



Facility Condition Assessment

Pawtucket - William E Tolman Senior High School

June 2017

150 Exchange Street, Pawtucket, RI 02860





Introduction

William E Tolman Senior High School, located at 150 Exchange Street in Pawtucket, Rhode Island, was built in 1927. It comprises 147,100 gross square feet. Each school across the district was visited three times during the Facility Condition Assessments by three teams of specialists in the spring/summer of 2016.

William E Tolman Senior High School serves grades 9 - 12, has 65 instructional spaces, and has an enrollment of 1,012. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for William E Tolman Senior High School is 1,299 with a resulting utilization of 78%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For William E Tolman Senior High School the 5-year need is \$20,744,566. The findings contained within this report resulted from an assessment of building systems performed by building professionals experienced in disciplines including: architecture, mechanical, plumbing, electrical, acoustics, hazardous materials, and technology infrastructure.

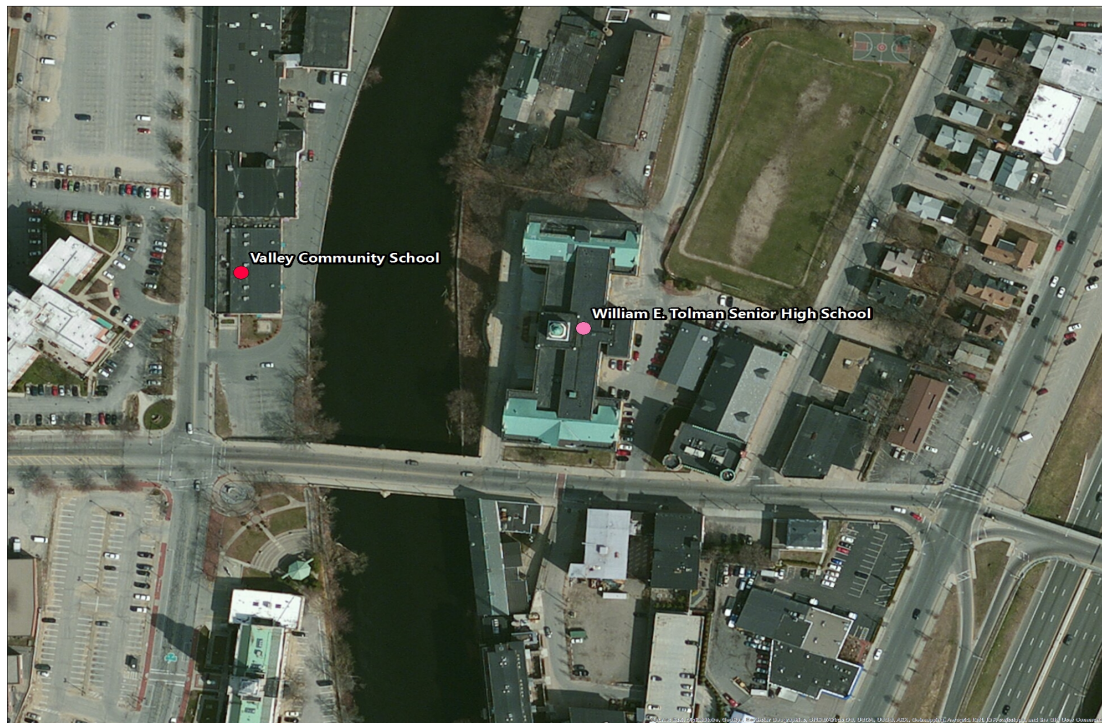


Figure 1: Aerial view of William E Tolman Senior High School



Approach and Methodology

A facility condition assessment evaluates each building's overall condition. Two components of the facility condition assessment are combined to total the cost for facility need. The two components of the facility condition assessment are current deficiencies and life cycle forecast.

Current Deficiencies: Deficiencies are items in need of repair or replacement as a result of being broken, obsolete, or beyond useful life. The existing deficiencies that currently require correction are identified and assigned a priority. An example of a current deficiency might include a broken lighting fixture or an inoperable roof top air conditioning unit.

Life Cycle Forecast: Life cycle analysis evaluates ages of a building's systems to forecast system replacement as they reach the end of serviceable life. An example of a life cycle system replacement is a roof with a 20-year life that has been in place for 15 years and may require replacement in five years.

Discipline Specialists

All assessment teams produced current deficiencies associated with each school. The assessment for the school facilities at the Rhode Island Department of Education included several specialties:

Facility Condition Assessment: Architectural, mechanical, and electrical engineering professionals observed conditions via a visual observation that did not include intrusive measures, destructive investigations, or testing. Additionally, the assessment incorporated input provided by district facilities and maintenance staff where applicable. The assessment team recorded existing conditions, identified problems and deficiencies, documented corrective action and quantities, and identified the priority of the repair in accordance with parameters defined during the planning phase. The team took digital photos at each school to better identify significant deficiencies.

Technology: Technology specialists visited RIDE facilities and met with technology directors to observe and assess each facility's technology infrastructure. The assessment included network architecture, major infrastructure components, classroom instructional systems, necessary building space and support for technology. The technology assessment took into account the desired technology outcome and best practices and processes to ensure results can be attained effectively.

Hazardous Materials: Schools constructed prior to 1990 were assessed by specialists to identify the presence of hazardous materials. The team focused on identifying asbestos containing building materials (ACBMs), lead-based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. If sampling and analysis was required, these activities were recommended but not included in the scope of work.

Traffic: A traffic specialist performed an in-office review of aerial imagery of the traffic infrastructure around the facilities in accordance with section 1.05-7 in the Rhode Island School Construction Regulations and reviewed data collected on site during the facility condition assessment. Based on this information, deficiencies and corrective actions were identified. High problem areas were identified for consideration of more detailed site-specific study and analysis in the future.

Acoustics: Specialists assessed each school's acoustics, including architectural acoustics, mechanical system noise and vibration, and environmental noise. The assessment team evaluated room acoustics with particular attention to the intelligibility of speech in learning spaces, interior and exterior sound isolation, and mechanical system noise and vibration control.

Educational Program Space Assessment: Teams evaluated schools to ensure that that all spaces adequately support the districts educational program. Standards are established for each classroom type or instructional space. Each space is evaluated to determine if it meets those standards and a listing of alterations that should be made to make the space a better environment for teaching and learning was created.



System Summaries

The following tables summarize major building systems at the William E Tolman Senior High School campus, identified by discipline and building.

Site

The site level systems for this campus include:

| | |
|-------------|-------------------------------|
| Site | Asphalt Parking Lot Pavement |
| | Asphalt Roadway Pavement |
| | Concrete Parking Lot Pavement |
| | Concrete Pedestrian Pavement |

Building Envelope

The exterior systems for the building(s) at this campus includes:

| | |
|----------------------------|---------------------------------------|
| 01 - Main Building: | Brick Exterior Wall |
| | Glass Block Exterior Wall |
| | Pre-cast Concrete Panel Exterior Wall |
| | Stucco Exterior Wall |
| | Aluminum Exterior Windows |
| | Steel Exterior Entrance Doors |
| 02 - Shed: | CMU Exterior Wall |
| | Steel Exterior Entrance Doors |

The roofing for the building(s) at this campus consists of:

| | |
|----------------------------|-----------------------------|
| 01 - Main Building: | Metal Steep Slope Roofing |
| | EPDM Roofing |
| 02 - Shed: | Composition Shingle Roofing |

Interior

The interior systems for the building(s) at this campus include:

| | |
|----------------------------|-----------------------------------|
| 01 - Main Building: | Steel Interior Doors |
| | Wood Interior Doors |
| | Interior Door Hardware |
| | Suspended Acoustical Grid System |
| | Suspended Acoustical Ceiling Tile |
| | Adhered Acoustical Ceiling Tiles |
| | Painted Ceilings |
| | Ceramic Tile Wall |
| | Brick/Stone Veneer |
| | Interior Wall Painting |
| | Concrete Flooring |
| | Ceramic Tile Flooring |



| | |
|----------------------------|---------------------------------|
| 01 - Main Building: | Quarry Tile Flooring |
| | Vinyl Composition Tile Flooring |
| | Terrazzo Flooring |
| | Carpet |
| | Athletic/Sport Flooring |
| 02 - Shed: | Wood Ceilings |
| | Interior Wall Painting |
| | Concrete Flooring |

Mechanical

The mechanical systems for the building(s) at this campus include:

| | |
|----------------------------|---|
| 01 - Main Building: | 1,275 MBH Cast Iron Water Boiler |
| | 4,488 MBH Cast Iron Water Boiler |
| | Finned Wall Radiator |
| | Fin Tube Water Radiant Heater |
| | 12 MBH Steam Unit Heater |
| | DDC Heating System Controls |
| | 1 Ton Ductless Split System |
| | 5 Ton Condensing Unit |
| | Window Units |
| | 5 HP Pump |
| | 10 HP Pump |
| | 2-Pipe Hot Water Hydronic Distribution System |
| | 5,000 CFM Interior AHU |
| | Ductwork |
| | Small Roof Exhaust Fan |
| | Wall Exhaust Fan |
| | Fire Sprinkler System |

Plumbing

The plumbing systems for the building(s) at this campus include:

| | |
|----------------------------|---------------------------------|
| 01 - Main Building: | 1,000 Gallon Water Storage Tank |
| | 2" Backflow Preventers |
| | 3/4" Backflow Preventers |
| | 4" Backflow Preventers |
| | Gas Piping System |
| | 75 Gallon Gas Water Heater |
| | Domestic Water Piping System |
| | Classroom Lavatories |
| | Lavatories |
| | Mop/Service Sinks |



| | |
|----------------------------|------------------------------------|
| 01 - Main Building: | Non-Refrigerated Drinking Fountain |
| | Refrigerated Drinking Fountain |
| | Restroom Lavatories |
| | Showers |
| | Toilets |
| | Urinals |
| | Sump Pump |

Electrical

The electrical systems for the building(s) at this campus include:

| | |
|----------------------------|------------------------------------|
| 01 - Main Building: | Panelboard - 120/208 100A |
| | Panelboard - 120/208 125A |
| | Panelboard - 120/208 400A |
| | Panelboard - 120/240 225A |
| | 800 Amp Distribution Panel |
| | Electrical Disconnect |
| | Light Fixtures |
| | Building Mounted Lighting Fixtures |



Facility Deficiency Priority Levels

Deficiencies were ranked according to five priority levels, with Priority 1 items being the most critical to address:

Priority 1 – Mission Critical Concerns: Deficiencies or conditions that may directly affect the school’s ability to remain open or deliver the educational curriculum. These deficiencies typically relate to building safety, code compliance, severely damaged or failing building components, and other items that require near-term correction. An example of a Priority 1 deficiency is a fire alarm system replacement.

Priority 2 - Indirect Impact to Educational Mission: Items that may progress to a Priority 1 item if not addressed in the near term. Examples of Priority 2 deficiencies include inadequate roofing that could cause deterioration of integral building systems, and conditions affecting building envelopes, such as roof and window replacements.

Priority 3 - Short-Term Conditions: Deficiencies that are necessary to the school's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and plumbing deficiencies.

Priority 4 - Long-Term Requirements: Items or systems that may be considered improvements to the instructional environment. The improvements may be aesthetic or provide greater functionality. Examples include cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs.

Priority 5 - Enhancements: Deficiencies aesthetic in nature or considered enhancements. Typical deficiencies in this priority include repainting, replacing carpet, improved signage, or other improvements to the facility environment.



Facility Condition Assessment

Pawtucket - William E Tolman Senior High School

The following chart summarizes this site's current deficiencies by building system and priority. The listing details current deficiencies including deferred maintenance, functional deficiencies, code compliance, capital renewal, hazardous materials and technology categories.

Table 1: System by Priority

| System | Priority | | | | | Total | % of Total |
|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|------------|
| | 1 | 2 | 3 | 4 | 5 | | |
| Site | - | - | \$28,901 | \$1,256,191 | \$1,261,423 | \$2,546,514 | 12.80 % |
| Roofing | - | \$384,070 | - | - | - | \$384,070 | 1.93 % |
| Structural | \$67,664 | - | - | - | - | \$67,664 | 0.34 % |
| Exterior | - | \$759,596 | - | - | - | \$759,596 | 3.82 % |
| Interior | - | - | \$2,684,524 | \$1,087,435 | \$1,699,291 | \$5,471,250 | 27.50 % |
| Mechanical | - | \$1,780,136 | - | \$87,943 | \$14,084 | \$1,882,162 | 9.46 % |
| Electrical | \$5,649 | \$111,240 | - | - | \$107,193 | \$224,082 | 1.13 % |
| Plumbing | - | - | \$1,810,984 | \$327,956 | \$46,613 | \$2,185,553 | 10.99 % |
| Fire and Life Safety | \$2,675,368 | - | - | - | - | \$2,675,368 | 13.45 % |
| Technology | - | - | \$2,771,840 | - | - | \$2,771,840 | 13.93 % |
| Conveyances | - | - | - | - | - | \$0 | 0.00 % |
| Specialties | - | - | \$22,817 | \$839,230 | \$65,028 | \$927,074 | 4.66 % |
| Total | \$2,748,681 | \$3,035,041 | \$7,319,066 | \$3,598,755 | \$3,193,631 | \$19,895,174 | |

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

| | | |
|----------------------|---|-------------|
| Interior | - | \$5,471,250 |
| Technology | - | \$2,771,840 |
| Fire and Life Safety | - | \$2,675,368 |

The chart below represents the building systems and associated deficiency costs.

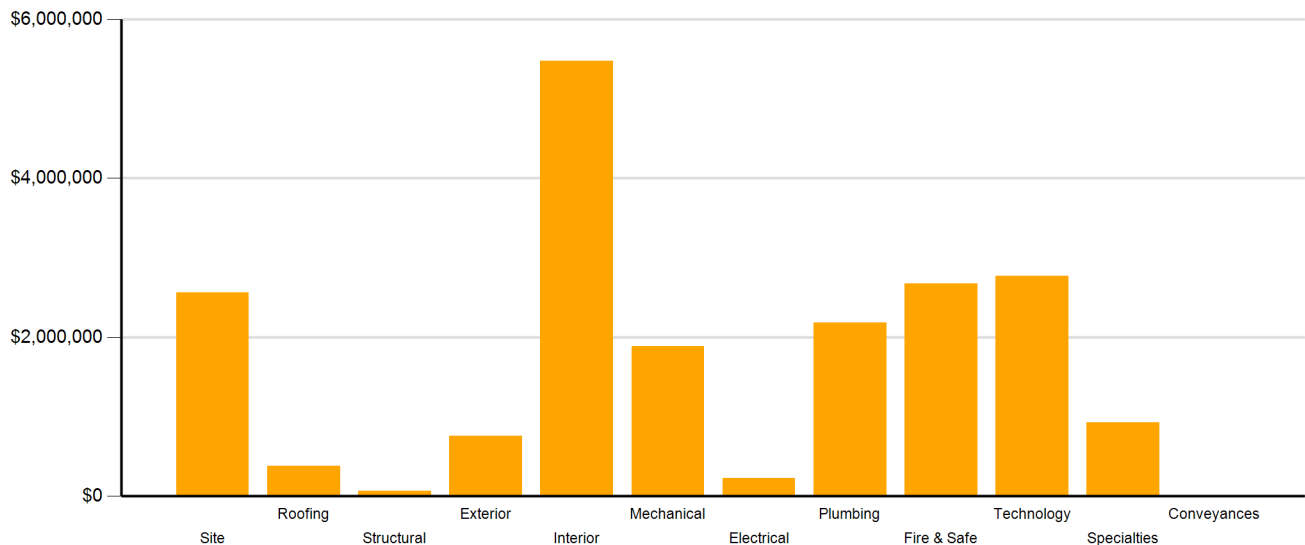


Figure 2: System Deficiencies



Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

- **Acoustics** deficiencies relate to room acoustics, sound insulation, and mechanical systems and vibration control modeled after ANSI/ASA Standard S12.60-2010 and ASHRAE Handbook, Chapter 47 on Sound and Vibration Control.
- **Barrier to Accessibility** deficiencies relate to the Americans with Disabilities Act and the Rhode Island Governors Commission on Disability. Additional items related to accessibility may be included other categories.
- **Capital Renewal** items have reached or exceeded serviceable life and require replacement. These are current and do not include life cycle capital renewal forecasts. Also included are deficiencies correcting planned work postponed beyond its regular life expectancy.
- **Code Compliance** deficiencies related to current codes. Many may fall under grandfather clauses, which allow buildings to continue operating under codes effective at the time of construction. However, there are instances where the level of renovation requires full compliance which are reflected in the master plan.
- **Educational Adequacy** deficiencies identify where facilities do not align with the Basic Education Program and the RIDE School Construction Regulations.
- **Functional Deficiencies** are deficiencies for components or systems that have failed before the end of expected life or are not the right application, size, or design.
- **Hazardous Materials** include deficiencies for building systems or components containing potentially hazardous material. The team focused on identifying asbestos containing building materials (ACBMs), lead based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. With other scopes of work there may be other costs associated with hazardous materials.
- **Technology** deficiencies relate to network architecture, technology infrastructure, classroom systems, and support. Examples of technology deficiencies include: security cameras, secure electronic access, telephone handsets, and dedicated air conditioning for telecommunication rooms.
- **Traffic** deficiencies relate to vehicle or pedestrian traffic, such as bus loops, crosswalks, and pavement markings.



The following chart and table represent the deficiency category by priority. This listing includes current deficiencies for all building systems.

Table 2: Deficiency Category by Priority

| Category | Priority | | | | | Total |
|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Acoustics | - | - | - | - | - | \$0 |
| Barrier to Accessibility | - | - | \$1,037,662 | - | - | \$1,037,662 |
| Capital Renewal | \$1,386,293 | \$3,032,979 | \$3,479,648 | \$2,919,848 | \$48,309 | \$10,867,077 |
| Code Compliance | \$1,299,698 | - | - | - | - | \$1,299,698 |
| Educational Adequacy | \$62,691 | - | \$45,633 | \$466,213 | \$1,495,597 | \$2,070,134 |
| Functional Deficiency | - | \$2,062 | - | - | - | \$2,062 |
| Hazardous Material | - | - | - | \$212,694 | \$1,649,725 | \$1,862,419 |
| Technology | - | - | \$2,749,024 | - | - | \$2,749,024 |
| Traffic | - | - | \$7,099 | - | - | \$7,099 |
| Total | \$2,748,681 | \$3,035,041 | \$7,319,066 | \$3,598,755 | \$3,193,631 | \$19,895,174 |

*Displayed totals may not sum exactly due to mathematical rounding

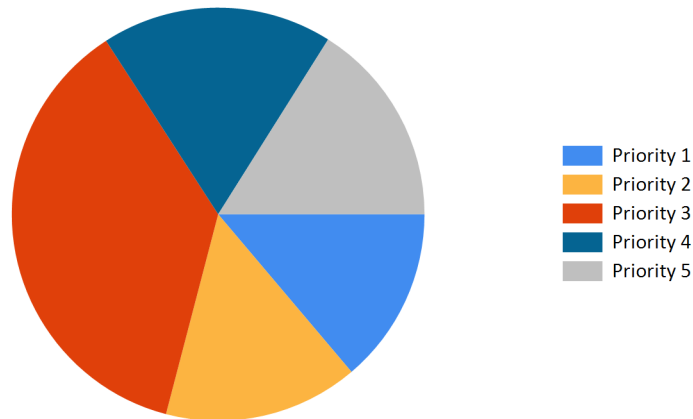


Figure 3: Current deficiencies by priority



Life Cycle Capital Renewal Forecast

During the facility condition assessment, assessors inspected all major building systems. If a need for immediate replacement was identified, a deficiency was created with the estimated repair costs. The identified deficiency contributes to the facility's total current repair costs.

Capital planning scenarios span multiple years, as opposed to being constrained to immediate repairs. Construction projects may begin several years after the initial facility condition assessment. Therefore, in addition to the current year repair costs, it is necessary to forecast the facility's future costs using a 5-year life cycle renewal forecast model.

Life cycle renewal is the projection of future building system costs based upon each individual system's expected serviceable life. Building systems and components age over time, eventually break down, reach the end of their useful lives, and may require replacement. While an item may be in good condition now, it might reach the end of its life before a planned construction project occurs.

The following chart shows all current deficiencies and the subsequent 5-year life cycle capital renewal projections. The projections outline costs for major building systems in which a component is expected to reach the end of its useful life and require capital funding for replacement.

Table 3: Capital Renewal Forecast

| System | Current Deficiencies | Life Cycle Capital Renewal Projections | | | | | LC Yr. 1-5 Total | Total 5-Year Need |
|----------------------|----------------------|--|-------------|-------------|-----------------|------------------|------------------|---------------------|
| | | Year 1 2017 | Year 2 2018 | Year 3 2019 | Year 4 2020 | Year 5 2021 | | |
| Site | \$2,546,514 | \$0 | \$0 | \$0 | \$99,256 | \$15,470 | \$114,726 | \$2,661,241 |
| Roofing | \$384,070 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$384,070 |
| Structural | \$67,664 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$67,664 |
| Exterior | \$759,596 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$759,596 |
| Interior | \$5,471,250 | \$0 | \$0 | \$0 | \$0 | \$551,733 | \$551,733 | \$6,022,983 |
| Mechanical | \$1,882,162 | \$0 | \$0 | \$0 | \$0 | \$128,285 | \$128,285 | \$2,010,448 |
| Electrical | \$224,082 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$224,082 |
| Plumbing | \$2,185,553 | \$0 | \$0 | \$0 | \$0 | \$29,426 | \$29,426 | \$2,214,979 |
| Fire and Life Safety | \$2,675,368 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,675,368 |
| Technology | \$2,771,840 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,771,840 |
| Conveyances | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Specialties | \$927,074 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$927,074 |
| Total | \$19,895,174 | \$0 | \$0 | \$0 | \$99,256 | \$724,914 | \$824,170 | \$20,719,344 |

*Displayed totals may not sum exactly due to mathematical rounding

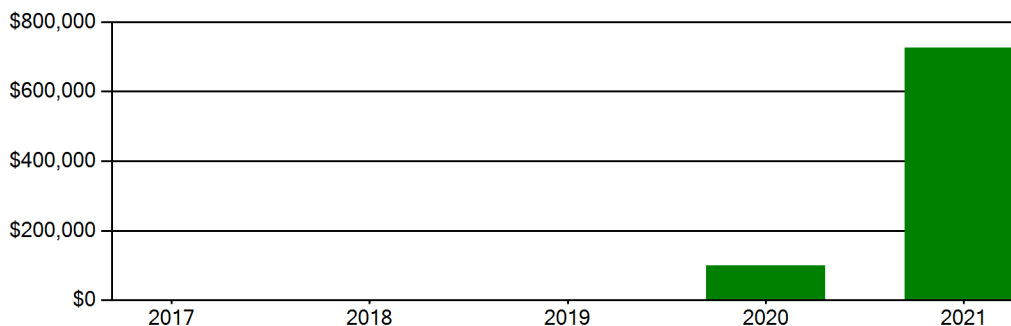
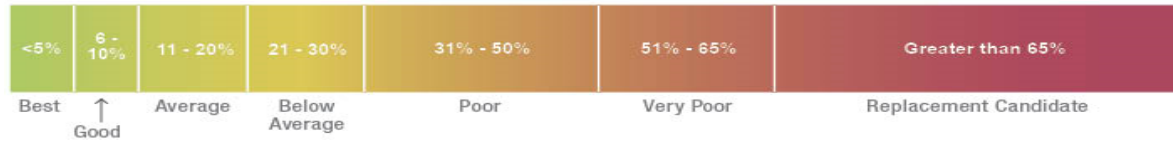


Figure 4: Life Cycle Capital Renewal Forecast



Facility Condition Index (FCI)

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building’s health. Since 1991, the facility management industry has used an index called the FCI to benchmark the relative condition of a group of schools. The FCI is derived by dividing the total repair cost, including educational adequacy and site-related repairs, by the total replacement cost. A facility with a higher FCI percentage has more need, or higher priority, than a facility with a lower FCI. It should be noted that costs in the New Construction category are not included in the FCI calculation.



Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair schools with a FCI of 65 percent or greater. This is due to efficiency gains with facilities that are more modern and the value of the building at the end of the analysis period. It is important to note that the FCI at which a facility should be considered for replacement is typically debated and adjusted based on property owners and facility managers approach to facility management. Of course, FCI is not the only factor used to identify buildings that need renovation, replacement, or even closure. Historical significance, enrollment trends, community sentiment, and the availability of capital are additional factors that are analyzed when making school facility decisions.

For master planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-year FCI was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCI calculation.

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today’s estimated cost of construction in the Providence, Rhode Island area. The estimated replacement cost for this facility is \$52,956,000. For planning purposes, the total 5-year need at the William E Tolman Senior High School is \$20,744,566 (Life Cycle Years 1-5 plus the FCI deficiency cost). The William E Tolman Senior High School facility has a 5-year FCI of 39.13%.

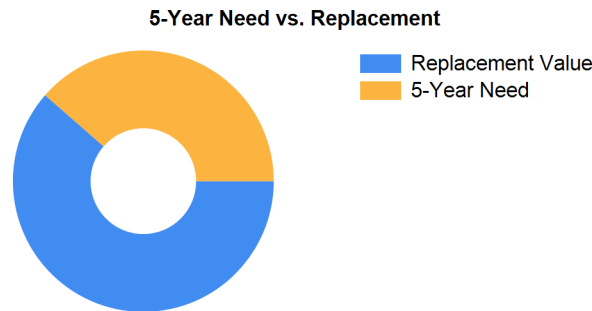


Figure 5: 5-Year FCI

It is important to reiterate that this FCI replacement threshold is not conclusive, but is intended to initiate planning discussion in which other relevant issues with regard to a facility’s disposition must be incorporated. This merely suggests where conversations regarding replacement might occur.



Rhode Island Aspirational Capacity

The capacity of a school reflects how many students the school's physical facility can effectively serve. There are various methodologies that exist to calculate capacity. It is not uncommon to review an existing building only to find that the capacity that had once been assigned is greater than what can be reasonably accommodated today. This is primarily because of a change in how programs are delivered.

The Rhode Island Aspirational Capacity is based on the Rhode Island School Construction Regulations (SCRs) and is an aspirational goal of space use. The capacity for each individual public school in the state of Rhode Island was designed to conform to Section 1.06-2 Space Allowance Guidelines of the Rhode Island Department of Education (RIDE) SCRs. These regulations outline the allowed gross square feet (GSF) per student at each school type (ES, MS, HS) by utilizing a sliding scale based on projected enrollment. The resulting capacities reflect how school capacities align to the SCRs for new construction. The existing enrollment was multiplied by the GSF per student for the appropriate bracket. For the purposes of this analysis, Pre-K centers were rolled into the elementary totals, and K-8 facilities were counted as middle schools.

The most consistent and equitable way a state can determine school capacities across a variety of districts and educational program offerings is to use square-foot-per-student standards. In contrast, in the 2013 Public Schoolhouse Assessment Report, LEAs self-reported capacities for their elementary, middle and high schools. Districts typically report "functional capacity," which is defined as the number of students each classroom can accommodate. Functional capacity counts how many students can occupy a space, not how much room students and teachers have within that space. For example, a 650-square-foot classroom and a 950-square-foot classroom can both have a reported capacity of 25 students, but the actual teaching and learning space per student varies greatly.

The variation in square feet per student impacts the kinds of teaching practices possible in each space. The lowest allocation of space per student restricts group and project-based learning strategies and requires teachers to teach in more traditional, lecture-style formats, due to a lack of space. Furthermore, the number of students that can be accommodated in a classroom does not account for access to sufficient common spaces such as libraries, cafeterias, and gymnasiums. When cafeterias are undersized relative to the population, schools must host four or more lunch periods a day, resulting in some students eating lunch mid-morning and some mid-afternoon. Similarly, undersized libraries and gymnasiums create scheduling headaches for schools and restrict student access. Finally, a classroom count-only approach to school capacity does not consider the inherent scheduling challenges schools face.

Applying the Rhode Island Aspirational Capacity, a facility of this size could ideally support an enrollment of approximately 743 students.

Facility New Construction

As part of the Educational Program Space Assessment, select core spaces were compared to the RI School Construction Regulations. If it was determined that a facility was in need of square footage related to a cafeteria or library/media center, a cost for additional space was estimated. This cost is not included in the total 5-year need or the 5-year FCI calculation.

The New Construction cost to bring the William E Tolman Senior High School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$900,461.



Summary of Findings

The William E Tolman Senior High School comprises 147,100 square feet and was constructed in 1927. Current deficiencies at this school total \$19,920,396. Five year capital renewal costs total \$824,170. The total identified need for the William E Tolman Senior High School (current deficiencies and 5-year capital renewal costs) is \$20,744,566. The 5-year FCI is 39.13%.

Table 4: Facility Condition by Building

| | Gross Sq Ft | Year Built | Current Deficiencies | LC Yr. 1-5 Total | Total 5 Yr Need (Yr 1-5 + Current Defs) | 5-Year FCI |
|--|-------------|------------|----------------------|------------------|---|------------|
| William E Tolman Senior High School Totals | 147,100 | 1927 | \$19,920,396 | \$824,170 | \$20,744,566 | 39.13% |

**Displayed totals may not sum exactly due to mathematical rounding*

The following pages provide a listing of all current deficiencies and 5-year life cycle need and the associated costs, followed by photos taken during the assessment.

Cost Estimating

Cost estimates are derived from local cost estimating expertise and enhanced by industry best practices, historical cost data, and relevance to the Rhode Island region. Costs have been developed from current market rates as of the 2nd quarter in 2016. All costs are based on a replace-in-kind approach, unless the item was not in compliance with national or state regulations or standards.

For planning and budgeting purposes, facility assessments customarily add a soft cost multiplier onto deficiency repair cost estimates. This soft cost multiplier accounts for costs that are typically incurred when contracting for renovation and construction services. Soft costs typically include construction cost factors, such as contractor overhead and profit, as well as labor and material inflation, professional fees, and administrative costs. Based on the Rhode Island School Construction Regulations, a soft cost multiplier of 20% is included on all cost estimates. Other project allowances are included in the cost estimates based on school attributes such as age, location, and historic designation. All stated costs in the assessment report will include soft costs for planning and budgeting purposes. These are estimates, and costs will vary at the time of construction.



Site Level Deficiencies

Site

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|---|----------------------|-----------|--------------|----------|--------------------|-------|
| Concrete Walks Require Replacement Note: Concrete walkways are cracked and heaved. | Capital Renewal | 800 | SF | 3 | \$21,802 | 22071 |
| Crosswalk Requires Repainting Note: Repaint crosswalk adjacent to school on Exchange St | Traffic | 1 | Ea. | 3 | \$1,014 | 25066 |
| Traffic Signage Is Required Note: Add school zone signs on Exchange St | Traffic | 2 | Ea. | 3 | \$6,084 | 25065 |
| Asphalt Paving Requires Replacement Note: Asphalt paving is cracked and weathered. | Capital Renewal | 25 | CAR | 4 | \$110,284 | 22072 |
| Backstops Require Replacement Note: Backstops Require Replacement | Educational Adequacy | 1 | Ea. | 4 | \$38,028 | 28530 |
| Concrete Paving Requires Replacement Note: Concrete parking lot paving has large cracks and spalling. | Capital Renewal | 35 | CAR | 4 | \$248,449 | 22070 |
| Fencing Requires Replacement (Ornamental Fence) Note: Ornamental fence is weathered and rotted. | Capital Renewal | 600 | LF | 4 | \$859,430 | 22069 |
| School has insufficient # of tennis courts. Note: School has insufficient # of tennis courts. | Educational Adequacy | 1 | Ea. | 5 | \$216,924 | 29026 |
| School has insufficient baseball fields. Note: School has insufficient baseball fields. | Educational Adequacy | 1 | Ea. | 5 | \$278,871 | 28320 |
| School has insufficient football/soccer fields. Note: School has insufficient football/soccer fields. | Educational Adequacy | 1 | Ea. | 5 | \$126,760 | 28191 |
| School has insufficient softball fields. Note: School has insufficient softball fields. | Educational Adequacy | 1 | Ea. | 5 | \$202,815 | 28364 |
| School lacks a competition track. Note: School lacks a competition track. | Educational Adequacy | 1 | Ea. | 5 | \$436,053 | 28257 |
| Sub Total for System | | 12 | items | | \$2,546,514 | |
| Sub Total for School and Site Level | | 12 | items | | \$2,546,514 | |

Building: 01 - Main Building

Roofing

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|---|-----------------|----------|--------------|----------|------------------|-------|
| EPDM Roofing Requires Replacement (Bldg SF) Note: EPDM roof membrane is buckling and the insulation has deteriorated. | Capital Renewal | 27,000 | SF | 2 | \$384,070 | 22103 |
| Sub Total for System | | 1 | items | | \$384,070 | |

Structural

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------|----------|--------------|----------|-----------------|-------|
| Evidence of Structural Deficiency Note: The retaining wall is cracking and the interior wall at the bell tower is deteriorating. | Capital Renewal | 1 | Ea. | 1 | \$67,664 | 22108 |
| Sub Total for System | | 1 | items | | \$67,664 | |

Exterior

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|---|-----------------|----------|--------------|----------|------------------|-------|
| The Aluminum Window Requires Replacement Note: Single pane windows are old and poorly functioning. | Capital Renewal | 3,004 | SF | 2 | \$571,893 | 22076 |
| The Metal Exterior Door Requires Replacement Note: Doors are old, weathered, and are deteriorating at the sill. | Capital Renewal | 26 | Door | 2 | \$187,703 | 22075 |
| Sub Total for System | | 2 | items | | \$759,596 | |

Interior

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------|-------|-----|----------|-------------|-------|
| The Acoustical Ceiling Tiles Require Replacement | Capital Renewal | 3,675 | SF | 3 | \$37,340 | 22077 |



Facility Condition Assessment

Pawtucket - William E Tolman Senior High School

Interior

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------------------|-----------------|---------|----------|--------------------|--------|
| The Athletic Sport Flooring Requires Replacement | Capital Renewal | 7,350 | SF | 3 | \$282,999 | 22092 |
| The Carpet Flooring Requires Replacement | Capital Renewal | 2,940 | SF | 3 | \$71,959 | 22078 |
| Note: Carpet is bubbled, stained, and worn. | | | | | | |
| The Interior Door Hardware Requires Replacement | Barrier to Accessibility | 294 | Door | 3 | \$1,037,662 | 22093 |
| Note: Original door hardware is old and performing poorly. | | | | | | |
| The Vinyl Composition Tile Requires Replacement | Capital Renewal | 97,210 | SF | 3 | \$1,254,564 | 22080 |
| Note: Vinyl flooring is cracked, chipped, and lifting at the seams. | | | | | | |
| Adhered Acoustical Ceiling Tile Requires Replacement | Capital Renewal | 7,350 | SF | 4 | \$89,665 | 22107 |
| Note: Adhered ceiling tiles are stained and falling. | | | | | | |
| Interior Gypsum Board Walls Require Repair | Capital Renewal | 3,000 | SF Wall | 4 | \$24,666 | 24718 |
| Note: Plaster walls in the corridors, bell tower stairwell, and outside of the auditorium are chipped and worn. | | | | | | |
| Light Deterioration or Damage of 9x9 Asbestos Floor Tile is Present | Hazardous Material | 5,690 | SF | 4 | \$182,569 | Rollup |
| Metal Interior Doors Require Replacement | Capital Renewal | 85 | Door | 4 | \$409,460 | 22105 |
| Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - each) | Hazardous Material | 46 | Ea. | 4 | \$14,760 | Rollup |
| Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - linear feet) | Hazardous Material | 134 | LF | 4 | \$3,440 | Rollup |
| Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet) | Hazardous Material | 1,115 | SF | 4 | \$11,925 | Rollup |
| Room Lighting Is Inadequate Or In Poor Condition. | Educational Adequacy | 8,693 | SF | 4 | \$331,238 | Rollup |
| The Plaster Ceilings Require Repair | Capital Renewal | 1,000 | SF | 4 | \$19,712 | 22074 |
| Location: Boy's locker room, hallway to girl's locker room, stairwell to bell tower | | | | | | |
| Classroom Door Requires Vision Panel | Educational Adequacy | 4 | Ea. | 5 | \$8,381 | Rollup |
| Interior Walls Require Repainting (Bldg SF) | Hazardous Material | 138,180 | SF | 5 | \$1,027,128 | Rollup |
| Room lacks appropriate sound control. | Educational Adequacy | 200 | SF | 5 | \$6,959 | Rollup |
| The Concrete Flooring Requires Repair Or Repainting | Capital Renewal | 4,000 | SF | 5 | \$34,225 | 22091 |
| Note: The pool area and gymnasium seating concrete floor paint is chipped and worn. | | | | | | |
| The Gypsum Board Ceilings Require Repainting | Hazardous Material | 132,300 | SF | 5 | \$622,597 | Rollup |
| | Sub Total for System | 19 items | | | \$5,471,250 | |

Mechanical

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------------------|----------------|-----|----------|--------------------|--------|
| Steam/HW Unit Heater Requires Replacement | Capital Renewal | 3 | Ea. | 2 | \$8,060 | 22099 |
| Note: Unit heaters are aged and rusted. | | | | | | |
| The Fin Tube Water Radiant Heater Requires Replacement | Capital Renewal | 236 | Ea. | 2 | \$444,747 | 22100 |
| Note: Fin tube heaters are old and rusted. Some units have damaged casings. | | | | | | |
| The Mechanical / HVAC Piping / System Is Beyond Its Useful Life | Capital Renewal | 147,000 | SF | 2 | \$1,274,742 | 22101 |
| Note: HVAC piping is old and rusted. | | | | | | |
| The Window AC Unit Component Requires Replacement | Capital Renewal | 14 | Ea. | 2 | \$52,587 | 22097 |
| Note: Window units are old with damaged coils. | | | | | | |
| Lab lacks an appropriate fume hood. | Educational Adequacy | 4 | Ea. | 4 | \$87,943 | Rollup |
| Remove Abandoned Equipment | Capital Renewal | 4 | Ea. | 5 | \$14,084 | 22096 |
| Note: Original AHUs | | | | | | |
| | Sub Total for System | 6 items | | | \$1,882,162 | |

Electrical

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------------|-----|-----|----------|-------------|--------|
| Room last power shut-off valves for utilities | Educational Adequacy | 4 | Ea. | 1 | \$5,649 | Rollup |
| The Distribution Panel Requires Replacement | Capital Renewal | 1 | Ea. | 2 | \$32,813 | 22102 |
| Note: Distribution panel is old with rusted breakers. | | | | | | |
| The Electrical Disconnect Requires Replacement | Functional Deficiency | 1 | Ea. | 2 | \$2,062 | 22081 |
| Note: Original Pringle disconnect should be replaced. | | | | | | |



Facility Condition Assessment

Pawtucket - William E Tolman Senior High School

Electrical

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------------------|----------|--------------|----------|------------------|--------|
| The Panelboard Requires Replacement | Capital Renewal | 14 | Ea. | 2 | \$76,365 | 22098 |
| Note: Panelboards are old and rusted with damaged breakers. | | | | | | |
| Room Has Insufficient Electrical Outlets | Educational Adequacy | 216 | Ea. | 5 | \$107,193 | Rollup |
| | Sub Total for System | 5 | items | | \$224,082 | |

Plumbing

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------------------|-----------|--------------|----------|--------------------|--------|
| The Plumbing / Domestic Water Piping System Is Beyond Its Useful Life | Capital Renewal | 147,000 | SF | 3 | \$1,330,588 | 22095 |
| Note: Domestic water piping is aged, rusted, and corroded. | | | | | | |
| The Showers Plumbing Fixtures Require Replacement | Capital Renewal | 53 | Ea. | 3 | \$453,482 | 22086 |
| Note: Showers are corroded with missing heads. | | | | | | |
| The Urinal Plumbing Fixtures Require Replacement | Capital Renewal | 18 | Ea. | 3 | \$26,914 | 22094 |
| Note: Urinals are rusted and several are not functional. | | | | | | |
| Non-Refrigerated Drinking Fountain Requires Replacement | Capital Renewal | 1 | Ea. | 4 | \$11,497 | 22087 |
| Note: Rusted drinking fountain should be replaced. | | | | | | |
| The Classroom Lavatories Plumbing Fixtures Require Replacement | Capital Renewal | 61 | Ea. | 4 | \$186,591 | 22073 |
| Note: Classroom lavatories are aged, rusted, and stained. | | | | | | |
| The Custodial Mop Or Service Sink Requires Replacement | Capital Renewal | 9 | Ea. | 4 | \$26,086 | 22090 |
| Note: Mop sinks are old, rusted, and cracked. | | | | | | |
| The Restroom Lavatories Plumbing Fixtures Require Replacement | Capital Renewal | 13 | Ea. | 4 | \$46,523 | 22082 |
| The Restroom Lavatories Plumbing Fixtures Require Replacement | Capital Renewal | 6 | Ea. | 4 | \$21,472 | 22083 |
| Note: Lavatories in the teacher's lounge, nurse's office, and kitchen are rusted. | | | | | | |
| The Restroom Lavatories Plumbing Fixtures Require Replacement | Capital Renewal | 10 | Ea. | 4 | \$35,787 | 22084 |
| Note: Bradley half sinks are cracked and rusted. | | | | | | |
| Room lacks a drinking fountain. | Educational Adequacy | 8 | Ea. | 5 | \$8,822 | Rollup |
| The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed | Educational Adequacy | 25 | Ea. | 5 | \$37,790 | Rollup |
| | Sub Total for System | 11 | items | | \$2,185,553 | |

Fire and Life Safety

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|-----------------------------|----------|--------------|----------|--------------------|--------|
| Fire Sprinkler System Requires Replacement (SF Basis) per NFPA 13 | Capital Renewal | 58,800 | SF | 1 | \$1,257,772 | 53415 |
| Install Fire Sprinklers (NFPA 13) | Code Compliance | 88,200 | SF | 1 | \$1,299,698 | 53465 |
| Note: Install fire sprinklers in the remainder of the building. | | | | | | |
| Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6) | Educational Adequacy | 5 | Ea. | 1 | \$57,042 | Rollup |
| Wall Pack Lighting Requires Replacement | Capital Renewal | 50 | Ea. | 1 | \$60,856 | 22089 |
| | Sub Total for System | 4 | items | | \$2,675,368 | |

Technology

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|----------------------|-----|------|----------|-------------|--------|
| Room lacks Interactive White Board | Educational Adequacy | 4 | Ea. | 3 | \$22,817 | Rollup |
| Technology: Auditorium AV/Multimedia system is in need of minor improvements. | Technology | 1 | Room | 3 | \$106,953 | 13381 |
| Technology: Campus network switching electronics are antiquated and/or do not meet standards. | Technology | 312 | Ea. | 3 | \$166,847 | 13388 |
| Technology: Classroom AV/Multimedia systems are in need of improvements. | Technology | 88 | Ea. | 3 | \$941,190 | 13384 |
| Technology: Instructional spaces do not have local sound reinforcement. | Technology | 90 | Ea. | 3 | \$481,290 | 13387 |
| Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent. | Technology | 4 | Ea. | 3 | \$23,958 | 13378 |
| Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate. | Technology | 1 | Ea. | 3 | \$50,910 | 13375 |
| Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate. | Technology | 1 | Ea. | 3 | \$50,910 | 13376 |
| Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate. | Technology | 1 | Ea. | 3 | \$50,910 | 13377 |



Facility Condition Assessment

Pawtucket - William E Tolman Senior High School

Technology

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|---|------------|-----------|--------------|----------|--------------------|-------|
| Technology: Intermediate Telecommunications Room needs minor improvements. | Technology | 1 | Ea. | 3 | \$18,824 | 13374 |
| Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent. | Technology | 4 | Ea. | 3 | \$21,391 | 13379 |
| Technology: Main Telecommunications Room ground system is inadequate or non-existent. | Technology | 1 | Ea. | 3 | \$7,487 | 13371 |
| Technology: Main Telecommunications Room is not dedicated and/or inadequate. | Technology | 1 | Ea. | 3 | \$56,471 | 13370 |
| Technology: Main Telecommunications Room UPS does not meet standards, is inadequate, or non-existent. | Technology | 1 | Ea. | 3 | \$10,161 | 13372 |
| Technology: Network system inadequate and/or near end of useful life | Technology | 52 | Ea. | 3 | \$278,079 | 13386 |
| Technology: PA/Bell/Clock system is inadequate and/or near end of useful life. | Technology | 147,000 | SF | 3 | \$282,999 | 13385 |
| Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements. | Technology | 1 | Ea. | 3 | \$8,556 | 13373 |
| Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements. | Technology | 4 | Ea. | 3 | \$21,391 | 13380 |
| Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus. | Technology | 95 | Ea. | 3 | \$162,569 | 13383 |
| Technology: Telephone system is inadequate and/or non-existent. | Technology | 1 | Ea. | 3 | \$8,128 | 13382 |
| Sub Total for System | | 20 | items | | \$2,771,840 | |

Specialties

| Deficiency | Category | Qty | UoM | Priority | Repair Cost | ID |
|--|----------------------|-----------|--------------|----------|---------------------|--------|
| Room has insufficient writing area. | Educational Adequacy | 5 | Ea. | 3 | \$22,817 | Rollup |
| The Metal Student Lockers Require Replacement | Capital Renewal | 1,500 | Ea. | 4 | \$830,226 | 22104 |
| Welding Bays Are Required | Educational Adequacy | 1 | Ea. | 4 | \$5,419 | Rollup |
| Work Tables Are Required | Educational Adequacy | 1 | Ea. | 4 | \$3,585 | Rollup |
| Room lacks an appropriate refrigerator. | Educational Adequacy | 6 | Ea. | 5 | \$51,338 | Rollup |
| The room lacks a washer and/or dryer. | Educational Adequacy | 1 | Ea. | 5 | \$13,690 | Rollup |
| Sub Total for System | | 6 | items | | \$927,074 | |
| Sub Total for Building 01 - Main Building | | 75 | items | | \$17,348,660 | |
| Total for Campus | | 87 | items | | \$19,895,174 | |

Buildings with no reported deficiencies

02 - Shed



William E Tolman Senior High School - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

| Uniformat Description | LC Type Description | Qty | UoM | Repair Cost | Remaining Life |
|-----------------------|---------------------|---------------------------------|----------------|------------------|----------------|
| Roadway Pavement | Asphalt | 30 | CAR | \$99,256 | 4 |
| Parking Lot Lighting | Pole Lighting | 2 | Ea. | \$15,470 | 5 |
| | | Sub Total for System | 2 items | \$114,725 | |
| | | Sub Total for Building - | 2 items | \$114,725 | |

Building: 01 - Main Building

Interior

| Uniformat Description | LC Type Description | Qty | UoM | Repair Cost | Remaining Life |
|-------------------------------|---------------------------------|-----------------------------|----------------|------------------|----------------|
| Tile Flooring | Ceramic Tile | 16,170 | SF | \$434,225 | 5 |
| Resilient Flooring | Vinyl Composition Tile Flooring | 7,350 | SF | \$84,317 | 5 |
| | | Note: | Sheet vinyl | | |
| Acoustical Suspended Ceilings | Ceilings - Acoustical Tiles | 3,675 | SF | \$33,191 | 5 |
| | | Sub Total for System | 3 items | \$551,734 | |

Mechanical

| Uniformat Description | LC Type Description | Qty | UoM | Repair Cost | Remaining Life |
|---------------------------------|---------------------------------|-----------------------------|----------------|------------------|----------------|
| Decentralized Cooling | Ductless Split System (1 Ton) | 1 | Ea. | \$14,116 | 5 |
| Decentralized Heating Equipment | Radiant Heater - Fin Tube Water | 15 | Ea. | \$114,169 | 5 |
| | | Sub Total for System | 2 items | \$128,285 | |

Plumbing

| Uniformat Description | LC Type Description | Qty | UoM | Repair Cost | Remaining Life |
|--|---------------------------------|---|-----------------|------------------|----------------|
| Plumbing Fixtures | Refrigerated Drinking Fountain | 3 | Ea. | \$22,132 | 5 |
| Domestic Water Equipment | Water Heater - Gas - 75 Gallons | 1 | Ea. | \$5,845 | 5 |
| Building Support Plumbing System Supplementary Components | Sump Pump | 1 | Ea. | \$1,449 | 5 |
| | | Sub Total for System | 3 items | \$29,426 | |
| | | Sub Total for Building 01 - Main Building | 8 items | \$709,445 | |
| | | Total for: William E Tolman Senior High School | 10 items | \$824,170 | |



Supporting Photos



Site Aerial



Auditorium



Site Signage



Library



Gym



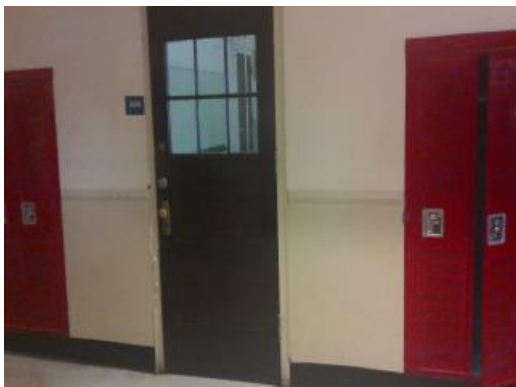
Bell Tower



Chipped Floor Paint



Worn Floor Finish



Original Door Hardware



Worn Sport Flooring



Abandoned AHU



Rusted Urinal



Aged Panelboard



Damaged Window Unit



Distribution Panel



Rusted Unit Heater



Weathered Roof



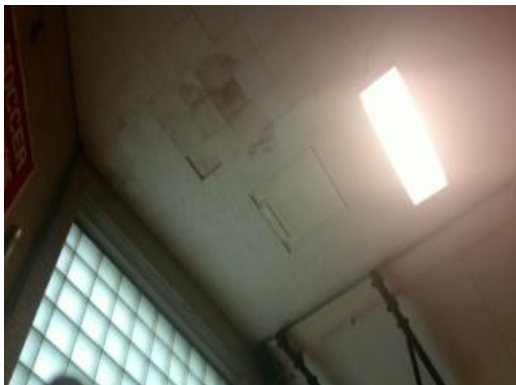
Damaged Fin Tube Heater



Peeling Paint



Weathered Roof



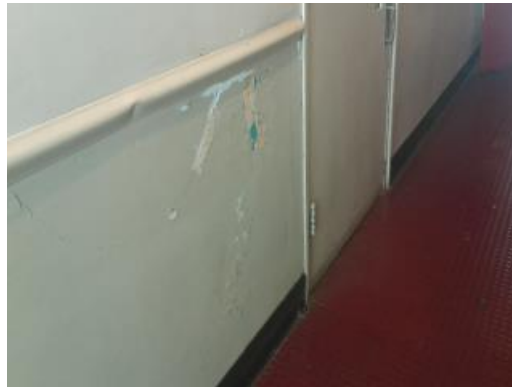
Stained And Missing Adhered Ceiling Tiles



Lockers



Science Room



Chipped Wall Paint



Bell Tower Stair



VCT Lifting At Seams



Bell Tower Stair



Typical Classroom



Retaining Wall



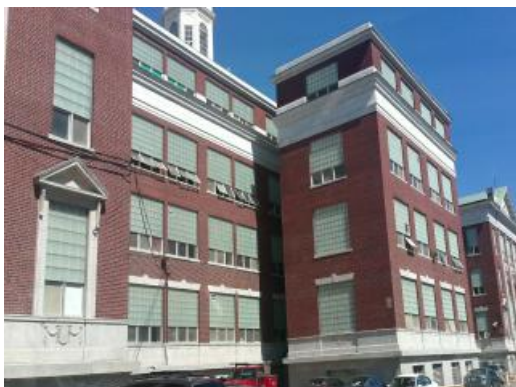
Bell Tower Stair



Exterior Finishes



Bell Tower Stair



East Elevation



Retaining Wall



Cafeteria



Wall Pack Lighting



Rusted Mop Sink



Pool



Rusted Fin Tube Heater



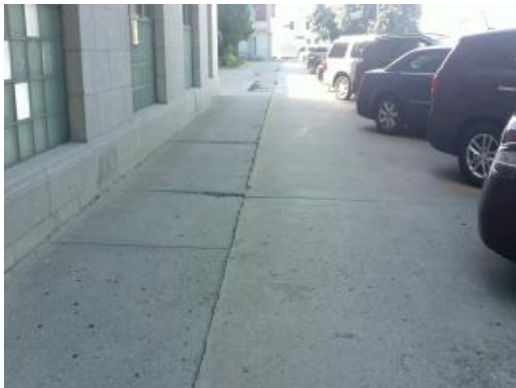
South Elevation



Shed Exterior



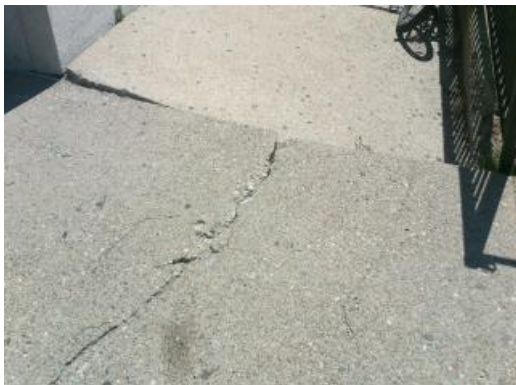
Corroded Fence



Cracked Concrete Parking



Cracked And Spalled Concrete Parking



Heaved And Cracked Sidewalk



Asphalt Paving



Cracked Asphalt Paving



Rusted Classroom Lavatory



Original Classroom Lavatory



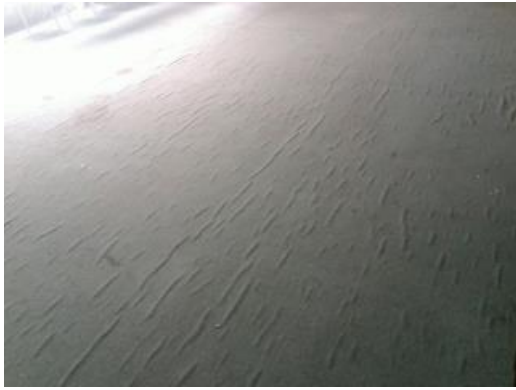
Damaged Plaster Ceiling



Deteriorated Door



Stained And Sagging Ceiling Tiles



Bubbled Carpet



Retaining Wall



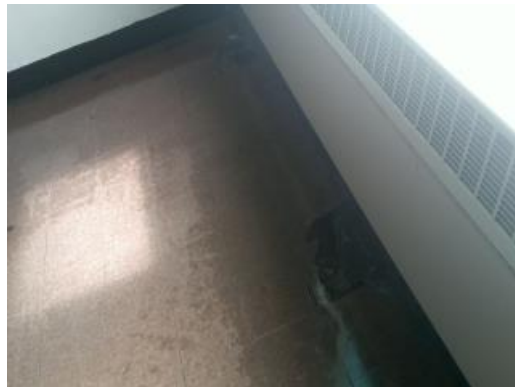
Bell Tower Stair



Damaged Plaster Wall



Cracked And Broken Plaster Wall



Chipped VCT Floor



Elevation



Original Disconnect



Cracked Vinyl Flooring



Rusted Bradley Half Sink