Urinals are wall hung, vitreous china with battery powered, sensor operated flush valves.

Lavatories are wall hung, vitreous china or trough type solid surface with either manual or battery powered, sensor operated faucets.

Drinking fountain is stainless steel, dual height, in wall mounted with chiller.

Electric water cooler is dual height, recessed mounted, double unit bubbler, side by side with bottle filler.

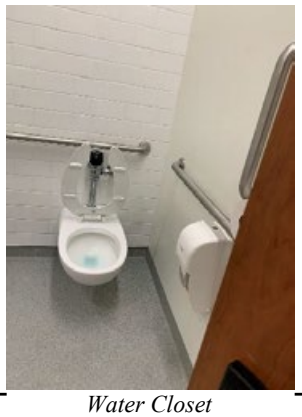
Janitor's sink is a floor receptor with wall mount faucet equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucet, with dual lever type hot and cold-water faucet.

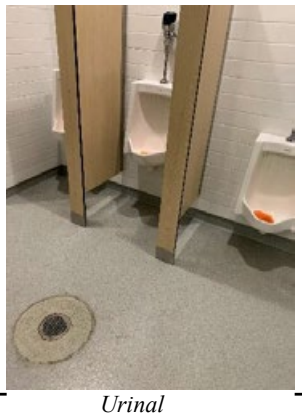
Showers are tiled surrounds with thermostatic and pressure balancing mixing valve and handheld shower.

Exterior wall hydrants include loose key operation and threaded connection with vacuum breaker.

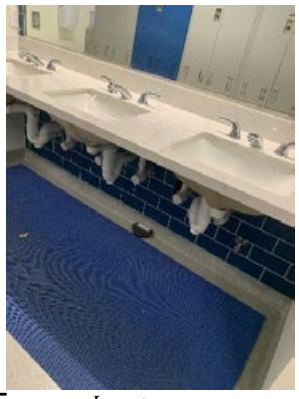
The institutional plumbing fixtures are stainless steel, ligature resistant with remote flush push button for water closets. There are dedicated accessible fixtures throughout.



Water Closet



Urinal



Lavatory



Drinking Fountain



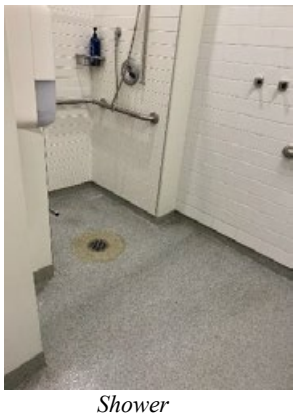
EWC with Bottle Filler



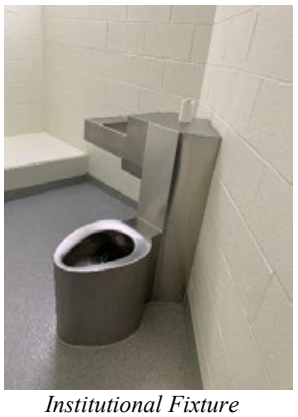
Janitor's Sink



Sink



Shower



Institutional Fixture

Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 4-inch in size. There is a water meter and reduced pressure backflow preventer and duplex pressure booster pump on the domestic service piping arrangement.

Piping, where exposed, is copper tubing with sweat joints. The majority of the piping is insulated and labeled. The valves used for isolation purposes are full port ball valves, tagged with an identification number.



Water Meter



Booster Pump



Water Piping

Domestic hot water is provided by a gas-fired, high-efficiency, indirect type water heater with an auxiliary storage tank, located in the Mechanical Room. The water heater has a storage capacity of 200 gallons and a gas input of 800,000 Btu/hr. The water heater is equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated and there is an expansion tank installed. The water heater appears to be in good condition.



Water Heating System



Mixing Valve



Recirc. Pumps

Gas:

An elevated pressure natural gas service is supplied to the Mechanical Room. The gas meter is located on the exterior of the building adjacent to the Basement Mechanical Room. Natural gas is provided to serve the heating boilers, the domestic water heater, heating equipment and kitchen equipment. Gas piping is black steel with either threaded or butt-welded type joints and fittings, depending on the size.



Gas Meter

Drainage Systems:

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.

The garage waste piping from the Apparatus Bay trench drains are directed to an oil/water separator.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Cast Iron Pipe



Trench Drain



Sewage Ejector



Roof Drains

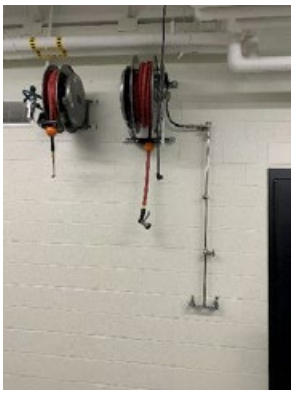
Compressed Air Systems:

An air compressor is installed to serve the air hose reels and stations.

The compressed air piping appears to be copper with sweat joints.



Air Compressor



Air Hose Reel

Recommendations:

- Continue with scheduled maintenance and repair system components when required.
  (High Priority 1-2 years)

  Showers require a collapsible dam to prevent water overspray from extending into main room floor.
  (High Priority 1-2 years)

FIRE PROTECTION- Dedham Public Safety Building

Executive Summary-

The existing building consists of an automatic sprinkler/standpipe system and is fully sprinklered. The majority of the equipment and systems installed appear to have been well maintained and are generally in good condition.

Massachusetts code requires that a commercial building, 7,500 square feet or more, must be sprinklered. Per 780 CMR 34.00 work shall not be considered a substantial renovation if the cost of installing a sprinkler system exceeds 15% of the total renovation cost. Should the existing building undergo a major renovation the building will require upgrades to the existing sprinkler system to provide complete protection of all spaces.

Existing Conditions:

There is an existing 6-inch ductile iron fire service that enters the Basement Mechanical Room. The Fire service within the building includes an existing backflow preventer, wet alarm check valve and a dry alarm check valve. The dry alarm check valve serves a dry sprinkler system serving unconditioned and parking garage spaces.



Double Check Valve

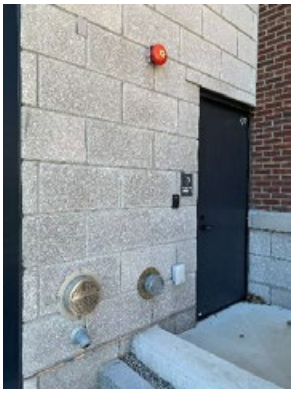


Wet Alarm Check Valve



Dry Alarm Check Valve

The sprinkler system has a dedicated Siamese Fire Department connection and electric bell located on the exterior of the building.



FDC and Electric Bell

There is a 4-inch fire main which serves the entire building sprinkler/standpipe system. The building is divided into zones not exceeding 52,000 square feet, each isolated by a sprinkler zone control valve assembly. The standpipes include 2-1/2-inch hose connections.



Sprinkler Zone Control Valve



Standpipe with Hose Connectio

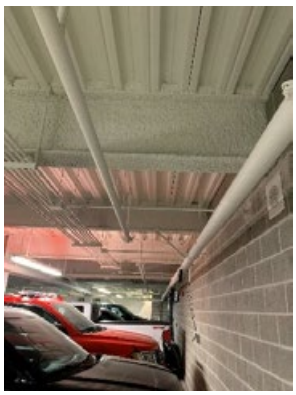
The piping for the sprinkler and standpipe system is black steel. Fitting and joints are grooved couplings or threaded depending on pipe size. The dry sprinkler system consists of galvanized steel pipes. Piping and sprinkler heads appear to be in good condition. Sprinkler heads include quick-response semi-recessed pendent type for rooms and areas with finished ceilings. Quick-Response upright sprinkler heads are utilized for rooms with no ceilings.



Pendent Sprinklers



Upright Sprinkler



Garage Upright

Recommendations:

- Maintain existing sprinkler system in accordance with MA State Building Code, NFPA 25-2020. (High Priority 1-2 years)

Riverdale Elementary School

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: S-5 | Riverdale Elementary School

SELECT BUILDING: S-5 | Riverdale Elementary School

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	S-5	**Flood Zone:**	None
Address:	143 Needham Street	**Wetlands:**	No
Year Built:	1920	**Historic:**	None
Last Renovated:	1952	**Lot Size (ac):**	5.75
Gross Sq Ft (GSF):	37,299	**Building Use:**	Educational
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	Masonry/Wood	**Assessed Value:**	$12,385,200
Roof Year:	1999	**Deferred Maint. ($):**	tbd
Window Year:	1920	**Est. Renovation Cost:**	tbd
No. of Floors:	2	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Fuel Oil	**Energy Use Intensity (EUI):**	85
Electrification Potential:	2031 – VRF	**GHG Emissions:**	233
Solar Potential (kW):	144.4	**Climate Resilience Risk:**	Low

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.77	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	2.9	• Poor
Structure (Avg):	2.0	• Fair
MEP / FP (Avg):	3.4	• Critical
Life Safety / Code:	2.8	• Poor

KEY COMPONENT SCORES

Roof:	4.0	Electrical:	4.0
HVAC – Heat:	3.2	HVAC – Cooling:	3.0
Fire Prot.:	4.0	Plumbing:	4.0

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	2.55	Poor

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	2.5	• Poor
EPI-2 Academic Suffic.:	2.2	• Fair
EPI-3 Program Suffic.:	2.8	• Poor
EPI-4 Universal Access:	2.6	• Poor
EPI-5 Building Safety:	2.8	• Poor
EPI-6 Tech. Readiness:	2.5	• Poor

Grade Config.:	1–5
Enrollment:	194
SF per Student:	192

Arrowstreet Inc. | Code Red | GGD Consultants | RSE *DRAFT — For Planning Purposes Only*



Exterior storefront glazing, in poor condition

Built in 1920, Riverdale Elementary is the second-oldest school in the district and has extensive deferred maintenance across nearly every major building system. The School Building Rehabilitation Committee is actively pursuing replacement of the building, and it is on the district's current active replacement priority.

Riverdale Elementary School, built in 1920 with additions in 1930 and 1970, is the second-oldest school building in the district and the School Building Rehabilitation Committee's (SBRC) current active replacement priority. The 37,299 SF facility serves grades 1–5 in the Riverdale neighborhood. The extraordinary volume of capital work required as aging building systems reach or exceed their end of useful life simultaneously. The building's small size, aging infrastructure, and educational adequacy deficiencies make renovation in-place a marginal alternative to new construction.

The building uses fuel oil for space heating (86% of FY2022 emissions), drawing from 2011 boilers but distributing through aging cast-iron and galvanized iron piping infrastructure. The 1970 addition features a curtain wall glazing system and non-brick exterior walls in poor condition; the primary wing's ceiling systems were significantly damaged by water infiltration from a failed roof (replaced in summer 2024). Electrical systems are antiquated and in poor condition. The building has no elevator or accessible route to the lower level, limiting access for persons with disabilities. The building is not fully sprinklered. An interior ceiling and light fixture replacement project was funded in FY26 following the roof replacement.

Building Structure & Exterior

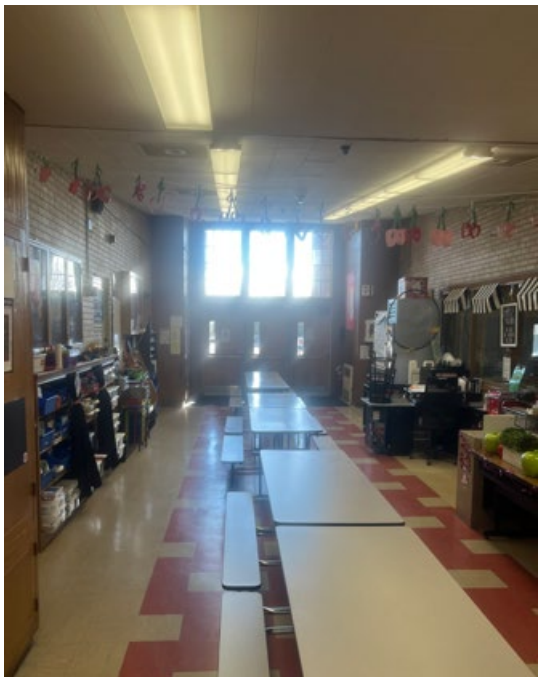
The Riverdale Elementary School is a two-story wood and masonry structure, originally built in 1930 and expanded in 1952. The foundation is a crawl space with concrete footings and piers. There is a partial basement in earlier portion of the building. The bottom of exterior footings are 4 feet minimum below grade. There is no slab at crawl space areas. At the 1952 portion a 4" slab on grade is installed. Besides minor cracking in perimeter frost walls which have been repaired, no other structural foundation issues observed.

The original 1930 building first floor is wood framed with steel and wood girders spanning between concrete piers. The second floor is also wood framed with bearing walls to the first floor, and exterior bearing walls. A small portion of both levels is concrete slab. The roof over the gym consists of steel beams on masonry walls, and wood infill rafters. The main roof is also wood framed to interior and exterior bearing walls. The 1952 addition is a 4" one-way concrete slab with concrete beams supported on concrete piers at the first floor. Roof wood framing is supported on exterior masonry walls. Rust jacking has damaged brick at some locations and it is recommended to monitor lintels. Repair may be required in the future.

The exterior of the building is predominantly red brick masonry with punched openings, double hung windows. Windows are metal and not original to the building, but observed to be beyond their service life. Windows in the addition sections are metal ribbon glazing, original to their vintage of construction and leaks and deterioration has been observed, particularly in the solid spandrels below gazed sections. Generally the facade is observed to be in poor condition. The roof is a single-ply low-slope membrane roof. The roof had limited observation due to snow cover but water damage was observed in ceiling tiles in certain areas, partidiuclarly in the additions. The roof was most recently replaced in 2024 but leaks have persisted. The roof should continue to be repaired and monitored to prevent further leaks and damage to interior spaces. The exterior should continue to be monitored and replacements for windows and roof should be studied.



Auditorium in Riverdale, with dated chairs



Informal cafeteria tables set up in corridor

Interior Environment

The Riverdale Elementary School is a purpose built elementary school, containing classrooms for typical and special instruction, administration spaces, a gym, auditorium and stage, and support spaces. Building spaces are purpose built and generally fit for purpose although classrooms are undersized compared to modern classrooms. Floor finish is typically a resilient tile floor in most student spaces, and the floor in the addition is new, having been replaced due to water damage. Tile floor or sealed concrete is located in bathrooms and the gym and auditorium have wood floors. Walls are generally painted plaster, with masonry in the corridors. Tile is installed in restrooms and at drinking fountain locations.

Floor finish in the original building shows various replacements and vintages and is in poor condition with multiple areas of cracking and failure. Walls are in fair to poor condition, and the finishes are dated and past their service life. Classrooms should be well lit with good access to natural daylight, but many windows are covered. Many spaces are cluttered and lack dedicated storage. While classrooms have operable windows, indoor air quality is likely fair to poor without dedicated mechanical outdoor air supply.

Programmatic Suitability

The Riverdale Elementary School sits within the Riverdale neighborhood, a low-density residential neighborhood. The building is a purpose built elementary school, and was built over multiple decades. The original building and main entry face Needham Street. The school has a dedicated gym and auditorium, but lacks a cafeteria and special instruction spaces such as Art and Music.

The school is 37,300SF and its current enrollment is approximately 200. This averages approximately 192 square foot per student, which is slightly larger than MSBA standards. While this does not specifically identify any space deficiencies, it shows that the Riverdale school is generally an appropriate size for its enrollment.

While overall the school is appropriately sized, classrooms are smaller than a comparable school and lack sufficient storage space, dedicated special instruction space, and support space, such as a kitchen and cafeteria to adequately support elementary level instruction. The building is not efficiently organized, with the Two story main building (with basement) connected to the one story addition at the rear. The current layout does not support current teaching and learning methods.

(Note: see the Volume 2 report for usage analysis and planning studies).



Special education areas set up within classroom

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Accessibility compliance upgrades — full accessibility assessment required
- Mill and overlay of deteriorated asphalt parking areas,repair of sunken catch basins and site drainage improvements, replacement of damaged granite curbs and concrete sidewalks
- Repairs of active roof leaks, deteriorated roof flashing, damaged exterior brick masonry facade and chimney areas
- Replacement of curtain wall glazing system (1970 addition)

10-Year Capital Improvements

- Replacement of galvanized iron domestic water supply piping infrastructure
- Replacement of wood auditorium chairs
- Replacement of cast-iron sanitary waste piping infrastructure
- Modernization of antiquated main electrical service and distribution panels
- Full installation of fire suppression (sprinkler) system
- Replacement of exterior windows (original building)
- Replacement of exterior wood doors and interior fire doors
- Interior painting, floor finishes, ceiling finishes, and casework

Capital Investment History

FY	Project / Capital Improvement	Amount
FY22	Asbestos Abatement (shared)	Shared
FY23	Entrance Safety Vestibule — Riverdale Design	$50,000
FY24	District Wide Roof Repairs — Infrared Scan & Design/Repairs (shared)	Shared
FY24	Roof Replacement — Summer 2024 (primary wing)	Completed
FY25	Door Replacements — Riverdale	$60,000
FY26	Interior Security Camera System — Phase I Design & Infrastructure	$50,000
FY26	Interior Ceiling / Light Fixture Replacement — Riverdale Addition (Phase I Design & Phase III Installation)	$165,000
FY26	Exterior Rehabilitation — Oakdale / Riverdale / DHS (Exterior Walls/ Windows)	$425,000
FY26	Roof Replacement Design — Riverdale / Greenlodge / Oakdale	$350,000
FY26	Electrical Infrastructure Modernization Study (System-wide)	$125,000

Site Conditions

The Riverdale school sites along Needham Street to the south. Parking is located along front and side, although extremely limited. The site is large, at nearly 6 acres, and is largely flat and developed. A playground and two ball fields are also located on site. The playground is

The site contains paved parking and walkways, which are in poor condition. The site is classified as FEMA Flood Zone x, reflecting low flood risk. No wetlands are present on the parcel per GIS review.

The building is a critical hub for the Riverdale neighborhood as it is separated from the rest of the town of Dedham by the Charles River and should remain as a community use facility if the school is relocated.

The site itself relatively large, flat, and developed, with the existing school, playground and ball fields. There are no wetlands observed on GIS maps, and the site is not within the mapped FEMA flood zones.

(Note: see the Volume 2 report for usage analysis and planning studies).

Sustainability & Decarbonization

FY2022 GHG emissions were 233 MT CO_2e (6.6% of portfolio). Fuel oil accounts for 86% of building emissions; EUI 85 kBtu/ft². Decarbonization Roadmap proposes VRF heat pump electrification in 2031 (or at new construction), heat pump water heaters in 2031, and 144 kW solar in 2045 (or with new school). If a new school is constructed, modern heating/cooling systems would replace the current fuel oil infrastructure entirely.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

The enormous deferred capital needs accumulating as every major building system approaches end of life simultaneously. The FY26 interior ceiling replacement project followed the 2024 roof replacement, confirming that continued investment in the existing building is necessary even if replacement is actively planned. The school is undersized and to serve modern teaching and learning.



Typical Classrooms are Larger, but Furnishings and Storage is Older

HVAC - Heating, Ventilation and Air Conditioning: Riverdale Elementary School

Executive Summary:

Existing Conditions

The Riverdale Elementary School is an aged building with many dated and antiquated systems. Many of the HVAC systems are beyond their serviceable life expectancy.

Central Heating Plant

The school has two cast iron sectional steam boilers. Both boilers were manufactured by Weil McLain model 88 and dual fuel for #2 heating oil and natural gas. The boiler burners were manufactured by John Zink and were dated September 28, 1960. The burners have input max ratings of gas CFH 2.7, oil input of GPH 18.8, min ratings of gas CFH 1.6, oil input of GPH 11.3, based on the boiler tag indicating model 988R, the boiler input rating is 2.4 MBH proving an output rating of 1.9. The boilers produce low pressure steam to provide heat throughout the building. The boilers are well beyond their serviceable life expectancy and should be considered for replacement.



Boilers



Oil Pump set

The Condensate receiver located in the mechanical room has a dual pump set which collects condensate return from the building and pumps it back to the boilers which heat to convert back to steam.



Condensate Receiver

Distribution Piping is run from the Boiler room to the through crawlspace piping throughout the building.



Crawlspace Piping



Underground Oil Tank

Classroom Heating

Classrooms have unit ventilators providing heat and ventilation to each space. The unit ventilators appear to be fair condition for their age. The UVs utilize the low pressure steam from the central boiler plant. There are some older unit ventilators that are antiquated



Unit Ventilator



Older Unit Ventilator

Terminal Heating Equipment

Throughout the building there are terminal heat devices such as convectors, unit heaters and fin tube radiation in areas where supplemental heat is required. Most of the terminal heat devices are well beyond their anticipated serviceable life and should be considered to be replaced.



Steam Unit Heater



Steam Radiation



Typical Convector

Air Conditioning

In few areas air conditioning. The wall mounted AC units appear in good condition should have many years of serviceable life.



Typical Wall mounted cooling unit



Typical Wall mounted condensing cooling unit



Typical Window AC

Gymnasium

The Gymnasium is heated and ventilated by two air handling units located near the exterior wall and provide heat and ventilation to the space.



Gym HV unis

Auditorium

The Auditorium is heated and ventilated by two air handling units located near the exterior wall and provide heat and ventilation to the space. Supply air is distributed high and return from the system enters from the grilles below the stage.



Auditorium HV unis

Toilet Rooms:

Toilet rooms have wall mounted grilles in proximity to the fixtures. Many of the grilles appear original and likely connected to original ductwork. Existing systems would be recommended to have ductwork and existing grilles cleaned in accordance with industry duct cleaning standards and insure fans are operating at design CFMs



Exhaust Fans

Automatic Temperature Controls:

Controls throughout the building are a mixture of pneumatic controls and stand-alone electric/electronic. There is a controls cabinet in the mechanical room which has switches for the majority of the HVAC equipment. The controls appear to be stand-alone and require manual operation. All controls would be recommended to be replaced with a full direct digital controls BMS system.



Stand-Alone Controls



Siemens Controls



Pneumatic Compressors



Controls Cabinet

Recommendations:

Based on the conditions observed of the existing HVAC systems and equipment, We recommend the following improvements to the HVAC system.

- The majority of the HVAC systems and equipment have exceeded their serviceable life expectancy.
- The owner should verify if the Oil is still utilized at the site of if the system has been abandoned in place. If the oil system is abandoned, it should be fully removed.
- If steam heat source was converted to a hot water plant, then any associated terminal heating devices downstream would need to be converted for the heating coils to be changed from steam to hot water. Coil size would increase in each unit to ensure that adequate heat discharge would come form each unit ventilator, unit heater, fin tube radiation and convector. While the unit ventilators are approaching the end of their anticipated serviceable life, the unit heaters, fin tube radiation and convectors are all well beyond their serviceable life and in need of replacement at this time.
- Replace any remaining pneumatic controls throughout the building with a full direct digital control (DDC) system. A full DDC system will provide improved energy efficiency, thermal occupant comfort, alarm notification, scheduling and an improved operating system. A building management control system would have all spaces and HVAC equipment integrated into graphics which will be reporting live data to the front-end user.
- In the basement level there is condensate return pipe in boxed in enclosures above the slab that are required to return the condensate low. These enclosures create obstructions at the floor level which impedes serviceability and access.

ELECTRICAL – Riverdale Elementary School

Executive Summary:

On February 19th, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Riverdale Elementary School. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings systems are in poor to fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's main service is rated for 400 Amperes, single phase with a service voltage of 120/240V. The secondary service is brought overhead by Eversource from a utility pole located on Needham Street where secondary service attaches to the corner of the building and is run surface mounted along the building before elbowing into the main electric room. The secondary service is cold sequence metered terminating within a 400A rated main service disconnect switch before entering a C.T. (current transformer) cabinet. The building's utility meter is located adjacent the main service disconnect.

A 400A distribution panel with (5) output breakers is located adjacent the main service disconnect which feeds the other electrical panelboards within the school. The distribution panelboard is manufactured by Underwriter's Laboratories and has passed its serviceable life.

Electrical sub-panels vary in manufacturer but are typically in poor condition and have passed their serviceable life like other electrical equipment within the building. Electrical panels were noted to have been installed above the maximum allowable height specified by the National Electrical Code (NEC), rendering it not readily accessible and in violation.













Emergency Power System:

The building is not equipped with an emergency back-up generator. Life safety lighting is typically covered by twin-headed emergency battery units (EBUs). These units vary widely in condition and age from poor to new.

Exit signs within the building are all thermoplastic type and vary in condition from poor to good. Many of the buildings' exit signs have emergency lighting heads attached.









Fire Alarm System:

The existing building is equipped with a FCI Gamewell addressable fire alarm control panel (FACP) located within the corridor outside the boiler room. Fire alarm notification and initiation devices located throughout the building are in fair condition.

A key repository box or beacon was not found at the buildings main entry. No fire alarm annunciator or graphical map was found during the visit to the site. The method of transmission is via surface mounted local energy master box located on the exterior of the building.











Exterior Lighting System:

Canopy lighting at the main building entry lobby consists of square surface light fixtures. Building mounted lighting primarily consists of traditional style wall pack lighting with clear glass lens. Parking lot lighting is comprised of flood light style fixtures mounted on the building.







Interior Lighting:

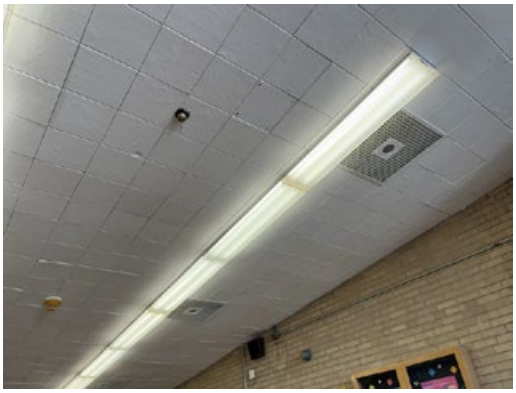
Interior lighting within the Main Lobby consisted of recessed square fixtures and linear surface wrap around.

Corridors consist of 2x4 surface mounted fixtures. Some classrooms have recessed 2x4 LED fixtures.

Utility lighting primarily consisted of linear wrap around fixtures some with prismatic lensing. Stage has theatrical flood lights.

No centralized control system was found but some areas were outfitted with line voltage occupancy sensors. No daylight harvesting sensors were found.










Wiring Devices & Branch Circuitry:

In general receptacles are sparsely located throughout the building so much so that extension cords and power strips are commonplace. Receptacles are in poor to fair condition throughout. Exposed wiring terminations were found in several areas throughout the building and damaged surface raceway were observed.






Security System

No intrusion detection system was found within the building.

An access control system is provided at main entry points into the building utilizing AWID card readers, keyscan access door controllers and a keyscan management software.

The use of a CCTV (Closed Circuit Television) system is utilized to monitor the building perimeter and data closets with video storage to an Exaqvision NVR. A security monitor is located in an administration office for live video monitoring.

An Aiphone Video Intercom is utilized at the main entrance and gym entrance door that provides two-way talk communication with visitors and remote door release.











<u>Communication Systems:</u>

Communication services enter the building overhead and terminate at a demarcation wall within the school's basement. Fiber and other communication cabling are then run up to the school's first floor MDF where it is terminated into the school's network patch panels.

A single mode fiber connection connects the Riverdale School to the town's school fiber network located at the high school. Data connection points and wireless access points are located adequately throughout the building for operational needs. The use of short throw projectors are utilized within classrooms.

The school utilizes an Avaya VoIP phone system like other buildings across the town. There is a Bogen paging speaker system that utilizes both upgraded surface mounted paging speakers and existing original paging speakers for overall building announcements.

The building's existing Simplex 2350 Master Time System which is now obsolete has been replaced by

an American Time & Signal All Sync IQ head end.

















Recommendations:

Electrical Distribution System:

The existing electrical service is only sufficient to power the existing building loads. Distribution equipment is generally in poor to fair condition and is nearing capacity. Any renovations that would include any HVAC system modification or addition would require a service upgrade.

Panels found to be in violation of working code clearances should either be relocated or modified to be compliant. Finally, it is recommended that all panels within publicly accessible areas remain locked as a general good safety practice.

Emergency Power System:

It is recommended that all existing battery units be tested for operation. In addition to this it is recommended that lighting levels along the egress paths be measured in a simulated power down condition to ensure compliance with code required life safety lighting levels.

Owner should verify that all exit signs within the building are tested for functionality and have been provided with integral battery back-up.

Fire Alarm System:

Fire alarm system should be replaced with a new addressable type system with voice excavation. All fire alarm devices to be replaced to comply with current codes.

Exterior Lighting System:

It is also recommended that all lighting be replaced with current LED low glare fixtures that are dark sky complaint. These fixtures offer better optical control of the lighting being emitted from them and in many cases can reduce overall power consumption and quantity of fixtures installed all while providing better overall lighting levels.

A control system should be provided for programming and zoning of the exterior lighting with a general goal of photocell on and time clock off operation with holiday and off business hour programming being used to reduce lighting levels outside of normal hours of operation.

Interior Lighting:

It is recommended that all lighting be considered for upgrade with more modern LED sourced fixtures being provided while respecting the intended design per building area maintaining a traditional appearance wherever desired.
Provide a lighting control system (centralized or de-centralized) to include dimming, occupancy, and daylight harvesting energy efficient controls.

Wiring Devices & Branch Circuitry:

It is recommended that all existing code violations be reviewed and addressed. Provide additional receptacle locations to assist in elimination of extension cord usage.

Security System:

It is recommended that an intrusion detection system be installed and provided with door contacts at all points of accessible entry to the building as well as full coverage of motion sensing devices within the building at grade level.

Communication Systems:

To ensure optimal performance and safety, the MDF room should be neatened and reconfigured, with all stored items relocated to a separate area to maintain necessary clearance and proper airflow for the existing equipment.

Provide additional telephone/data ports and wireless access points as needed throughout the building to accommodate daily operations in a 21st century learning environment.

PLUMBING– Riverdale Elementary School:

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, storm drain piping. Municipal sewer and municipal water serve the building.

Portions of the plumbing systems have been updated as part of building renovation and various upgrade projects. The plumbing systems are in fair condition and are nearing their life expectancy.

The plumbing fixtures are in fair condition. Some of the bathroom fixtures appear to have been modified to make them accessible; The current Access Code requires accessible fixtures wherever new plumbing fixtures are provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures must be water conserving type fixtures.

Cast iron is used for sanitary drainage. Rainwater from flat roof areas is collected through roof drains, which are piped internally and directed to an exterior site storm system. Where visible, in the building, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the drainage piping is nearing or has exceeded its life expectancy.

Fixtures:

The water closets are floor mounted, vitreous china with manually operated flush valves.

Urinals are pedestal, vitreous china with manually operated flush valves and are non-Compliant or wall mounted, vitreous china with manually operated flush valves.

Lavatories are wall hung, vitreous china with manually operated, holt and cold-water faucets.

Drinking fountains are stainless steel, dual height, surface mounted. There are vitreous china, original drinking fountains which do not appear to be operable.

Electric water cooler is surface, wall mounted, single unit with bottle filler.

Janitor's sink is an enameled, wall mounted, cast iron sink with 3-inch trap standard and wall mount faucet and is equipped with vacuum breaker.

Staff sinks are stainless steel, counter mounted, with gooseneck faucets, with dual lever type, hot and cold-water faucet.

Exterior wall hydrants include loose key operation and threaded connection with no vacuum breaker.



Water Closet



Urinals



Urinal



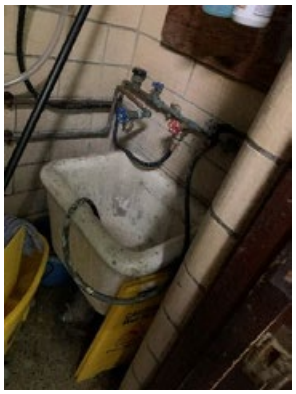
Lavatories



Drinking Fountain



EWC with Bottle Filler



Janitor's Sink



Sink

Water Systems:

The main domestic water service is in the Mechanical Room. The service appears to be 2-inch in size. There is a water meter but there is no reduced pressure backflow preventer on the domestic service piping arrangement.

The domestic water piping, where exposed, is copper tubing with sweat joints. The majority of the domestic water piping includes original insulated but much of the insulation is missing. The valves used for isolation purposes are either full port ball valves or original gate valves.



Water Piping



Water Piping

The majority of the domestic hot water is provided by an electrical, storage tank type water heater, located in the Mechanical Room. The water heater has a storage capacity of 50 gallons and a power input of 4.5 kW. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is recirculated and there is no expansion tank installed. The water heater appears to be in fair condition.

At Janitor's sinks, domestic hot water is provided by an electrical, storage tank type water heater. The water heater has a storage capacity of 19 gallons and a power input of 1.5 kW. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank installed. The water heaters appear to be in fair condition.



Water Heater

Drainage Systems:

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 a sump pump in the Mechanical Room floor. The ejector appears to be in poor condition and is likely not operational.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Cast Iron Piping



Sump Pump

Recommendations:

- Continue with scheduled maintenance and repair system components when required. (High Priority 1-2 years)
- Provide new high-efficiency, water conserving, plumbing fixtures. (Low Priority 5+ years)
- Provide accessible fixtures where required. (Low Priority 5+ years)
- Install thermostatic mixing valves, expansion tanks, and hot water recirculation loops at existing water heaters. (High Priority 1-2 years)
- Provide all new domestic water piping including insulation, pipe labels and full port ball valves for isolation purposes. (Low Priority 5+ years)
- Provide all new sanitary, waste and vent piping throughout the building. (Low Priority 5+ years)
- Provide Code required vacuum breakers on all wall hydrants. (High Priority 1-2 years)

FIRE PROTECTION – Riverdale Elementary School:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

STRUCTURAL EXISTING CONDITIONS (Riverdale Elementary School)

OVERVIEW

1. Existing conditions based on limited original structural and architectural drawings, dated 4-21-30, Feb 28, '52, and a site visit by RSE on February 19, 2026.

FOUNDATIONS

1. Shallow reinforced concrete spread footings with concrete frost walls at the perimeter.
    a. 1930 Portion: Allowable soil bearing pressure is not provided. Crawl space with concrete footings and piers. Partial basement in earlier portion of the building. Bottom of exterior footings are 4 feet minimum below grade. No elevations provided at interior footings and piers which are spaced on a regular grid. No slab on grade at crawl space.
    b. 1952 Portion: Allowable soil bearing pressure is 3 TSF. 4" slab on grade in some areas. Bottom of exterior footings are 4 feet minimum below grade. Interior footings are up to 8 feet below top of slab.
2. No known modifications to foundations since original construction.
3. Besides minor cracking in perimeter frost walls which have been repaired, no other structural foundation issues observed.
4. Recommendations: None.

SUPERSTRUCTURE

1. Three different components with very little information available for the oldest segment.
    a. 1930 Portion: First floor is wood framed with steel and wood girders spanning between concrete piers. Second floor is also wood framed with bearing walls to the first floor, and exterior bearing walls. A small portion of both levels is concrete slab. The roof over the gym consists of steel beams on masonry walls, and wood infill rafters. The main roof is also wood framed to interior and exterior bearing walls.
    b. 1952 Portion: 4" one-way concrete slab with concrete beams supported on concrete piers at the first floor. Roof wood framing supported on exterior masonry walls.
2. Condition/Known Issues: Rust jacking has damaged brick at one or more locations.
3. Recommendations: monitor lintels. Repair may be required in the future.

PHOTOS

	Photo: Previously repaired crack at foundation wall.
	Photo: Crack in masonry originating from window lintel.

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Rustcraft Field

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: PR-5 | Rustcraft Field – Concession Stand & Restrooms

SELECT BUILDING: PR-5 | Rustcraft Field – Concession Stand & Restrooms

BUILDING INFORMATION	
Building ID:	PR-5
Address:	169 Rustcraft Road
Year Built:	tbd
Last Renovated:	None
Gross Sq Ft (GSF):	0

SITE CONSTRAINTS & REGULATORY	
Flood Zone:	Zone AE (100-yr)
Wetlands:	Within Wetland
Historic:	None
Lot Size (ac):	14.1
Building Use:	Parks / Recreation

ROOF & ENVELOPE	
Construction Type:	Wood Frame
Roof Year:	tbd
Window Year:	tbd
No. of Floors:	1

CAPITAL COST ESTIMATES	
Assessed Value:	$646,400
Deferred Maint. ($):	tbd
Est. Renovation Cost:	tbd
Replacement Cost:	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	Electric only	**Energy Use Intensity (EUI):**	~8
Electrification Potential:	N/A – Electric only	**GHG Emissions:**	5
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	High

BUILDING PHOTO



AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	2.02	Fair

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	1.8	• Good
Structure (Avg):	2.0	• Fair
MEP / FP (Avg):	3.0	• Poor
Life Safety / Code:	1.3	• Excellent

KEY COMPONENT SCORES

Roof:	3.0	Electrical:	3.0
HVAC – Heat:	n/a	HVAC – Cooling:	n/a
Fire Prot.:	n/a	Plumbing:	3.2

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

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General View of Ball Fields.

The Rustcraft concession stand is a seasonal facility serving the Fairbanks Park athletic complex, with fair condition systems and the most complete security coverage of the three concession buildings. Like its counterparts at Barnes and Gonzalez, improvements should be planned as part of a coordinated Parks concession facility program.

The Rustcraft Field Concession Stand and Restrooms at 169 Rustcraft Road serves the 14.1-acre Fairbanks Park complex, which includes three baseball/softball fields, one soccer field, restrooms, a concession stand, and sports lighting. This is the third of the three similar seasonal concession facilities in the Parks portfolio.

Concession Stand & Restrooms

The Rustcraft Concession stand and restroom is a small, brick-clad structure, generally in fair condition. The building is made up of one area for small concessions and restrooms.

The site is supplied by a 400A 3-phase service at 277/480V fed underground from Rustcraft Road. The main GE panelboard is in the concession storage area and the musco sports field lighting control cabinets are also in the storage area. Interior lighting is in poor to fair condition. A Honeywell intrusion detection system and CCTV cameras (Vivotek) with interior and exterior coverage are installed. Exterior lighting includes a motion-sensor floodlight and flagpole photocell light. Seasonal fixtures with domestic water service, water meter, and an electric water heater lacking a TMV and expansion tank. All in fair condition; piping insulation is not complete.

A large parking area is located to the west of the ball fields and is in good condition.

Priority Issues & Recommendations

Immediate Priorities (0–2 Years)

- Clear NEC 110.26 working clearances from electrical panels
- Install kitchen exhaust hood for cooking appliances
- Replace/repair poor-to-fair interior lighting fixtures
- Insulate exposed domestic water piping
- Install TMV and expansion tank at water heater

10-Year Capital Improvements

- Full LED lighting upgrade with occupancy sensor controls
- Connect to Town fiber backbone for centralized monitoring
- Accessibility restroom upgrades
- Evaluate building envelope condition

Capital Investment History

FY	Project / Capital Improvement	Amount
	No capital appropriations recorded for this facility during FY2021–FY2026.	

Sustainability & Decarbonization

GHG emissions were not separately metered; estimated ~5 MT CO_2e from electricity. Musco LED sports lighting is already efficient. Interior LED upgrade is the primary opportunity.

(Note: data taken from 2025 Town of Dedham Decarbonization Roadmap).

Planning Notes & Observations

Any outstanding repairs or improvements to the concession buildings should be addressed through a coordinated capital program. The Town should consider whether three separate concession stand capital plans or one consolidated parks concession stand improvement program is more efficient.

The Rustcraft field site is one of the town's largest properties, at over 14 acres. The site is adjacent to the Wigwam Pond area and the site has significant exposure to FEMA Flood Zone A as well as Wetland areas observed in GIS maps.

The town completed an updated conceptual design (03/2026, Activitas) which propsed replacing the existing stand & restoom in kind (+/- 800SF) support building as well as a playground, expanded seating, and improvements to the existing ball fields. Other uses should be studied for this site to align with findings in this report.

(Note: see the Volume 2 report for usage analysis and planning studies).



Kitchen with Residential Type Appliances

HVAC - Heating, Ventilation and Air Conditioning: Rustcraft Concession

Executive Summary:

The Rustcraft Concession Building is a seasonal building which is only used during the warmer weather months and drained down for the winter so heat is not needed and freezing will not occur.

Existing Conditions

Central Heating Plant:

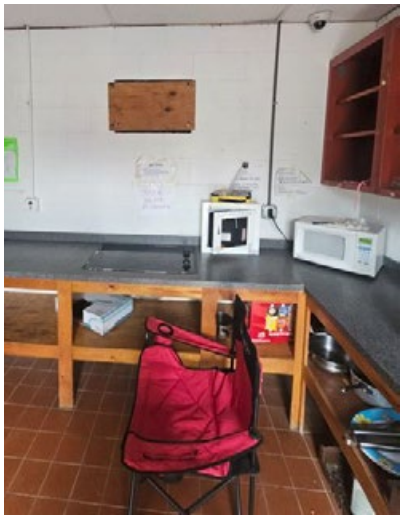
There is no heating site.

Central Cooling Plant:

There is no Air Conditioning at this site.

Kitchen:

The cooking area has some residential type appliances with no means of mechanical exhaust.



Kitchen Exhaust System

Toilet Rooms:

The Toilet rooms have fan light combination units which serve the toilet rooms, the switch that serves the light also energizes the exhaust fan.



Exhaust Fans

Automatic Temperature Controls:

The Concession Stand only shares control with the fan light in each toilet room.

Recommendations:

Based on the cooking appliances utilized, a kitchen exhaust hood would be recommended to remove odors and smoke

ELECTRICAL – Rustcraft Concession Stand

Executive Summary:

On April 2nd, 2026 an evaluation of the electrical, technology, and security systems was performed by GGD Consulting Engineers to determine the condition of all existing systems and equipment at the Rustcraft Concession Stand. The contents of this report are considered the professional opinion of the engineer assessing the systems and shall be used as a reference of existing system condition and recommended maintenance or upgrade suggestions.

In general, most of the buildings' systems are in fair condition and in many cases have reached their expected usable life. The systems are broken down throughout the report with recommendations being provided per system area.

Electrical Distribution System:

The building's electrical utility service is provided by Eversource and fed underground from a utility pole located across the street on Rustcraft Road. The building's main service is rated for 400 Amperes 277/480V, 3 Phase, 4 Wire and is terminated into a 400 Amp GE panelboard. The main panelboard is located in the concession stand's storage area along with the other electrical distribution equipment. The secondary service is hot sequence metered utilizing a Class 320 meter which is also located within the concession stand's storage area.

Electrical sub-panels are not located within dedicated electric rooms, vary in manufacturer and are in fair to good condition. Electrical panels serve the building for its operational needs along with feeding sports lighting out at the ball fields. Some panels are in violation of NEC 110.26 (National Electrical Code) which governs clear spaces and working clearances for electrical equipment.







Emergency Power System:

The building is not provided with emergency power or emergency lighting life safety systems.

Fire Alarm System:

The existing building is not equipped with a fire alarm system.

Exterior Lighting System:

Exterior lighting is accomplished via a building mounted exterior floodlight that has an integral motion sensor. Flagpole lighting was provided with a building mounted floodlight which was provided with an integral photocell. It was noted that while on site all exterior lighting was on during daytime operations.

Sports field lighting is controlled and powered via Musco lighting control cabinets located within the concession stand storage area.





Interior Lighting:

Interior lighting within the concession stand varied between utility strip fixtures within the storage space and bathrooms recessed troffers in the kitchen/concession space. Spaces utilized line voltage manual switches for the only source of control. Fixtures throughout the spaces were in poor to fair condition.




Wiring Devices:

In general receptacles are sparsely located throughout the building. Receptacles are in fair condition throughout the facility. Exterior receptacles are of GFI type and provided with weatherproof covers. Kitchen/concession receptacles are provided with dedicated circuits and GFCI protection. The NEC though has expanded many of the GFCI required areas under NEC 210.8.B, C, and D. A renovation of the concession area would trigger these added required GFCI conditions and require GFCI protection at the electric stovetop.







Security System

The building is monitored by both exterior and interior CCTV Camera system that has a power supply for the two cameras located within the storage area. CCTV cameras are manufactured by Vivotek and monitor the concession area and exterior of the building. The building is also protected by a Honeywell intrusion system with keypad located within the storage area.











Recommendations:

Electrical Distribution System:

Panels found to be in violation of working code clearances should either be relocated or clear space shall be made to provide proper electrical clearances.

Exterior and Interior Lighting System:

Upgrade all existing lighting within the facility to integral LED type. Storage spaces to be provided with vaportight impact resistant lensed fixtures, concession space to be provided with LED flat panels and public bathrooms to be provided with upgraded utility strip fixtures. All spaces should be provided with line voltage occupancy sensor control to allow for a secondary control in the event lights are left on.

Communication Systems:

Provide a town fiber connection to concession stand for connection back to central town fiber hub located at the town hall.

PLUMBING- RUSTCRAFT CONCESSIONS

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system. Municipal sewer and municipal water serve the building.

Fixtures:

The water closets are floor mounted vitreous china with manual flush valves.

Lavatories are wall hung vitreous china with manual metering faucets.

Concessions area has a counter mounted two-bowl stainless steel sink with gooseneck faucet.

There is no mop sink.

There is no drinking fountain.

Water Systems:

The main domestic water service appears to be 1-inch in size and includes a 5/8-inch water meter. There is no backflow preventer on the service.

Piping, where exposed, is copper tubing with sweat joints. The piping is not insulated.

Domestic hot water is provided by an electric tank type water heater. The water heater is 120-volt, single phase, with 1.5 kW heating element and 6 gallons of storage. The water heater is not equipped with a thermostatic mixing valve to prevent scalding. The hot water is not recirculated and there is no expansion tank. The water heater appears to be in fair condition.

Drainage Systems:

Cast iron is used for sanitary drainage at bathroom. Piping at the concessions sink is PVC.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Typical toilet fixture



Typical lavatory



Concessions sink



Domestic water service



Domestic water heater

Recommendations:

- Provide new high-efficiency, water conserving, plumbing fixtures.
- Provide accessible fixtures where required.
- Provide mop sink and drinking water station.
- Install thermostatic mixing valve and expansion tank at water heater.
- Insulate domestic water piping.

FIRE PROTECTION – Rustcraft Concession Stand:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

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

Saint Mary's Parking Lot (361 High Street)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: D-2 | Saint Mary's Parking Lot (vacant lot)

SELECT BUILDING: D-2 | Saint Mary's Parking Lot (vacant lot)

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	D-2	**Flood Zone:**	None
Address:	361 High Street	**Wetlands:**	No
Year Built:	n/a	**Historic:**	None
Last Renovated:	n/a	**Lot Size (ac):**	2.06
Gross Sq Ft (GSF):	0	**Building Use:**	Vacant / Land
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	N/A	**Assessed Value:**	$950,500
Roof Year:	n/a	**Deferred Maint. ($):**	tbd
Window Year:	n/a	**Est. Renovation Cost:**	tbd
No. of Floors:	N/A	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	N/A	**Energy Use Intensity (EUI):**	N/A
Electrification Potential:	N/A	**GHG Emissions:**	N/A
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	Medium

BUILDING PHOTO

AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	n/a

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	n/a
Structure (Avg):	n/a
MEP / FP (Avg):	n/a
Life Safety / Code:	n/a

KEY COMPONENT SCORES

Roof:	n/a	Electrical:	n/a
HVAC – Heat:	n/a	HVAC – Cooling:	n/a
Fire Prot.:	n/a	Plumbing:	n/a

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

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The Saint Mary's Parking Lot is located at 361 High Street. The site is a vacant lot adjacent to the former St. Mary's Church complex. The site is bound on the south by High Street and north by the Brookdale Cemetery. The site split between a paved area and a wooded area and a significant topographic change at the rear of the site.

No building is currently present and the site is unsecured (no fencing). The site is used as town overflow, primarily for DPW to store vehicles, equipment as well as seasonal use for snow storage. The pavement is generally in fair condition.

Planning Notes & Observations

The site presents a future planning opportunity rather than near-term capital needs. The Saint Mary's Parking Lot may have value in the context of Dedham Square parking strategies and the Town Green planning, as well as reuse for future town facilities. The site's location in the Dedham Square area and proximity to the East Dedham neighborhood gives it potential for future parking, open space, or development use.

The site is moderately sized, at 2 acres, but its proximity to Dedham square, and its adjacency to the Brookdale Cemetery provide options for Dedham to consider.

(Note: see the Volume 2 report for usage analysis and planning studies).

Priority Issues & Recommendations

- Commission Phase I Environmental Site Assessment prior to any future disposition or redevelopment
- Evaluate highest and best use for the vacant lot (parking, open space, or development)
- Consider disposition or programming decision in context of Dedham Square planning initiatives

Capital Investment History

FY	Project / Capital Improvement	Amount
	No capital appropriations recorded for this facility during FY2021–FY2026	

Former Transfer Station (5 Incinerator Road)

TOWN OF DEDHAM | FACILITIES MASTER PLAN *BUILDING SUMMARY*

Building: D-3 | Transfer Station (no longer active)

SELECT BUILDING: D-3 | Transfer Station (no longer active)

BUILDING INFORMATION		SITE CONSTRAINTS & REGULATORY	
Building ID:	D-3	**Flood Zone:**	Zone AE (100-yr)
Address:	5 Incinerator Road	**Wetlands:**	Within Wetland
Year Built:	n/a	**Historic:**	None
Last Renovated:	n/a	**Lot Size (ac):**	0.85
Gross Sq Ft (GSF):	0	**Building Use:**	Infrastructure / Inactive
ROOF & ENVELOPE		**CAPITAL COST ESTIMATES**	
Construction Type:	N/A	**Assessed Value:**	$1,955,500
Roof Year:	n/a	**Deferred Maint. ($):**	tbd
Window Year:	n/a	**Est. Renovation Cost:**	tbd
No. of Floors:	N/A	**Replacement Cost:**	tbd

SUSTAINABILITY & ENERGY PERFORMANCE (DATA FROM 2025 DECARBONIZATION ROADMAP)			
Heating Fuel Type:	N/A	**Energy Use Intensity (EUI):**	N/A
Electrification Potential:	N/A	**GHG Emissions:**	N/A
Solar Potential (kW):	N/A	**Climate Resilience Risk:**	High

BUILDING PHOTO

AERIAL / SITE PHOTO



FACILITY CONDITION INDEX (FCI)

OVERALL FCI:	n/a

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

Architecture (Avg):	n/a
Structure (Avg):	n/a
MEP / FP (Avg):	n/a
Life Safety / Code:	n/a

KEY COMPONENT SCORES

Roof:	n/a	Electrical:	n/a
HVAC – Heat:	n/a	HVAC – Cooling:	n/a
Fire Prot.:	n/a	Plumbing:	n/a

EDUCATIONAL ADEQUACY INDEX (EAI)

OVERALL EAI:	-	N/A

1-1.3=Excellent 1.4-1.8=Good 1.9-2.4=Fair 2.5-3.2=Poor 3.3-4.0=Critical

EPI-1 Learning Environ.:	-	• N/A
EPI-2 Academic Suffic.:	-	• N/A
EPI-3 Program Suffic.:	-	• N/A
EPI-4 Universal Access:	-	• N/A
EPI-5 Building Safety:	-	• N/A
EPI-6 Tech. Readiness:	-	• N/A

Grade Config.:	-
Enrollment:	-
SF per Student:	-

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The former Transfer Station is located at 5 Incinerator Road (no longer actively operated as a transfer facility). The site is vacant, a former boat house occupied the site until the 1950's when it was converted into a transfer station and an incinerator was constructed. The site ceased operation in 2019 and former structures from prior operations were removed in 2024. The site is currently used as overflow storage for DPW operations.

The site's industrial history suggests the potential for environmental conditions (soil/groundwater) that would require assessment prior to any redevelopment or change of use.

The site is also bound to the north by the Mother Brook and surrounded on other sides by commercial development, from the Dedham Mall. The site is within both FEMA Flood zone and wetland buffers.

Planning Notes & Observations

The site presents a future planning opportunity rather than near-term capital needs. The site was analyzed by the BSC Group in 2024 and the study team has been informed a phase 1 study is underway.

Redevelopment of the site will be challenging due to its adjacent to flood zone and wetland buffers as well as its location within the commercial development of the Dedham Mall and adjacent commercial properties.

(Note: see the Volume 2 report for usage analysis and planning studies).

Priority Issues & Recommendations

- Evaluate highest and best use for the vacant lot (parking, open space, or development)
- Confirm site security, fencing, and liability mitigation for vacant/inactive properties
- Determine whether remediation is required; evaluate potential for future reuse

Capital Investment History

FY	Project / Capital Improvement	Amount
FY25	Demolition and Abatement of Former Incinerator Building	$1.2M


1644
AMES SCHOOL
1897
DEDHAM SENIOR CENTER
DEDICATED 2019

III. APPENDIX

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1. INTRODUCTION

Arrowstreet has retained Code Red Consultants to provide fire protection, life safety, and accessibility code consulting services for the Town of Dedham Facilities Master Plan study. This report is intended to document existing conditions and outline major code considerations for ten buildings included in the portfolio of the Town and School Department facilities. The sites respective of each building reviewed as part of this code evaluation are shown in Figure 1 below.

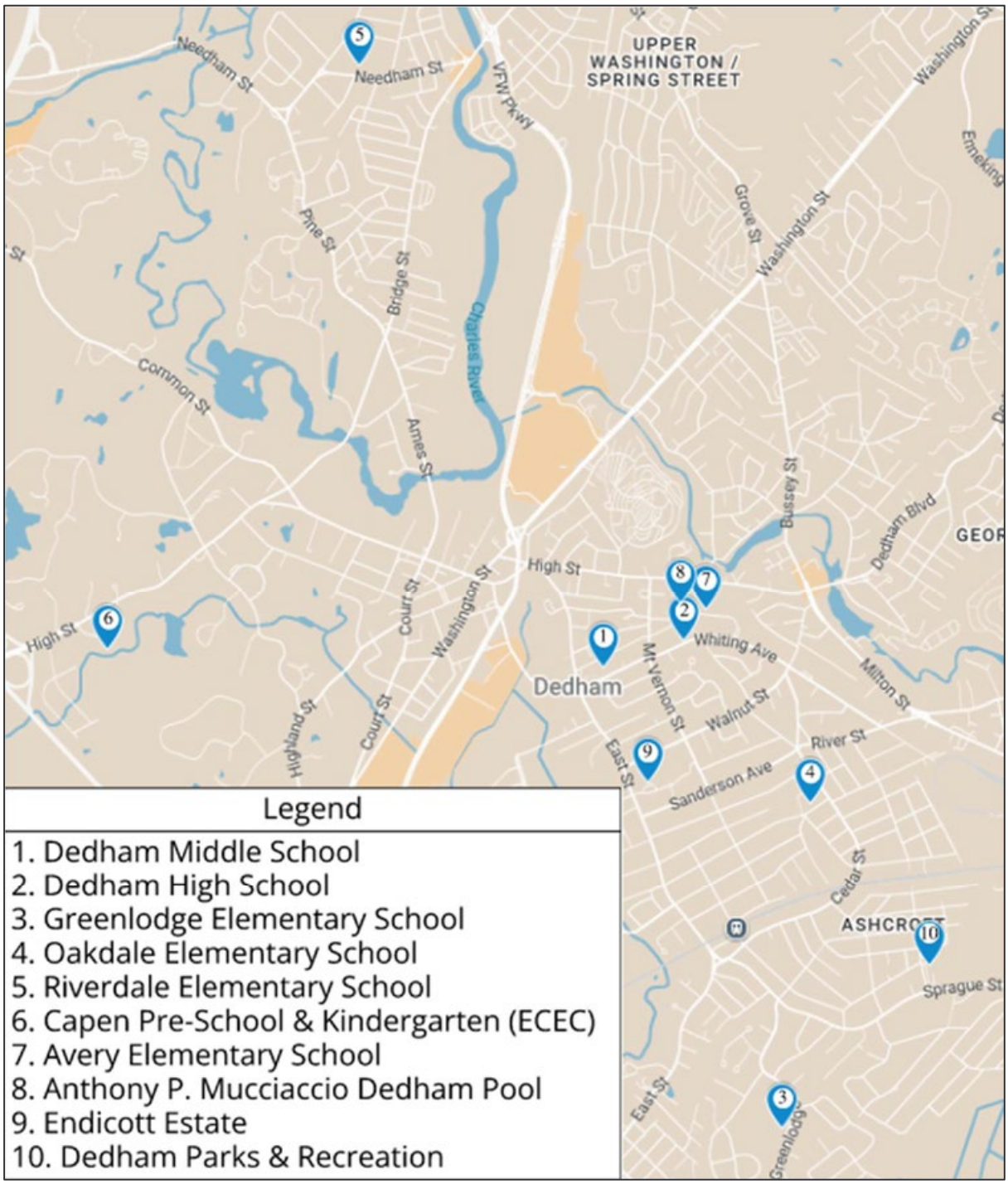


Figure 1: Locations of Buildings Reviewed

As part of our evaluation, we conducted site surveys of each building identified in Figure 1 on February 17, 19, and March 26, 2026. During the surveys, destructive openings into existing construction were not made, and functional testing of building systems was not performed. Our surveys were intended to gather high-level information to help assess the status of each building and identify thresholds for potential code upgrades.

1.1 BUILDINGS OVERVIEW

Middle School – 70 Whiting Avenue

The Middle School was originally constructed in 2006 and is three stories in height. The overall building is designed as four separate buildings, with fire walls detailed on base building drawings as building separations between each. Each building is constructed with unprotected steel and concrete structure (Type IIB). The building protected throughout by a sprinkler system and served by a fire alarm and detection system consisting of audio/visual notification devices, smoke and heat detectors, and pull stations at exits. The building includes educational spaces, along with an auditorium, gymnasium, and cafeteria that are also used outside normal hours.

High School – 140 Whiting Avenue

The High School was originally constructed in 1959 with additions taking place in 1967 and 1975. Large renovations were also completed in 2002 and 2015. The building contains multiple Levels and is constructed with a mix of protected and unprotected steel and concrete structure with masonry exterior walls, resembling Type IIB construction. The building is not provided with a sprinkler system but is equipped with a fire alarm and detection system consisting of audio/visual notification devices, smoke and heat detectors, and pull stations at exits. The building contains an auditorium, multiple gymnasiums, and cafeteria in addition to educational spaces.

Greenlodge Elementary School – 191 Greenlodge Street

The building was originally constructed in 1955 with renovations and additions taking place throughout the 1960s adding a rear wing and then later the two other additions (one off main building and another identical addition off the rear wing). The building is constructed with wood structure and masonry exterior walls (Type IIIB). A sprinkler system is not provided, but the building is equipped with a fire alarm and detection system consisting of audio/visual notification devices, smoke and heat detectors, and pull stations at exits. The building contains a multi-purpose auditorium/gymnasium in addition to educational spaces.

Oakdale Elementary School - 147 Cedar Street, Dedham, MA 02026

The school was originally constructed in 1902, with an addition containing the gymnasium that was constructed in 1952. In 1960 the two other additions were constructed with two classrooms in each. The main building and additions are constructed with a mix of conventional wood frame structure on concrete slab, masonry walls and wood-framed roofs, steel frame with concrete-topped metal decks and concrete tilt-up bearing walls and wood panel roof (Type IIIB). The building is not provided with a sprinkler system. The fire alarm and detection system consists of audio/visual notification devices, smoke and heat detectors, and pull stations at exits.

Riverdale Elementary School - 143 Needham Street

The building was originally constructed in 1930 with an addition constructed in 1952. The building is 2 stories in height and consists of wood frame structure with raised floor. The 1952 addition was constructed using a steel frame structure with concrete-topped metal decks (Type IIIB). The building is not

provided with an automatic sprinkler system but is served by a fire alarm and detection system. Fire alarm system components include audio/visual notification devices, smoke and heat detectors, and pull stations at exits. The building contains an auditorium and gymnasium in addition to educational spaces.

Capen Pre-School & Kindergarten (ECEC) - 1100 High Street

The building is 1 story with a Type IIB construction type as documented in the 2017 Code Summary. The building is protected throughout by a sprinkler system and served by a fire alarm and detection system. The building contains a gymnasium and cafeteria in addition to educational spaces.

Avery Elementary School - 336 High Street

Avery Elementary School was originally constructed in 2011. The building is 3 stories and is constructed with steel and concrete structure resembling Type IIB construction. The building is protected throughout by a sprinkler system which is served by an electric fire pump, and equipped with a fire alarm and detection system consisting of audio/visual notification devices, smoke and heat detectors, and pull stations at exits. The building contains a gymnasium and cafeteria in addition to educational spaces.

Anthony P. Mucciaccio Dedham Pool - 336 High Street

The building was originally constructed in 1973 with a pedestrian bridge providing circulation to the high school, which was demolished. The structure includes unprotected steel and masonry exterior walls, most closely resembling Type IIB construction. The building is not provided with an automatic sprinkler system. A fire alarm and detection system serves the building. The building contains a pool with seating and locker rooms.

Endicott Estate – 656 East Street

The Endicott estate consists of multiple buildings. The two buildings we surveyed include the main building and library. The main building was constructed in 1904. The construction type of both buildings is most consistent with Type IIIB. The main building contains a partial sprinkler system served by the domestic water supply. It is likely that the sprinkler system is not functional. Additionally, the main building was provided with occupant fire hoses in the basement. The library is also not provided with a sprinkler system. Both buildings are provided with fire alarm and detection systems.

Parks & Recreation – 310 Sprague Street

The building was originally constructed in 1930 with and addition constructed in the 1960's. The building is two stories with a basement and constructed with brick, concrete, block walls and partitions, masonry block walls and wood-framed roofs. These building elements are consistent with Type IIIB construction. The building is not provided with an automatic sprinkler system. A fire alarm and detection system serves the building, consisting of audio/visual notification devices, smoke and heat detectors, and pull stations at exits. The building contains a gymnasium classroom in addition to the Parks and Recreation office space.

Note, all buildings were reviewed for scope and compliance with life safety and accessibility code by Code Red and Arrowstreet. An indepth review of each facility was not included in this appendix, depending on the use, scope and age of the building. Code review, rankings, and notes are inlcuded for each building in each facilities section above.

1.2 REFERENCED DOCUMENTS

The following documents were reviewed in addition to observations made during the site surveys to establish key building information:

Dedham Middle School

- 2004 Base Building Construction Drawings (Sheets AC-1.1 – AC1.2, A-1.0W, and A-1.1 – A-1.2)
- 2016 Facility Conditions Assessment

Dedham High School

- 1957 Drawings (Sheets A3, A4 and A6)
- 1965 Drawings (Sheets A2 – A6 and A11)
- 1973 Drawings (Drawing No. 1, 2, 4 and 5)
- 2002 Drawings (Sheet A1.1 – A1.3)
- 2025 Drawings (Sheet A100)
- 2016 Facility Conditions Assessment

Greenlodge Elementary School

- 1960 Addition Drawings (Sheets A-2, 2 and 3)
- 1970 Addition Drawings (Sheet 3)
- 2016 Facility Conditions Assessment

Oakdale Elementary School

- 1999 Drawings
- 2016 Facility Conditions Assessment

Riverdale Elementary School

- 1930 Construction Drawings (Sheets 1-3)
- 1952 Addition Drawings (Sheet 3)
- 2016 Facility Conditions Assessment

Capen Pre-School & Kindergarten (ECEC)

- 2020 Record Drawings (Sheets A0.00, A1.01 and A1.11 – A1.13)

Avery Elementary School

- 2010 Construction Drawings (Sheets AC1.00 – AC1.02 and A1.10 – A1.40)
- 2016 Facility Conditions Assessment

Anthony P. Mucciaccio Dedham Pool

- 1973 Addition Plans (Sheet C1)
- 2020 As-Built HVAC Drawings (Sheet H1.0)

Endicott Estate

- 2021 Topographic Survey (Sheet EX-3)
- 2025 Fire Protection Plans (Sheets FP101-105)

Parks & Recreation

- 1930 Construction Drawings (Sheets 3 & 4)
- 1970 Addition Drawings (Sheet 2)
- 2016 Facility Conditions Assessment
- 2024 As-Built Drawings (Sheets A1.1 & A1.0.1)
- 2023 Existing Condition Plans

General

- 1995 Handicapped Accessibility Renovations Drawings
- Town of Dedham Master Plan dated February 2024

2. APPLICABLE CODES

The codes referenced within this evaluation are as follows:

Building	780 CMR – Massachusetts State Building Code 10th Edition, which is an amended version of the 2021 International Building Code (IBC).
	780 CMR 34.00 – Massachusetts State Existing Building Code, which is an amended version of the 2021 International Existing Building Code (IEBC)
Fire	527 CMR 1.00 - Massachusetts Comprehensive Fire Safety Code, which is an amended version of the 2021 Edition of NFPA 1, Uniform Fire Code
Accessibility	521 CMR – Massachusetts Architectural Access Board (MAAB) Rules and Regulations

3. BUILDING SURVEY DATA

The information listed below for each building was collected during the survey, gathered from existing documentation, and is summarized in **Appendix A**. Section 4 of this report addresses each in context of code considerations for future alterations.

- Select survey photos
- Building identification information (Name, Address)
- Building Area (total square footage)
- Number of stories above grade
- Construction type (see Section 4.5.1)
- Sprinkler protection (see Section 4.3), and 33% sprinkler cost threshold
- Other fire protection / life safety features
- General observation of key accessibility building features including restrooms, drinking fountain, entrance, and elevator. 30% MAAB threshold also established (see Section 4.4)
- Other observations (miscellaneous)

Relative to details identifying fire protection/ life safety devices, note that the survey data relates to visual observations only regarding what types of features have been installed. The compliance of device coverage or type/listing is not part of this analysis.

4. CODE COMPLIANCE THRESHOLDS & CONSIDERATIONS

4.1 GENERAL EXISTING BUILDING SCOPING

In general, existing materials and conditions are allowed to remain and be presumed to have met the provisions of applicable codes at the time of original installation, unless they are deemed a hazardous condition by an authority having jurisdiction (AHJ) (780 CMR 102.6.1, 102.6.4). **Existing conditions that have not been maintained as originally constructed, present a potential risk to life safety, or may be subject to citations by the AHJ are shown in bold in Appendix A.**

The following include general scoping considerations outlined in the Massachusetts Existing Building Code (MEBC) when an existing building undergoes repair, alteration, addition, or a change of occupancy:

- All new work in existing buildings is required to comply with the materials and methods in accordance with 780 CMR, or the applicable code for new construction unless otherwise specified by the MEBC (MEBC 702.6).
- Alterations to an existing building or portion thereof are not permitted to reduce the level of safety currently provided within the building unless portion altered complies with the requirements of 780 CMR for new construction (MEBC 701.2).
- Where compliance with the requirements of the code for new construction is impractical due to construction difficulties or regulatory conflicts, compliance alternatives may be approved by the building official (MEBC 101.5.0). Any compliance alternatives being sought are required to be identified on the submittal documents (MEBC 104.11).

4.2 CODE COMPLIANCE METHOD & CLASSIFICATION OF WORK

The requirements and design implications from the Work Area Method have been documented in this report (MEBC 301.3.2). Definitions of various classifications of work within the Work Area method are as follows:

Work Area - Defined in the IEBC as “that portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents.” Massachusetts provides additional definition of ‘reconfigured space’ as space that is reconfigured to change the manner in which occupants egress from the space in terms of travel or distance to exits (BBRS Official Interpretation No. 2014_01).

Level 1 Alteration – Includes the removal and replacement of the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose (MEBC 602.1).

Level 2 Alteration – Includes the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment in less than 50% of the aggregate building area (MEBC 603.1).

Level 3 Alteration – Includes the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment in more than 50% of the aggregate building area (MEBC 604.1).

Addition – An extension or increase in floor area, number of stories, or height of a building or structure (MEBC 202).

Change of Occupancy - A change in the use of the building or a portion of a building. A change of occupancy shall include any change of occupancy classification, any change from one group to another

group within an occupancy classification or any change in use within a group for a specific occupancy classification (MEBC 202).

4.3 SPRINKLER TRIGGERS (BUILDINGS WITHOUT EXISTING SPRINKLER PROTECTION)

The surveys performed by Code Red Consultants included observations as to whether the building was provided with an automatic sprinkler system.

There are two different code sources that trigger sprinkler system installations: the MEBC and Massachusetts General Law (MGL) Chapter 148 Section 26G. A sprinkler system is required to be installed if triggered by either source as outlined below.

MEBC: Sprinklers are required to be provided throughout the building in accordance with the requirements of the classification of work (MEBC 703.1, 803.2.2, 904.1.4, 1004.1, 1102.3).

- **Level 1 Alteration:** Where the work is classified as a Level 1 Alteration, the level of fire protection provided is required to be maintained.
- **Level 2 Alteration:** For Level 2 Alterations, a sprinkler system is required to be provided where required by 780 CMR within the work area and if the building occupant load is greater than 30, a work area exceeds 50% of the floor area, and sufficient water supply is required to serve the sprinkler system without a fire pump.
- **Level 3 Alteration:** Level 3 alterations require a sprinkler system where required for Level 2 alterations above, or where otherwise required by 780 CMR, provided the building has sufficient municipal water supply.
- **Addition:** The construction of an addition requires an evaluation of the entire building respective of sprinkler coverage.

MGL Chapter 148 Section 26G: Sprinkler protection is required to be installed if the scope of work is considered a 'major alteration' based on MGL Ch. 148 Sec. 28G. Sec. 26G requires every building or structure, including 'major alterations' thereto, which totals more than 7,500 gross square feet, to be protected throughout with an automatic sprinkler system.

The law does not implicitly define what constitutes a 'major alteration.' An advisory document published by the Sprinkler Appeals Board in 2009 expands upon the application of this MGL to existing buildings, i.e., what should constitute 'major alterations.' This document summarizes that an existing building is required to be protected with sprinklers where all of the following four conditions are satisfied:

1. Building gross square footage is more than 7,500 sf;
2. Sufficient water and water pressure exist to serve the system;
3. The nature of work to the building is considered as "major", including any one or more of the following:
    a. The demolition or reconstruction of existing ceilings or installation of suspended ceilings;
    b. The removal and/or installation of sub flooring, not merely the installation or replacement of carpeting or finished flooring;
    c. The demolition and/or reconstruction or repositioning of walls or stairways or doors; or
    d. The removal or relocation of a significant portion of the building's HVAC, plumbing, or electrical systems involving the penetration of walls, floors, or ceilings.
4. The scope of work is proportional to the cost/benefit of sprinkler installation. To evaluate whether this is satisfied, the advisory document lists either of the following as thresholds for requiring sprinkler protection (evaluated over a 5-year period):
    a. Work affects 33% or more of the total gross square footage; or

b. Total cost of the work (excluding cost to install a sprinkler system) is equal to or greater than 33% of the assessed value of the building, as of the date of permit application.

The building information in Appendix A summarizes whether a sprinkler system is installed in each building. The table below summarizes applicable 33% cost thresholds based on the assessed value of the building.

Table 1: 33% Sprinkler Cost Thresholds

Building Name	Building Value	33% Threshold
Dedham Middle School	$63,510,700	$20,958,531
Dedham High School	$40,499,400	$13,364,802
Greenlodge Elementary School	$11,216,700	$3,701,511
Oakdale Elementary School	$15,295,100	$5,047,383
Riverdale Elementary School	$12,385,200	$4,087,116
Capen Pre-School & Kindergarten (ECEC)	$14,408,200	$4,754,706
Avery Elementary School	$33,079,100	$10,916,103
Anthony P. Mucciaccio Dedham Pool [1]	$2,430,100	$801,933
Endicott Estate [2]	$5,640,600	$1,861,398
Dedham Parks and Rec	$7,324,100	$2,416,953

1. The Town of Dedham GIS viewer lists the address of the pool building as 22 Mt. Vernon Street and the value associated with this address is used for this analysis.
2. The Value of the Endicott Estate includes the main building as well as the library. The greenhouse on the site is on a separate parcel and was not evaluated.

Based on the above criteria, while the cost trigger is just one item that needs to be evaluated, it may essentially act as the determining factor given the following

1. All buildings are greater than 7,500 sf;
2. All buildings are presumed to have 'sufficient water and water pressure' (although that should be confirmed on a case-by-case basis); and
3. The 'nature' of the work being 'major' (Item #3 above) is subject to interpretation of the local fire marshal and could conservatively be assumed to be true for all cases.

4.4 ACCESSIBILITY THRESHOLDS

521 CMR ("MAAB") is the state accessibility code, and it has thresholds for when accessibility upgrades are required to take place within existing buildings. Notably, there is a cost threshold above which the **entire building** is required to come into compliance with 521 CMR.

The following summarizes the scoping requirements of 521 CMR Section 3.3 for projects in existing buildings. The costs referred to in the scoping requirements below are cumulative for **all projects to the building within a rolling 36-month period**:

- If the work is less than $100,000, then only the work being performed is required to comply with 521 CMR.
- If the work costs more than $100,000 but is less than 30% of the full and fair cash value of the building then in addition to the working being performed, the following accessible features are also required to be provided in the building:
    - Accessible entrance
    - Accessible toilet room
    - Accessible drinking fountain (if provided)
    - Accessible public telephone (if provided)

  Note that if all work occurring in the building is limited solely to mechanical, electrical, plumbing, or fire protection systems, and/or the abatement of hazardous materials, then the $100,000 threshold is increased to $500,000 (521 CMR 3.3.1b, Exception b).
- If the work costs more than 30% of the full and fair cash value of the building, then all public portions of the building are subject to the requirements of 521 CMR.

The 30% threshold is determined by dividing the full and fair cash value of the building (assessed value, excluding land) by the equalized value ratio (EQV) for Dedham as established by the Commonwealth, and multiplying by 0.3.

The table below summarizes the full and fair cash value and 30% threshold for each building that would require the installation of a sprinkler system throughout.

Table 2: 30% Accessibility Cost Thresholds

Building Name	Building Value	Equalized Value Ratio (EQV)[1]	30% Value
Dedham Middle School	$63,510,700	0.94	$20,269,372
Dedham High School	$40,499,400		$12,925,340
Greenlodge Elementary School	$11,216,700		$3,579,798
Oakdale Elementary School	$15,295,100		$4,881,415
Riverdale Elementary School	$12,385,200		$3,952,723
Capen Pre-School & Kindergarten (ECEC)	$14,408,200		$4,598,362
Avery Elementary School	$33,079,100		$10,557,160
Anthony P. Mucciaccio Dedham Pool	$2,430,100		$775,564
Endicott Estate	$5,640,600		$1,800,191
Dedham Parks and Rec	$7,324,100		$2,337,479

1. Based on the 2024 Equalized Valuation Report, which is the most recent available.

Full accessibility audits of the buildings were not within the scope of this review and were not performed. Such audits would have to be performed separately, if deemed necessary and the 30% value is exceeded within a particular building. The building observations in **Appendix A** focus on key building elements

relative to the $100,000 trigger (second bullet above), where such information or observations were able to be made.

Of note, this review only summarizes state code requirements (521 CMR). Other requirements such as federal law (ADA) and Fair Housing Act (FHA) would also need to be considered as it relates to requisite accessibility upgrades. Typically, ADA requires that up to 20% of a project's budget be allocated to 'removing barriers' from buildings. This would also need to be studied separately on a case-by-case basis.

4.4.1 521 CMR VARIANCE PROCESS

There is a variance process for 521 CMR where relief may be granted based on illustrating that complying with the code is either not technically feasible given existing conditions or that the level of accessible benefit is disproportionate when compared with the cost to perform the work.

Without one of the justifications mentioned above, the Massachusetts Access Board will typically not consider the variance request. Proof of such hardship is typically shown via drawings illustrating infeasibility, cost estimates on manufacturer or contractor letterhead, and/or architect narratives describing such hardship. Depending on the variance request, seeking local access commissions buy-in may be prudent, as the groups are permitted to submit letters of support (or grievance) to the Board to consider along with the variance application.

Each variance topic requires rigorous study and substantiation on the part of the design team and owner before the application can be compiled and submitted. It is important to note that there is no variance process associated with ADA; civil litigation is the enforcement policy.

4.5 BUILDING CONSTRUCTION

4.5.1 OCCUPANCY CLASSIFICATION

The primary occupancies of each building are listed in **Appendix A** based on the current uses observed. For the school buildings, assembly spaces used for school-related purposes during school hours are considered part of the Group E occupancy (780 CMR 303.1.3). Outside of school hours, if these assembly spaces are intended to be used for various functions they are classified as Group A occupancies. The occupancy classifications outlined in **Appendix A** assume after-hours use of assembly spaces and are based on the current uses observed.

4.5.2 CONSTRUCTION CLASSIFICATION

The construction type classification of a building may be a pertinent item of information for building renovation projects. An effort was made as part of the surveys to identify the minimum construction type of each building. The classification of each building can be found in the individual building data sheets compiled in **Appendix A**.

4.5.3 HEIGHT AND AREA

The buildings' compliance with height and area requirements is not required to be evaluated, unless the project includes a Change of Occupancy to a higher hazard category or Addition. If a Change of Occupancy or Addition does occur, the allowable height and area of the buidling may be required to be further evaluated. This review does not include evaluating the buildings' existing height and area compliance based on the observed construction type since anticipated scopes of work are not yet defined.

4.5.4 VERTICAL OPENINGS

Existing conditions relative to vertical openings are summarized in **Appendix A**. Please note that when the term 'enclosed' is used, it is based on observations of fire-rated doors and/or wired glass that indicate some type of fire-resistant separation approach that was previously implemented, presumed to have met code at the time of installation (see Section 4.1).

Existing vertical openings within the buildings are required to comply with the MEBC and 780 CMR based on the scope and work classification of the work being done. Specific code implications would have to be studied further on a building-by-building basis based on scopes of work yet-to-be-determined (including whether any variances due to historic classification or otherwise could potentially be pursued).

At a high level, the MEBC contains the following general provisions:

Level 1 Alteration: If the work is classified as a Level 1 Alteration, existing vertical openings within the building are required to be maintained such that the building does not become less safe than its existing condition (MEBC 701.2).

Level 2 Alteration: If the work is classified as a Level 2 Alteration, existing vertical openings within the building are typically required to be enclosed in fire-rated construction of not less than 1 hour with approved opening protectives when connecting two or more floors, and be enclosed with approved assemblies (MEBC 802.2.1), with the following specific exceptions:

- In Group A occupancies, a minimum 30-minute enclosure is required to be provided to protect all vertical openings not exceeding three stories.
- In Group B occupancies, a minimum 30-minute enclosure is required to be provided to protect all vertical openings not exceeding three stories, unless the building is sprinkler-protected.
- In Group E occupancies, the enclosure shall not be required for vertical openings not exceeding three stories where the building is protected throughout by an approved automatic fire sprinkler system.

Level 3 Alteration: If the work is classified as a Level 3 Alteration, existing vertical openings within the building are required to be enclosed in accordance with MEBC 802.2.1 from the highest work area floor to, and including, the level of exit discharge and all floors below (MEBC 903.1).

Change of Occupancy: If the work is classified as a Change of Occupancy to a higher hazard category, and depending on where in the building that occurs, existing vertical openings within the building typically require upgrades to minimally meet the equivalent of atrium protection, with fire ratings or separation typically capping out at 1-hr, with some exceptions (MEBC 1011.8).

4.5.5 FIRE-RESISTANCE RATING OF BUILDING ELEMENTS

Any new or altered structural members are required to minimally maintain the construction type of the buildings (MEBC 701.2 & 801.4). Table 601 in 780 CMR indicates the minimum fire-resistance ratings required for the buildings.

4.6 FIRE PROTECTION SYSTEMS

4.6.1 AUTOMATIC SPRINKLER SYSTEMS

For buildings that have existing sprinkler protection, compliance of the existing sprinkler systems is required to be maintained in accordance with NFPA 13, 780 CMR, and 527 CMR 1.00.

All new sprinkler components and any modifications to the existing sprinkler system are required to meet new construction requirements of NFPA 13, 780 CMR, and 527 CMR 1.00 relative to their installation.

4.6.2 FIRE EXTINGUISHERS

Portable fire extinguisher coverage is required to be maintained throughout a building installed in accordance with NFPA 10 (780 CMR 906.1).

4.6.3 FIRE ALARM AND DETECTION SYSTEMS

All buildings were found to be equipped with various types of fire alarm and detection systems. Coverage of the existing fire alarm systems is required to be maintained in accordance with NFPA 72, 780 CMR, and 527 CMR 1.00.

All new fire alarm devices and any modifications to the existing fire alarm system are required to meet new construction requirements of NFPA 72, 780 CMR, and 527 CMR 1.00 relative to their installation.

4.6.4 STANDBY / EMERGENCY POWER SYSTEMS

Regardless of the scope of work, alterations to the existing standby/ emergency power supply are not permitted to reduce the level of safety currently provided within the building unless the portion altered complies with the requirements of 780 CMR for new construction (MEBC 701.2).

Within the **current** codes, emergency power is required for the following building features (780 CMR 2702.2):

- Exit signage in accordance with 780 CMR Section 1013.6.3
- Means of egress illumination in accordance with 780 CMR Section 1008.3
- Fire alarm systems including automatic fire detection systems if applicable
- Emergency voice/alarm communication system

Standby power system is required for the following building features (780 CMR 2702.2):

- Emergency Responder Radio Coverage System

Emergency and standby power systems are required to be installed in accordance with 780 CMR, 527 CMR 12.00, NFPA 110, and NFPA 111. The source of emergency power is permitted to be provided by an on-site emergency generator or from battery backup.

Of note, it is difficult to establish whether building lighting is on an emergency circuit based on visual observation. Further evaluation may be necessary on this front on a building-by-building basis to confirm.

4.7 MEANS OF EGRESS

All buildings are required to be provided with means of egress in accordance with 780 CMR that and be maintained in accordance with 527 CMR 1.00. Alterations to the existing means of egress are required to comply with the code for new construction (MEBC 801.4).

It is important to consider the implications specific to Vertical Openings outlined in Section 4.5.4 for enclosed exit stairs and unenclosed exit access stairs.

Existing means of egress within the buildings that have been maintained as originally designed and constructed are permitted to remain unless deemed hazardous by the building official (780 CMR 102.6.4).

The summaries in **Appendix A** note existing conditions which either warrant attention aside from a building/fire inspector citation (**these are noted in bold**), or are noted for potential consideration based on the nature and extent of future.

The following include a general list of existing means of egress deficiencies that are commonly identified in existing buildings:

- Low headroom
- Lacking exit sign coverage
- Non-compliant aisle widths
- Locks on egress doors
- Missing panic hardware
- Excessive dead ends
- Worn/ damaged stair treads
- Non-compliant or missing handrails
- Non-compliant guards
- Non-compliant stair widths
- Storage within exit stairs
- Non-compliant ramps
- Non-compliant stair discharge paths
- Non-illuminated exit signs

DEDHAM MIDDLE SCHOOL – 70 WHITING AVENUE

General Building Data

Occupancy Groups
Group E, Educational: Middle School
Group A-1, Assembly: Auditorium
Group A-3, Assembly: Gymnasium, Cafeteria, Media Center

Construction Type
Type 2C under the 6th Edition of 780 CMR consistent with Type IIB in the 10th Edition. The overall building is considered four separate buildings from a code perspective. The 2004 code summary plans indicate what appears to be back-to-back fire walls separating each building.

Height and Area
Overall: Height: 3 Stories
Aggregate Area: 71,765 GSF

Building A	Building B	Building C	Building D
Height: 3 Stories	Height: 2 Stories	Height: 1 Story	Height: 2 Stories
Aggregate Area: 16,197 GSF	Aggregate Area: 20,993 GSF	Aggregate Area: 22,800 GSF	Aggregate Area: 11,775 GSF

Vertical Openings
Vertical openings within the building include interior exit stairs and MEP / building support shafts. All enclosed exit stairs were observed to have 90-minute rated doors and indicated to be enclosed in 2-hour rated construction on the 2004 Code Summary Plans. Unenclosed vertical openings were not observed, however there were numerous double height spaces including the auditorium, gymnasium, cafeteria and library "turret" spaces. **Openings within fire/ smoke resistive assemblies were observed to be unprotected in select locations. Multiple fire doors also did not appear to be affixed with fire door labels (527 CMR 1.00, 12.4.2 & 12.7.6.3).**

Sprinkler Systems
The building is provided with an automatic sprinkler system understood to provide coverage throughout. A wet-system provides coverage throughout the interior and a dry system serves the exterior loading dock. The building is also provided with an automatic standpipe system with 2.5" hose connections in each stair on the main landings. **Missing ceiling tiles and sprinkler escutcheons were observed to be missing at select locations (527 CMR 1.00, 13.3.3.3).**

Fire Alarm Systems
The building is provided with a fire alarm system and detection system with emergency voice alarm capabilities (EVAC).

Exit Signage
Illuminated exit signs were observed within the building.

Fire Extinguishers
Fire extinguishers were observed in the building and were last serviced in June 2025.

Emergency Lighting
Emergency lighting was observed within the building. The building is served by an emergency generator located in the West Lower Level serving the emergency lighting.

Means of Egress
The building is provided with numerous exits directly to the exterior at grade from the Main lobby, Auditorium, and Gymnasium spaces.
4 enclosed exit stairs (WS1, WS2, ES1 and ES2) serve all levels of the building and there is one additional stair (BS1) which connects the main and west lower level serving the mechanical space. Stairs WS1 and WS2 discharge to grade at the lower level and Stairs ES1 and ES2 discharge to grade at the main level. **Garbage and recycle bins were observed to be located within exit stair enclosures (527 CMR 1.00, 14.3.3).**

Accessible Entrance
The main entrance to the building was observed to be accessible.

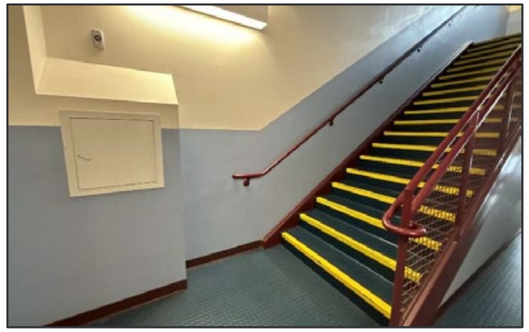
Accessible Restroom
An accessible restroom is provided in the building.

Accessible Drinking Fountain
An accessible drinking fountain was observed in the building.

Elevator
The building is provided with two elevators that serve all levels, one in the East wing and one in the West Wing.



Figure 2: Middle School Main Entrance


Figure 3: Standpipe Connection in Stair Enclosure

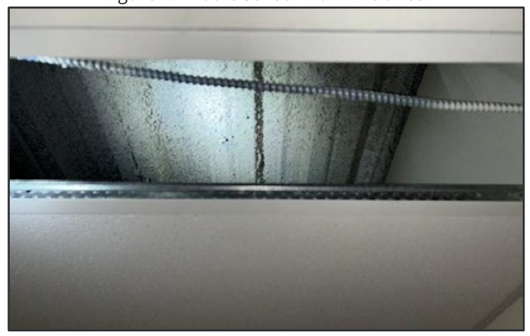
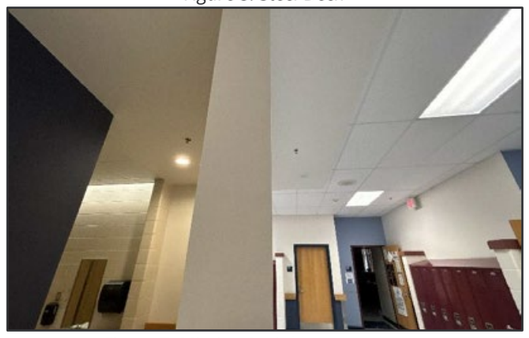

Figure 4: SFRM on Steel Deck in Stair Enclosure


Figure 5: Steel Deck


Figure 6: Main Level Boys Stall


Figure 7: Missing Sprinkler escutcheons

DEDHAM HIGH SCHOOL – 140 WHITING AVENUE

General Building Data

Occupancy Groups	Group A-2, Assembly – Cafeteria Group A-3, Assembly – Gymnasium Group A-5, Assembly – Auditorium Group E, Educational – Classrooms, Lab & Shop
Construction Type	The existing building consists of multiple additions over time with a mix of protected and unprotected noncombustible structure. The 1973 addition drawings specify 1.5-hour columns, beams, and girders, 2-hour floor/ ceiling assemblies, and 45-minute corridor walls. The construction type most closely resembles Type IIB due to nonrated structure. It is unclear whether building separations are provided.
Height and Area	The existing building is two-three stories in height with a basement. There are partial levels which are accessed from the intermediate landing of the stairs (D, 1A, 1B, 2A and 2B). The aggregate area of the building is approximately 300,000 GSF.
Vertical Openings	Vertical openings within the building include interior exit stairs and MEP / building support shafts. The stairs were observed to be separated from the remainder of the building by doors with wired glass. Additionally, there are numerous 2-story open stairs the building, which are not permitted in non-sprinklered buildings. **Unprotected penetrations were observed at fire-resistance-rated assemblies. Doors within fire/ smoke resistive assemblies were observed to be damaged, in disrepair, or not affixed with fire door labels (527 CMR 1.00, 12.4.2 & 12.7.6.3).**
Sprinkler Systems	The building is not provided with an automatic sprinkler system. The 1973 drawings indicate fire-resistance-rated assemblies creating what we understand to be different fire areas.
Fire Alarm Systems	The building is provided with a fire alarm and detection system.
Exit Signage	Exit signage was observed to be both illuminated and non-illuminated within the building. **Non-illuminated exit signs or exit sign stenciling is not permitted (780 CMR 1013.3).**
Fire Extinguishers	Fire extinguishers were observed in the building and were last serviced in July 2025.
Emergency Lighting	Emergency lighting was observed in the building. The building is provided with a generator located in the rear parking lot understood to serve the emergency lighting. Coverage of emergency lighting was not verified on site.
Means of Egress	The building is provided with numerous exits directly to grade from the Main lobby, Auditorium, and Gymnasium spaces. 15 stairs serve the building, Stairs A-D serve all levels with stairs E-O interconnecting different levels. Egress paths were generally observed to be maintained and of sufficient width. **Noncompliant handrail arrangements were observed at multiple locations (780 CMR 1014).**
Accessible Entrance	Both the High School and Auditorium are provided with accessible entrances.
Accessible Restrooms	Both the Male and female bathrooms between the Main and Auditorium Lobbies are generally not accessible due to maneuvering clearance deficiencies at the door as well as stalls not providing enough clear floor space.
Accessible Drinking Fountain	An accessible drinking fountain was provided within the Cafeteria on the First Floor and in the Gymnasium lobby on the Ground Floor.
Elevator	The building is provided with an elevator that serves levels D, 1A, 1B, 2A and 2B. Additionally, a lift is provided to serve the Gymnasium, Auditorium and backstage areas. An accessible route along the normal path of travel is not provided throughout building, due to steps along the path of travel.



Figure 8: High School Main Entrance



Figure 9: High School Auditorium Main Entrance

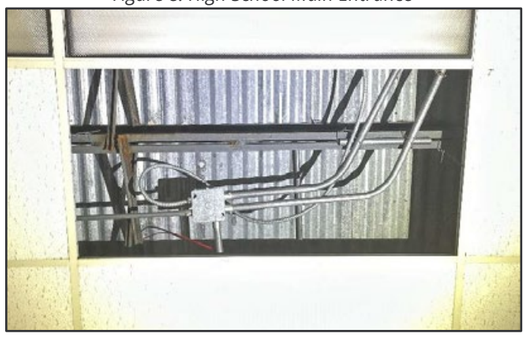


Figure 10: Unprotected Steel Decking

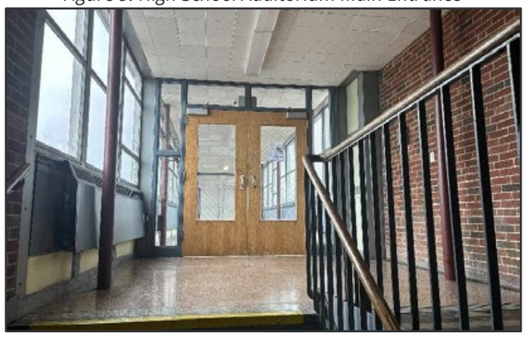


Figure 11: Typical Stair Enclosure

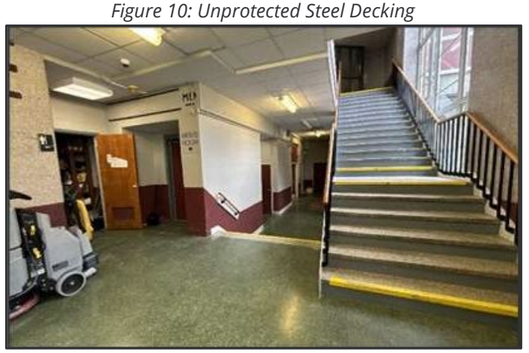


Figure 12: Open Stair "M"



Figure 13: Level 1 Women's Restroom

GREENLODGE ELEMENTARY SCHOOL – 191 GREENLODGE STREET

General Building Data

Occupancy Groups	Group A-2, Assembly – Cafeteria Group A-3, Assembly – Gymnasium Group E, Educational – Classrooms
Construction Type	The building is constructed with masonry exterior walls and wood roof structure. The construction type of the building is most consistent with Type IIIB.
Height and Area	Height: 1 Story Aggregate Area: ~38,300 GSF
Vertical Openings	N/A (1-Story Building)
Sprinkler Systems	The building is not provided with an automatic sprinkler system.
Fire Alarm Systems	The building is provided with a fire alarm system provided with audio/visual notification with pull stations at exits. Detection in the building consists of smoke and heat detection.
Exit Signage	Exit signage was observed to be both illuminated and non-illuminated within the building. **Non-illuminated exit signs are not permitted (780 CMR 1013.3).**
Fire Extinguishers	Fire extinguishers were observed within the building and were last serviced in July 2025.
Emergency Lighting	Emergency lighting was observed within the building.
Means of Egress	The building is provided with numerous exits directly to grade from the Main lobby, wings of the corridors and classrooms. **Corridor wall openings include doors without fire door labels, no closers and unprotected penetrations (527 CMR 1.00, 12.4.2 & 12.7.6.3). Noncompliant handrail arrangements were observed at multiple locations (780 CMR 1014).**
Accessible Entrance	The building is provided with an accessible entrance.
Accessible Restrooms	Both the male and female restrooms located in the addition are generally accessible, however, there were deficiencies associated with the pipes beneath the sink being unprotected and the location of the toilet.
Accessible Drinking Fountain	The drinking fountain was provided with 25.75” of knee clearance. 27” of knee clearance is required to be provided under the drinking fountain (521 CMR 36.2.1).
Elevator	N/A (1-Story Building). An accessible lift is provided to access the platform in the gymnasium.



Figure 14: Main Entrance



Figure 15: Typical Classroom



Figure 16: Wood Construction



Figure 17: Non-accessible Bathroom

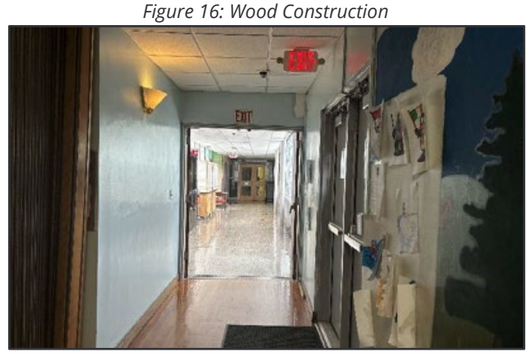


Figure 18: Illuminated and Non-illuminated Exit Signs



Figure 19: Door Propped open

OAKDALE ELEMENTARY SCHOOL – 147 CEDAR STREET

General Building Data

Occupancy Groups	Group A-3, Assembly – Gymnasium Group E, Educational – Classrooms
Construction Type	The building is constructed with a mix of masonry exterior walls and steel and wood structure, as such the building is most consistent with Type IIIB construction.
Height and Area	Height: 3 Stories with a Basement Footprint Area: ~31,000 SF Aggregate Area: ~51,300 GSF
Vertical Openings	Vertical openings within the building include interior exit stairs and MEP / building support shafts. **The interior exit stairs were enclosed on all levels except the basement. Stair doors did not have fire-rated labels (527 CMR 1.00, 12.4.2 & 12.7.6.3). Storage was observed within area in the basement that is open to the stair (527 CMR 1.00, 14.3.3).**
Sprinkler Systems	The building is not provided with an automatic sprinkler system.
Fire Alarm Systems	The building is provided with a fire alarm system provided with audio/visual notification with pull stations at exits. Detection within the building consists of smoke and heat detection.
Exit Signage	Exit signage was observed to be both illuminated and non-illuminated within the building. **Non-illuminated exit signs are not permitted (780 CMR 1013.3).**
Fire Extinguishers	Fire extinguishers were observed within the building and were last serviced in July 2025.
Emergency Lighting	Emergency lighting was observed within the building.
Means of Egress	The building is provided with numerous exits directly to grade from the first floor. The Second and Third Floors are served by two interior and two exterior exit stairs. **Noncompliant handrail and guard arrangements were observed within the building (780 CMR 1014 & 1015).**
Accessible Entrance	An accessible entrance is provided to the gymnasium portion of the building, but there is no accessible route or entrance to the original portion of the building.
Accessible Restrooms	An accessible restroom was not observed in the building. Deficiencies associated with the existing restrooms in the gymnasium portion of the building included knee clearance under the sink, grab bar dimensions, and toilet location. The bathrooms in the 3-story portion of the building are not provided with sufficient space.
Accessible Drinking Fountain	An accessible drinking fountain is provided on the first floor.
Elevator	The building is not provided with an elevator. An accessible lift is provided within the gymnasium serving the stage.



Figure 20: Oakdale School Main Entrance



Figure 21: Oakdale School Accessible Entrance

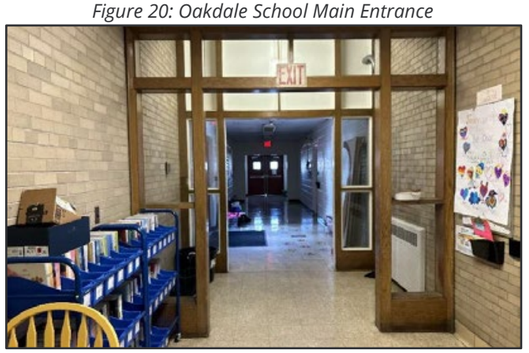


Figure 22: Illuminated & non-illuminated Exit Signs

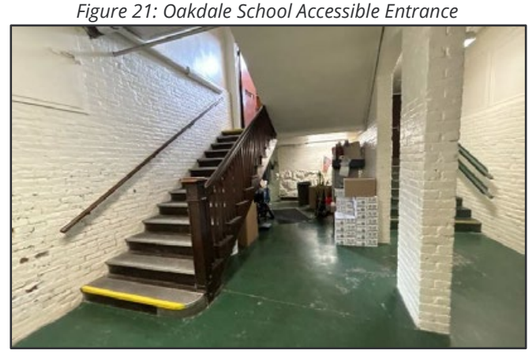


Figure 23: Open Stair in Basement



Figure 24: First Floor Women's Bathroom

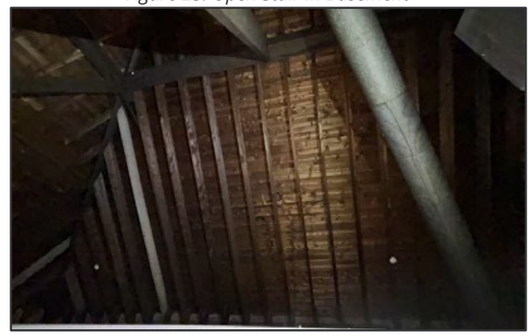


Figure 25: Wood Roof Structure

RIVERDALE ELEMENTARY SCHOOL – 143 NEEDHAM STREET

General Building Data

Occupancy Groups	Group A-3, Assembly – Gymnasium / Auditorium Group E, Educational – Classrooms
Construction Type	The existing building is constructed with masonry exterior walls and a mix of combustible and noncombustible structure. The construction type is most consistent Type IIIB construction.
Height and Area	Height: 2 Stories with a basement Footprint Area: ~25,500 SF Aggregate Area: ~ 33,300 GSF
Vertical Openings	Vertical openings within the building include interior exit stairs and MEP / building support shafts. The interior exit stairs were observed to be separated from the remainder of the building on all levels via doors with wired glazing, **however the doors did not have fire-rated labels and were not self-closing (527 CMR 1.00, 12.4.2 & 12.7.6.3). Additionally, doors to the classrooms opened directly into the stair enclosure (780 CMR 1023.4).**
Sprinkler Systems	The building is not provided with an automatic sprinkler system.
Fire Alarm Systems	The building is provided with a fire alarm system provided with audio/visual notification with pull stations at exits. Detection within the building consists of smoke detection. Devices appeared to have been removed at select locations and not replaced.
Exit Signage	Exit signage was observed to be both illuminated and non-illuminated within the building. **Non-illuminated exit signs are not permitted (780 CMR 1013.3).**
Fire Extinguishers	Fire extinguishers were observed within the building and were last serviced in December 2025.
Emergency Lighting	Emergency lighting was observed within the building.
Means of Egress	The building is provided with numerous exits directly to grade from the first floor. The Second and Third Floors are served by two interior and two exterior exit stairs. **Noncompliant handrail and guard arrangements were observed within the building (780 CMR 1014 & 1015).**
Accessible Entrance	The main entrance to the building is not accessible due to steps, and the gymnasium entrance is not accessible since the slope of the ramp was measured to be 10% (> 8.3%).
Accessible Restrooms	Both the Men's and Women's bathrooms were observed to have deficiencies associated with the toilet and grab bar locations.
Accessible Drinking Fountain	An accessible drinking fountain is provided on the first floor.
Elevator	The building is not provided with an elevator. An accessible lift is provided within the gymnasium serving the stage.

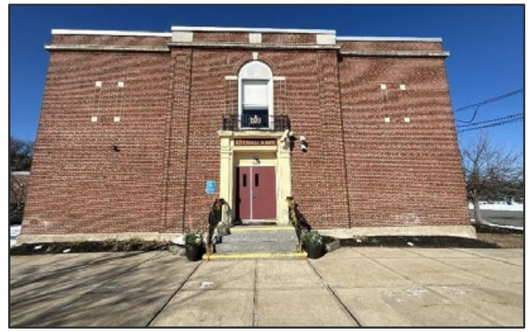


Figure 26: Riverdale School Main Entrance

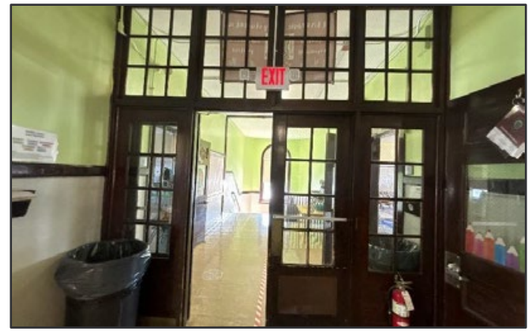


Figure 27: Typical Stair Enclosure, Illuminated Exit Sign

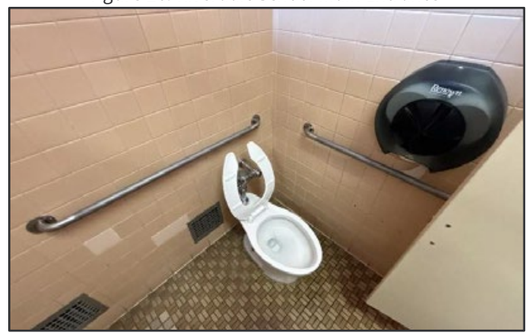


Figure 28: Ground Floor Women's Stall



Figure 29: Concrete Structure & Emergency Lighting



Figure 30: Auditorium

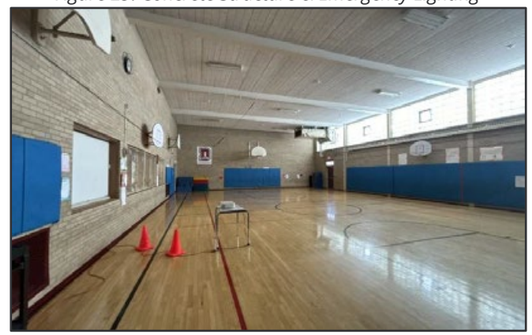


Figure 31: Gymnasium

CAPEN PRE-SCHOOL & KINDERGARTEN (ECEC) – 1100 HIGH STREET

General Building Data

Occupancy Groups	**Primary occupancies:** Group E, Educational	**Accessory Occupancies:** Group A, Assembly
Construction Type	Type IIB	
Height and Area	Height: 1 Story Aggregate Area: ~50,000 SF	
Vertical Openings	N/A (1-Story Building)	
Sprinkler Systems	The building is provided with an automatic sprinkler system throughout.	
Fire Alarm Systems	The building is provided with a fire alarm system consisting of audio/visual notification devices with emergency voice alarm capabilities (EVAC), smoke and heat detectors, and pull stations at exits. Additionally, Emergency responder radio coverage is provided.	
Exit Signage	Illuminated exit signs were observed within the building. Low level exit signs were also observed in the electrical room.	
Fire Extinguishers	Fire extinguishers were observed within the building.	
Emergency Lighting	Emergency lighting was observed within the building.	
Means of Egress	In addition to the main entrance/exit, numerous exits are provided directly to grade along the perimeter of the building.	
Accessible Entrance	The building is provided with multiple accessible entrances.	
Accessible Restrooms	Accessible restrooms are provided within the building.	
Accessible Drinking Fountain	Accessible drinking fountains were observed throughout the building.	
Elevator	N/A (1-Story Building)	



Figure 32: ECEC Main Entrance



Figure 33: ECEC Cafeteria Entrance

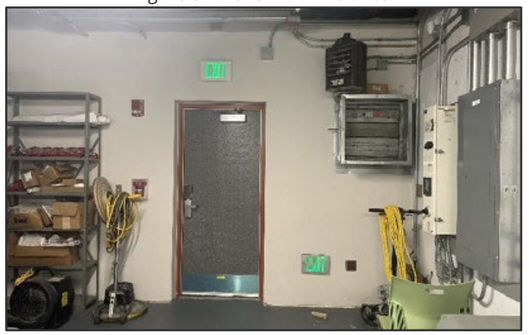


Figure 34: Unprotected Steel Decking & Illuminated High / Low level Exit Signs

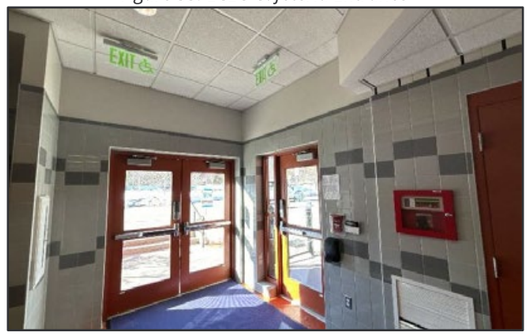


Figure 35: Accessible Exit Signs, Pull Station & Remote Annunciator at Exit



Figure 36: Typical Classroom

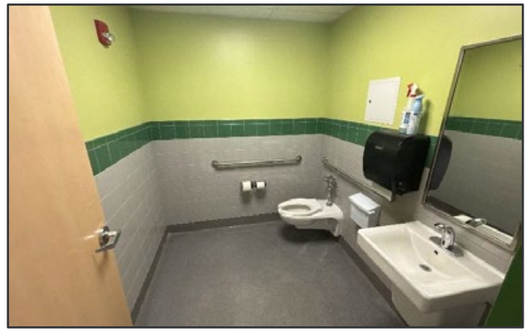


Figure 37: Accessible Bathroom

AVERY ELEMENTARY SCHOOL – 336 HIGH STREET

General Building Data

Occupancy Groups	The building is designed as a non-separated mixed occupancy containing the following occupancy groups: Group E, Educational: Elementary School Group A-2, Assembly: Cafeteria Group A-3, Assembly: Gymnasium, Media Center Group B, Business: Offices
Construction Type	The existing building is documented to be Type IIB construction under the 7th Edition of 780 CMR which is consistent with Type IIB construction under the 10th Edition.
Height and Area	Height: 3 stories Footprint Area: 24,798 SF Aggregate Area: 60,948 GSF
Vertical Openings	All enclosed exit stairs were observed to be enclosed in 1-hour rated construction and 60-minute rated doors and 90-minute rated frames. Unenclosed vertical openings include a 3-story open stair with draft stops and a double-height gymnasium. Sprinklers were observed to be located on the underside of the draft stop serving the open stair, as opposed to 6-12" from the draft stop on the side away from the opening (NFPA 13 Section 8.14.4.3.1 (2002 Edition)). There does not appear to be a fire-resistance rated separation between the 2-story gymnasium and the 3-story open stair. The vertical opening strategy for the unenclosed vertical openings in the building may need to be confirmed as part of future work.
Fire Protection Systems	The building is provided with an automatic wet sprinkler system throughout which is supplemented by an electric fire pump. The building is also provided with an automatic standpipe system with 2.5" hose connections in each stair on the intermediate landings.
Fire Alarm Systems	The building is provided with a fire alarm system consisting of audio/visual notification devices with emergency voice alarm capabilities (EVAC), smoke detectors, and pull stations at exits.
Exit Signage	Illuminated exit signs were observed within the building.
Fire Extinguishers	Fire extinguishers were observed within the building and were last serviced in June 2025.
Emergency Lighting	Emergency lighting was observed within the building. The building is served by an emergency generator located in the parking lot adjacent to the playground serving the emergency lighting.
Means of Egress	The building is provided with numerous exits directly to grade. **The treads in Stair 1 measured 12" deep (780 CMR 1011.5.2).**
Accessible Entrance	Deficiencies were not observed at the main entrance to the building.
Accessible Restrooms	Accessible Men's and Women's restrooms are provided.
Accessible Drinking Fountain	Accessible drinking fountains were observed.
Elevator	The building is provided with an elevator serving all floors of the building.

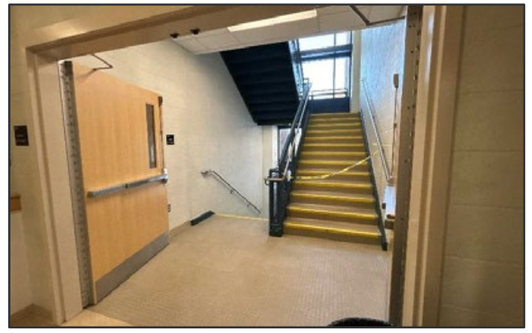


Figure 38: Typical Stair Enclosure



Figure 39: Electric Fire Pump

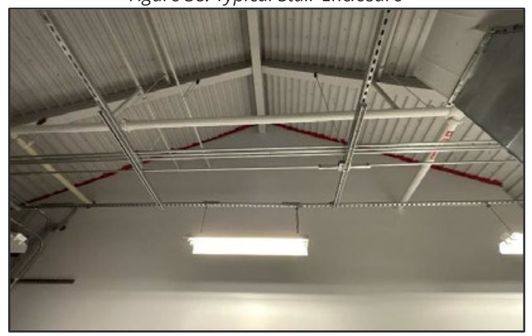


Figure 40: Unprotected Steel Structure

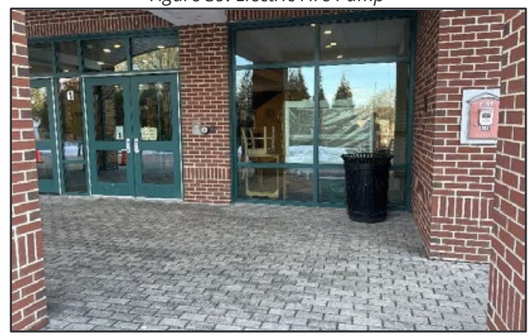


Figure 41: Rear Accessible Entrance



Figure 42: 3-Story Open Stair



Figure 43: First Floor Men's Accessible Stall

ANTHONY P. MUCCIACCIO DEDHAM POOL - 336 HIGH STREET

General Building Data

Occupancy Groups	Group A-4: Swimming Pool with Spectator Seating
Construction Type	The building is constructed with masonry exterior walls and unprotected steel structure. The construction type is most consistent with Type IIB.
Height and Area	Height: 1 Story Area: 11,000 GSF
Vertical Openings	Vertical openings within the building include interior exit stairs and MEP / building support shafts and the pool area which is a double height space. The stair was observed to be separated from the remainder of the building by a drop-down curtain.
Sprinkler Systems	The building is not provided with an automatic sprinkler system.
Fire Alarm Systems	The building is provided with a fire alarm system consisting of audio/visual notification devices, smoke and heat detectors, and pull stations at exits. **Note no AV devices were observed within the Men's and Women's bathrooms within the pool area (780 CMR 1008.3.3).**
Exit Signage	Exit signage was observed to be both illuminated and non-illuminated within the building. **Non-illuminated exit signs are not permitted (780 CMR 1013.3).**
Fire Extinguishers	Fire extinguishers were observed within the building and were last serviced in December 2018.
Emergency Lighting	Emergency lighting was observed within the building.
Means of Egress	The building is provided with numerous exits directly to grade. **Storage was observed within the stair enclosure that provided access to the High School (527 CMR 1.00, 14.3.3).** **Noncompliant handrail arrangements were observed within the pool area (780 CMR 1014).**
Accessible Entrance	The main entrance to the building was observed to be accessible.
Accessible Restrooms	Both the Men's and Women's restrooms had deficiencies pertaining to the location of the toilet, grab bars, mirror, and knee clearance / protection of the pipes beneath the sink.
Accessible Drinking Fountain	An accessible drinking fountain is provided within the pool area.
Elevator	The building is not provided with an elevator.

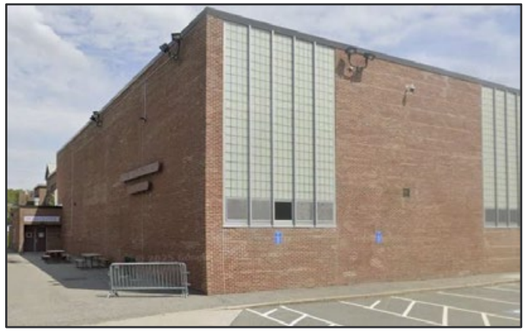


Figure 44: Pool Main Entrance



Figure 45: Pool area

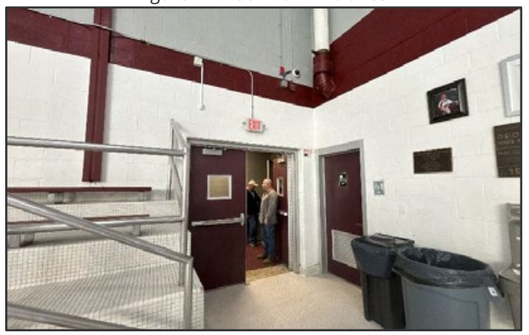


Figure 46: Illuminated Exit Sign / Pool Main Exit



Figure 47: Drop Down Curtain at Stair Enclosure



Figure 48: Unprotected Steel Structure



Figure 49: Un-protected pipes in Women's bathroom

ENDICOTT ESTATE - 656 EAST STREET

General Building Data	Endicott House	Dedham Library – Endicott Branch
Occupancy Groups	Group A-2: Banquet Hall	Group A-3: Library
Construction Type	The construction type is most consistent with Type IIIB or VB.	The construction type is most consistent with Type IIIB or VB.
Height and Area	Height: 3 Stories with a basement Footprint Area: ~5,150 SF Aggregate Area: ~20,200 GSF	Height: 1 Story Footprint Area: ~4,100 SF
Vertical Openings	Vertical openings within the building include unenclosed stairs, a decommissioned lift and MEP shafts. **The stairs were observed to be separated from the remainder of the building by doors on some levels of the building but rated door labels were not observed (527 CMR 1.00, 12.4.2 & 12.7.6.3).**	N/A (1-Story Building)
Sprinkler Systems	The building is equipped with a partial sprinkler system; **however, it is understood to be non-operational (527 CMR 1.00, 13.3.1.1)**. The kitchen is provided with a hood fire suppression system.	The building is not provided with an automatic sprinkler system.
Fire Alarm Systems	The building is provided with a fire alarm system consisting of audio/visual notification devices, smoke detectors, and pull stations at exits	The building is provided with a fire alarm system consisting of audio/visual notification devices, smoke detectors, and pull stations at exits
Exit Signage	Exit signage was observed to be both illuminated and non-illuminated within the building. **Non-illuminated exit signs are not permitted (780 CMR 1013.3).**	Illuminated exit signage was observed within the building.
Fire Extinguishers	Fire extinguishers were observed within both buildings. The fire extinguishers in the main building were last serviced in July 2025 and the library was serviced in January 2025. The occupant firefighting hose in the main building was last inspected in September 2015	
Emergency Lighting	Emergency lighting was observed within both buildings.	
Means of Egress	Both buildings are provided with numerous exits directly to grade. **Winder treads and noncompliant handrail arrangements were observed within the main building (780 CMR 1011.5.3 & 1014).**	
Accessible Entrance	The main entrance to the building is not accessible due to a pinch point in the ramp's width.	The main entrance to the building was observed to be accessible.
Accessible Restrooms	The accessible restroom was observed to have maneuvering clearance and clear floor space deficiencies.	The restroom was observed to have deficiencies pertaining to the grab bars, coat hook, and paper towel dispenser

General Building Data	Endicott House	Dedham Library – Endicott Branch
Accessible Drinking Fountain	No accessible drinking fountain is provided.	The building is provided with an accessible drinking fountain.
Elevator	The building is not provided with a functioning elevator.	N/A (1-Story Building)



Figure 50: Endicott Estate Main Entrance



Figure 51: Library Entrance



Figure 52: Endicott Estate Structure



Figure 53: Library Structure



Figure 54: First Floor non-accessible Bathroom



Figure 55: Library Accessible Bathroom

DEDHAM PARKS & RECREATION – 310 SPRAGUE STREET

General Building Data

Occupancy Groups	Group B: Offices Group A-3: Gymnasium, Dance Studio
Construction Type	The building is constructed of masonry exterior and wood and as such the type of the building is minimally Type IIIB.
Height and Area	Height: 3 Stories Footprint Area: ~15,100 SF Aggregate Area: ~33,100 GSF
Vertical Openings	Vertical openings within the building include interior exit stairs and MEP / building support shafts. The stairs were observed to be separated from the remainder of the building by doors with wired glass, **rated door labels were not observed consistently throughout the building (527 CMR 1.00, 12.7.6.3)**.
Sprinkler Systems	The building is not provided with an automatic sprinkler system.
Fire Alarm Systems	The building is provided with a fire alarm system consisting of audio/visual notification devices, smoke and heat detectors, and pull stations at exits. **Note it appears some AV devices were removed within the Second Floor Classroom spaces.**
Exit Signage	Exit signage was observed to be both illuminated and non-illuminated within the building. **Non-illuminated exit signs are not permitted (780 CMR 1013.3).**
Fire Extinguishers	Fire extinguishers were observed within the building and were last serviced in September 2025.
Emergency Lighting	Emergency Lighting was observed within the building.
Means of Egress	The building is provided with numerous exits directly to grade. **Storage was observed under the stage which did not appear to be 1 hour rated (780 CMR 410.3). Noncompliant handrail and guard arrangements were observed within the building (780 CMR 1014 & 1015).**
Accessible Entrance	The main entrance to the building is not accessible due to steps, the gymnasium entrance is not accessible since the slope of the ramp was measured to be 10%, 8.3% is permitted and the steps are not provided with handrails, and the Parks & Recreation entrance in the rear was non-accessible due to the ramp being in disrepair.
Accessible Restrooms	The accessible restroom had deficiencies pertaining to the location of the grab bars, mirror, coat hook, and knee clearance beneath the sink. The door was also not provided with sufficient latch push side clearance.
Accessible Drinking Fountain	An accessible drinking fountain is provided on the First Floor.
Elevator	The building is not provided with an elevator. Two stair lifts are provided at one of the open stairs serving the basement and First Floor from an intermediate stair landing.



Figure 56: Parks & Rec Building



Figure 57: Parks & Rec Main Entrance

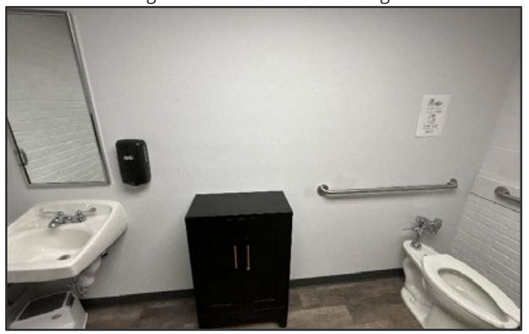


Figure 58: Parks & Rec Office Bathroom



Figure 59: Wood Structure

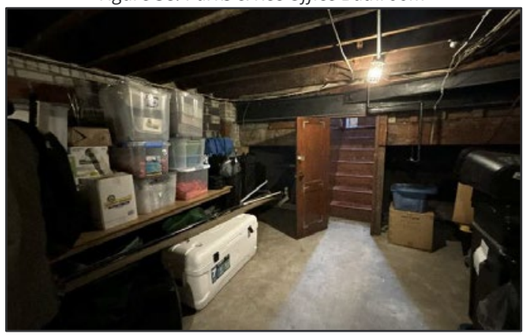


Figure 60: Storage Under Stage

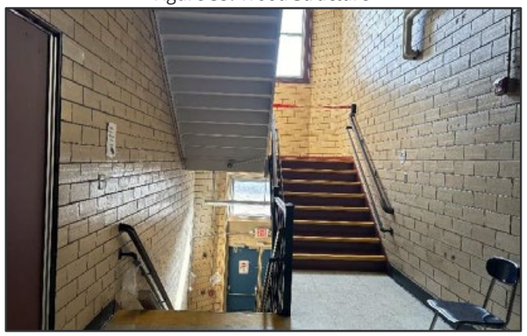


Figure 61: Open Stair & Stair Lift down

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