



Tiverton totals 405,097 square feet and consists of the school type(s) detailed below. School(s) were visited three times during the Statewide Facilities Assessment by teams of specialists in March 2016. This report provides LEA summary findings for the statewide assessment program.

### School Type by Count



School Type	SqFt
Elementary School	117,861
Middle School	142,000
High School	145,236
<b>Total:</b>	<b>405,097</b>

### Demographics

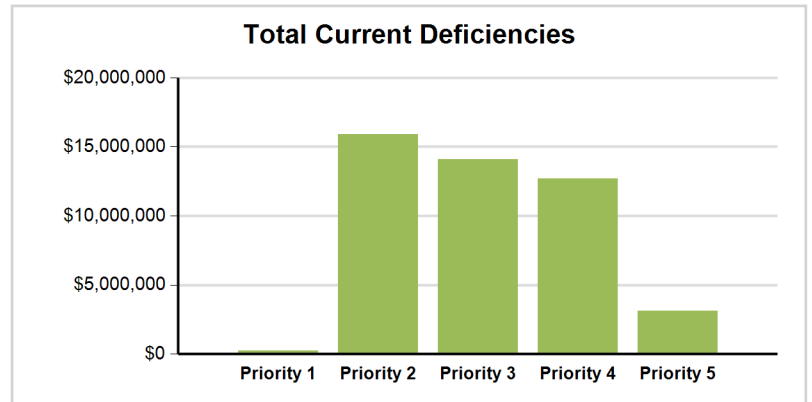
Enrollment is projected to decrease by 9.9% over the next 10 years in Tiverton. The total LEA enrollment at 5 school(s) is 1,820 students with a total capacity of 2,640 as reported by the LEA. Utilization is calculated by dividing enrollment by capacity, resulting in 68.9% utilization at Tiverton.

### 68.9 % Utilization



### Educational Program Space Analysis

In Tiverton there are 178 instructional spaces; of these spaces 12.9% meet or exceed the space size standards. Of the total current deficiencies identified, \$2,109,089 are related to the educational program space assessment. Addressing these identified deficiencies will improve the learning environment and bring the school(s) in the district closer to 21st century learning facilities.



### Five Year Need Summary

The current deficiencies total \$46,032,107, with 34.5% categorized as Priority 2 and another 30.6% as Priority 3. The building systems with the highest current deficiency costs are Interior and Mechanical.

School(s) with Greatest Need	Combined 5-Year Need
Tiverton High School	\$25,802,076
Tiverton Middle School	\$25,190,668
Pocasset School	\$1,638,076

The projected life cycle need in Years 1 through 5 is \$9,530,522. It is anticipated that the majority of the need will occur in Year 5. School(s) with the greatest need are represented in the adjacent table and make up 94.7% of the combined 5-Year need at Tiverton.

### Five Year Facility Condition Index (FCI)

For master planning purposes, the total current deficiencies, less new construction, and the first 5 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. The 5-Year need is \$55,562,629 with a district replacement value of \$140,396,310. The resulting 5-Year FCI is 39.6%.

### 5-Year FCI Ranges



### LEA Summary Data

Gross SqFt	Avg Year Built	Current Deficiencies (Less New Construction)	Life Cycle Year 1-5 Total	Total 5-Year Need (Year 1-5 + Current Defs)	5-Year FCI
405,097	1979	\$46,032,107	\$9,530,522	\$55,562,629	39.6%





# Facility Condition Assessment

Tiverton - Fort Barton School

June 2017

99 Lawton Avenue, Tiverton, RI 02878





## Introduction

Fort Barton School, located at 99 Lawton Avenue in Tiverton, Rhode Island, was built in 1936. It comprises 37,500 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.

Fort Barton School serves grades KG - 4, has 23 instructional spaces, and has an enrollment of 233. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Fort Barton School is 330 with a resulting utilization of 71%.

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 Fort Barton School the 5-year need is \$1,453,051. 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 Fort Barton 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 Fort Barton School campus, identified by discipline and building.

### Site

The site level systems for this campus include:

### Building Envelope

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

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

### Interior

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

### Mechanical

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

### Plumbing

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

### Electrical

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



## 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.



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	-	-	-	\$28,329	\$716,364	\$744,693	89.30 %
Roofing	-	-	-	-	-	\$0	0.00 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	-	-	-	-	\$0	0.00 %
Interior	-	-	-	\$31,017	-	\$31,017	3.72 %
Mechanical	-	-	-	-	-	\$0	0.00 %
Electrical	-	-	-	-	\$43,671	\$43,671	5.24 %
Plumbing	-	-	-	-	\$8,807	\$8,807	1.06 %
Fire and Life Safety	-	-	-	-	-	\$0	0.00 %
Technology	-	-	\$5,704	-	-	\$5,704	0.68 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	-	-	-	\$0	0.00 %
<b>Total</b>	\$0	\$0	\$5,704	\$59,345	\$768,842	\$833,892	

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

The building systems with the most need include:

Site	-	\$744,693
Electrical	-	\$43,671
Interior	-	\$31,017

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

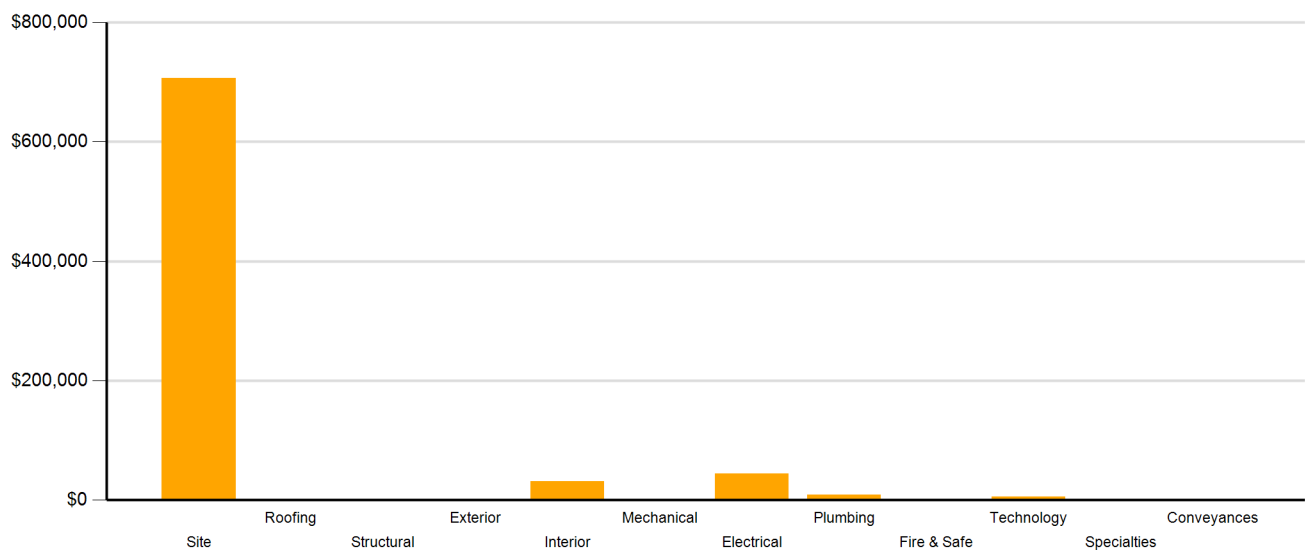


Figure 2: System Deficiencies



## 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	-	-	-	-	-	\$0
Capital Renewal	-	-	-	-	\$630,197	\$630,197
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	-	-	\$5,704	\$59,345	\$138,645	\$203,695
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	-	-	\$0
Technology	-	-	-	-	-	\$0
Traffic	-	-	-	-	-	\$0
<b>Total</b>	\$0	\$0	\$5,704	\$59,345	\$768,842	\$833,892

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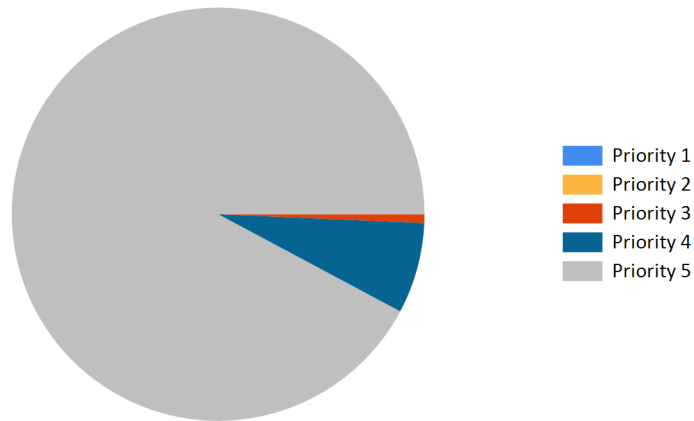


Figure 3: Current deficiencies by priority



### 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	\$744,693	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$656,250	\$1,400,943
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interior	\$31,017	\$0	\$0	\$0	\$0	\$0	\$0	\$31,017
Mechanical	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electrical	\$43,671	\$0	\$0	\$0	\$0	\$0	\$0	\$43,671
Plumbing	\$8,807	\$0	\$0	\$0	\$0	\$0	\$0	\$8,807
Fire and Life Safety	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Technology	\$5,704	\$0	\$0	\$0	\$0	\$0	\$0	\$5,704
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$833,892</b>	<b>\$131,250</b>	<b>\$131,250</b>	<b>\$131,250</b>	<b>\$131,250</b>	<b>\$131,250</b>	<b>\$656,250</b>	<b>\$1,490,142</b>

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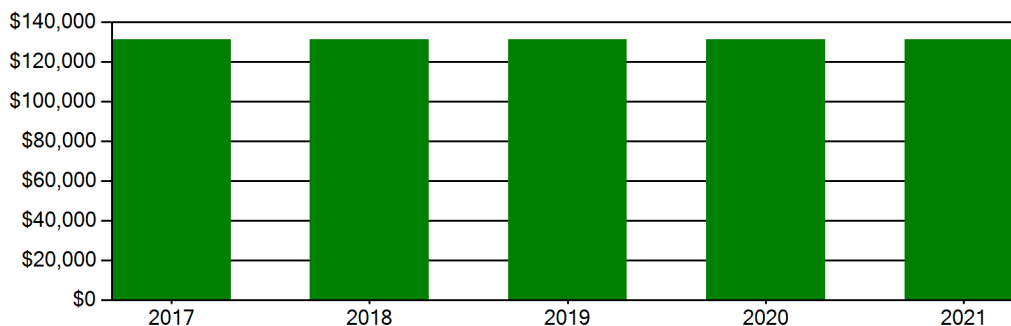
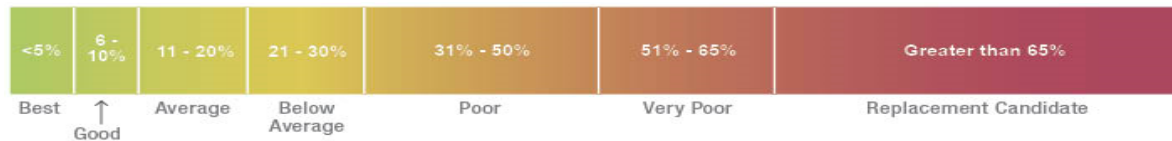


Figure 4: Life Cycle Capital Renewal Forecast



### 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 \$13,125,000. For planning purposes, the total 5-year need at the Fort Barton School is \$1,453,051 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Fort Barton School facility has a 5-year FCI of 11.35%.

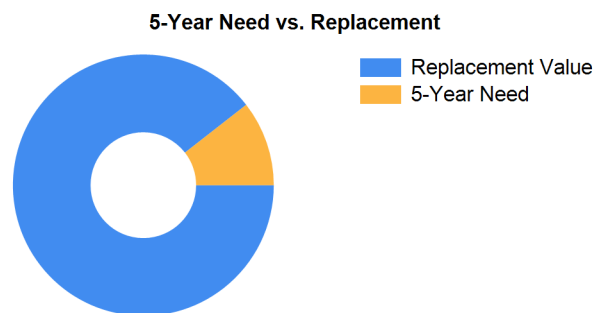


Figure 5: 5-Year FCI

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 208 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 Fort Barton School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$502,740.



### Summary of Findings

The Fort Barton School comprises 37,500 square feet and was constructed in 1936. Current deficiencies at this school total \$796,801. Five year capital renewal costs total \$656,250. The total identified need for the Fort Barton School (current deficiencies and 5-year capital renewal costs) is \$1,453,051. The 5-year FCI is 11.35%.

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
Fort Barton School Totals	37,500	1936	\$796,801	\$656,250	\$1,453,051	11.35%

*\*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
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28597
<b>Note:</b> Backstops Require Replacement						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28811
<b>Note:</b> Exterior Basketball Goals are Required						
Maintenance allowance. Facility Condition Assessment not performed.	Capital Renewal	1	LS	5	\$630,197	53592
<b>Note:</b> Annual maintenance allowance. Condition assessment not performed.						
The school lacks a paved play area.	Educational Adequacy	1	Ea.	5	\$80,360	28033
<b>Note:</b> The school lacks a paved play area.						
	<b>Sub Total for System</b>	<b>4</b>	<b>items</b>		<b>\$744,693</b>	
	<b>Sub Total for School and Site Level</b>	<b>4</b>	<b>items</b>		<b>\$744,693</b>	

## Building: 01 - Main Building

### Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	814	SF	4	\$31,017	Rollup
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$31,017</b>	

### Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Has Insufficient Electrical Outlets	Educational Adequacy	88	Ea.	5	\$43,671	Rollup
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$43,671</b>	

### Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks a drinking fountain.	Educational Adequacy	2	Ea.	5	\$2,206	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	6	Ea.	5	\$6,601	Rollup
	<b>Sub Total for System</b>	<b>2</b>	<b>items</b>		<b>\$8,807</b>	

### Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	1	Ea.	3	\$5,704	Rollup
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$5,704</b>	
	<b>Sub Total for Building 01 - Main Building</b>	<b>5</b>	<b>items</b>		<b>\$89,199</b>	
	<b>Total for Campus</b>	<b>9</b>	<b>items</b>		<b>\$833,892</b>	



## Fort Barton School - Life Cycle Summary Yrs 1-5

### Site Level Life Cycle Items

#### Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	37,500	SF	\$131,250	1
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	37,500	SF	\$131,250	2
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	37,500	SF	\$131,250	3
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	37,500	SF	\$131,250	4
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	37,500	SF	\$131,250	5
<b>Sub Total for System</b>		<b>5</b>	<b>items</b>	<b>\$656,249</b>	
<b>Sub Total for Building -</b>		<b>5</b>	<b>items</b>	<b>\$656,249</b>	
<b>Total for: Fort Barton School</b>		<b>5</b>	<b>items</b>	<b>\$656,249</b>	



## Supporting Photos



Site Aerial



Exterior



# Facility Condition Assessment

Tiverton - Pocasset School

*June 2017*

242 Main Road, Tiverton, RI 02878



## Introduction

Pocasset School, located at 242 Main Road in Tiverton, Rhode Island, was built in 2008. It comprises 38,861 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.

Pocasset School serves grades PK - 4, has 21 instructional spaces, and has an enrollment of 248. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Pocasset School is 330 with a resulting utilization of 75%.

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 Pocasset School the 5-year need is \$1,638,076. 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.

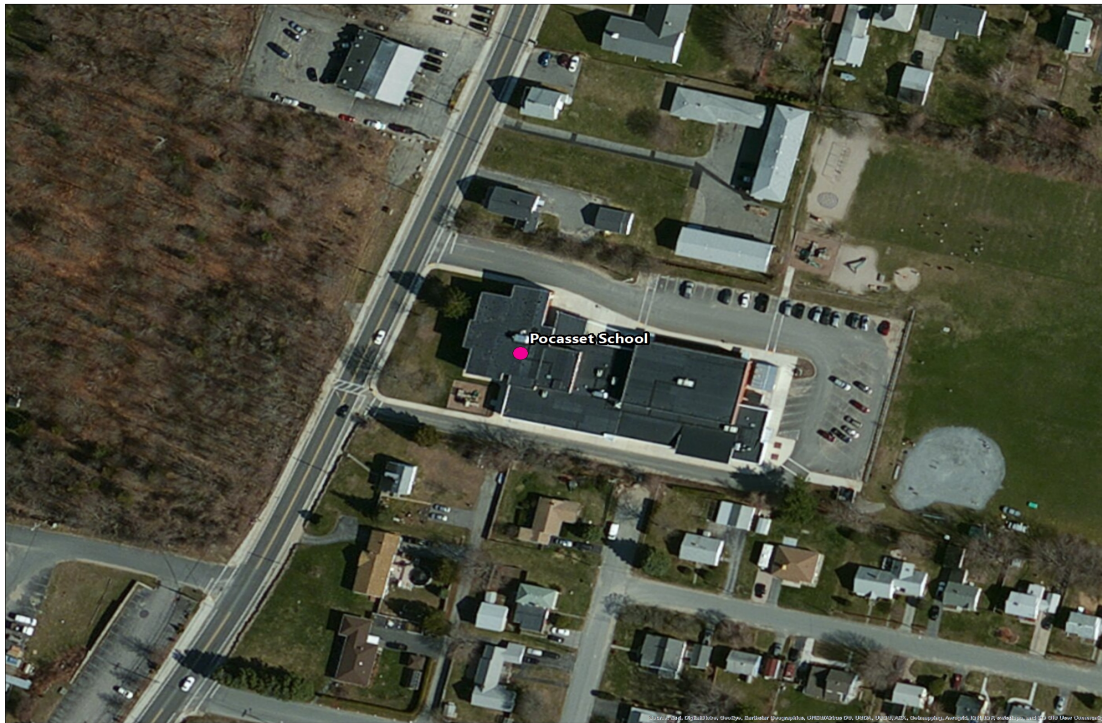


Figure 1: Aerial view of Pocasset School



## 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 Pocasset School campus, identified by discipline and building.

### Site

The site level systems for this campus include:

### Building Envelope

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

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

### Interior

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

### Mechanical

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

### Plumbing

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

### Electrical

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



## 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.



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	-	-	-	\$28,329	\$666,673	\$695,001	70.24 %
Roofing	-	-	-	-	-	\$0	0.00 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	-	-	-	-	\$0	0.00 %
Interior	-	-	-	\$165,885	\$11,332	\$177,216	17.91 %
Mechanical	-	-	-	-	-	\$0	0.00 %
Electrical	-	-	-	-	\$39,434	\$39,434	3.99 %
Plumbing	-	-	-	-	\$10,973	\$10,973	1.11 %
Fire and Life Safety	-	-	-	-	-	\$0	0.00 %
Technology	-	-	\$39,660	-	-	\$39,660	4.01 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$27,196	-	-	\$27,196	2.75 %
<b>Total</b>	\$0	\$0	\$66,856	\$194,214	\$728,410	\$989,480	

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

The building systems with the most need include:

Site	-	\$695,001
Interior	-	\$177,216
Technology	-	\$39,660

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

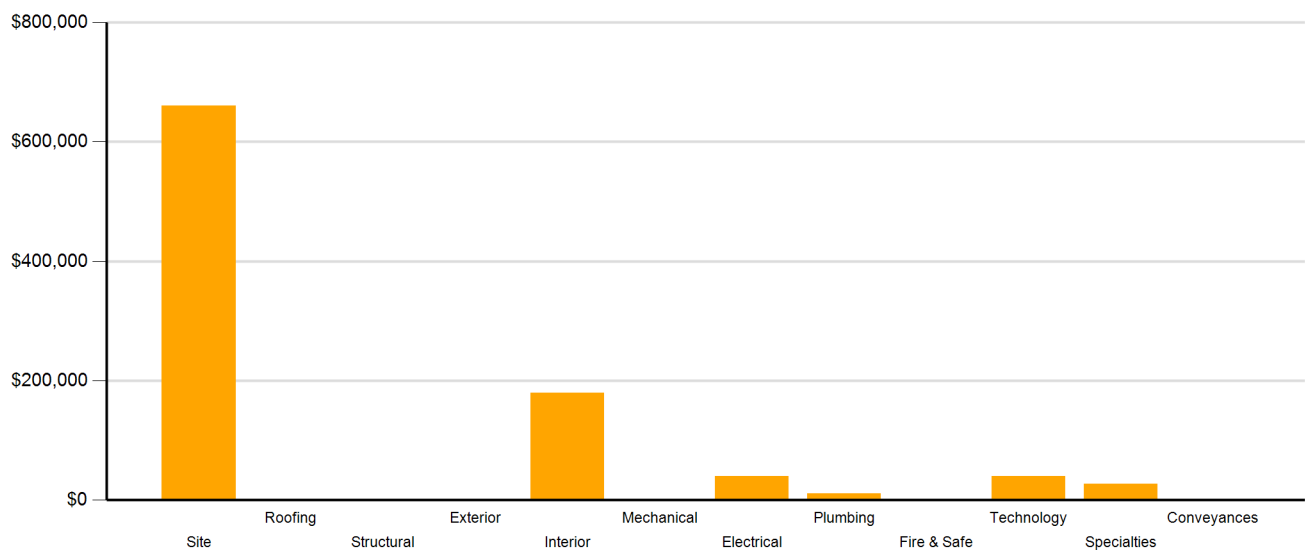


Figure 2: System Deficiencies



## 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	-	-	-	-	-	\$0
Capital Renewal	-	-	-	-	\$580,506	\$580,506
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	-	-	\$66,856	\$194,214	\$147,905	\$408,975
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	-	-	\$0
Technology	-	-	-	-	-	\$0
Traffic	-	-	-	-	-	\$0
<b>Total</b>	\$0	\$0	\$66,856	\$194,214	\$728,410	\$989,480

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

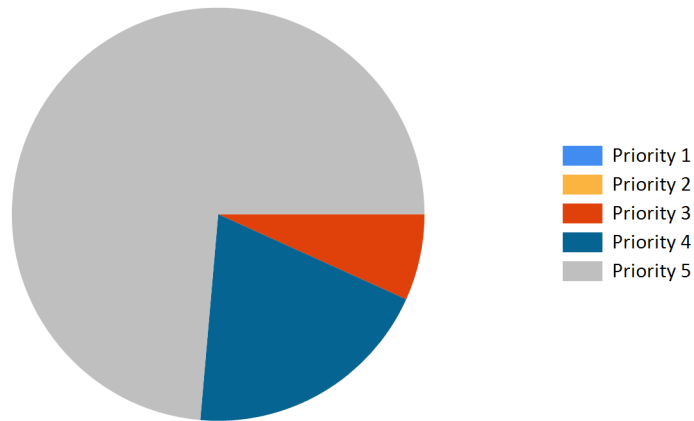


Figure 3: Current deficiencies by priority



### 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	\$695,001	\$136,013	\$136,013	\$136,013	\$136,013	\$136,013	\$680,065	\$1,375,066
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interior	\$177,216	\$0	\$0	\$0	\$0	\$0	\$0	\$177,217
Mechanical	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electrical	\$39,434	\$0	\$0	\$0	\$0	\$0	\$0	\$39,434
Plumbing	\$10,973	\$0	\$0	\$0	\$0	\$0	\$0	\$10,973
Fire and Life Safety	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Technology	\$39,660	\$0	\$0	\$0	\$0	\$0	\$0	\$39,660
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$27,196	\$0	\$0	\$0	\$0	\$0	\$0	\$27,196
<b>Total</b>	<b>\$989,480</b>	<b>\$136,013</b>	<b>\$136,013</b>	<b>\$136,013</b>	<b>\$136,013</b>	<b>\$136,013</b>	<b>\$680,065</b>	<b>\$1,669,545</b>

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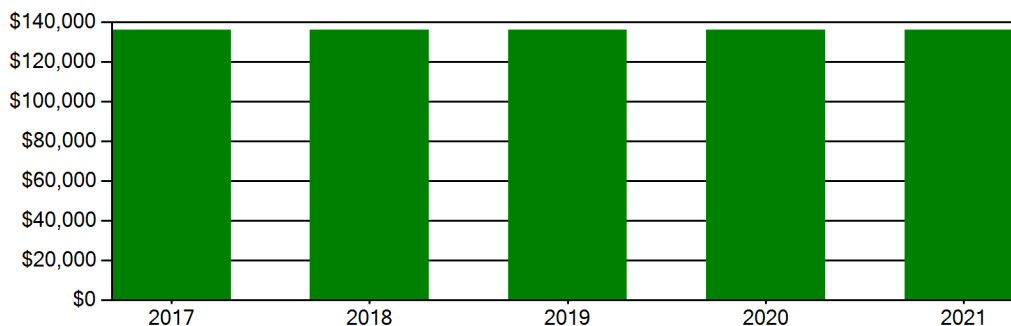
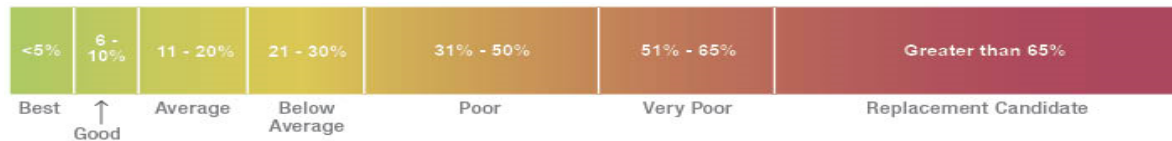


Figure 4: Life Cycle Capital Renewal Forecast



### 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 \$13,601,350. For planning purposes, the total 5-year need at the Pocasset School is \$1,638,076 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Pocasset School facility has a 5-year FCI of 12.27%.

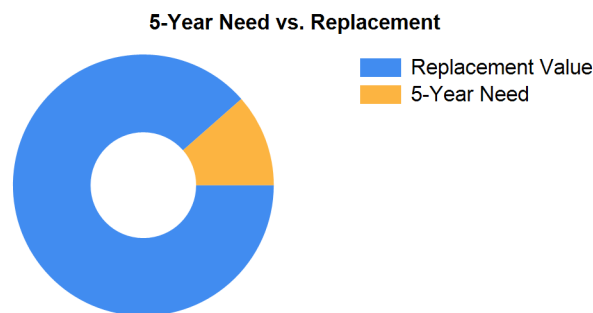


Figure 5: 5-Year FCI

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 216 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 Pocasset School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$529,200.



### Summary of Findings

The Pocasset School comprises 38,861 square feet and was constructed in 2008. Current deficiencies at this school total \$958,011. Five year capital renewal costs total \$680,065. The total identified need for the Pocasset School (current deficiencies and 5-year capital renewal costs) is \$1,638,076. The 5-year FCI is 12.27%.

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
Pocasset School Totals	38,861	2008	\$958,011	\$680,065	\$1,638,076	12.27%

*\*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
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28598
<b>Note:</b> Backstops Require Replacement						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28812
<b>Note:</b> Exterior Basketball Goals are Required						
Maintenance allowance. Facility Condition Assessment not performed.	Capital Renewal	1	LS	5	\$580,506	53593
<b>Note:</b> Annual maintenance allowance. Condition assessment not performed.						
The school lacks a paved play area.	Educational Adequacy	1	Ea.	5	\$80,360	28034
<b>Note:</b> The school lacks a paved play area.						
	<b>Sub Total for System</b>	<b>4</b>	<b>items</b>		<b>\$695,001</b>	
	<b>Sub Total for School and Site Level</b>	<b>4</b>	<b>items</b>		<b>\$695,001</b>	

## Building: 01 - Main Building

### Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	4,383	SF	4	\$165,885	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	5	Ea.	5	\$11,332	Rollup
	<b>Sub Total for System</b>	<b>2</b>	<b>items</b>		<b>\$177,216</b>	

### Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Has Insufficient Electrical Outlets	Educational Adequacy	80	Ea.	5	\$39,434	Rollup
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$39,434</b>	

### Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks a drinking fountain.	Educational Adequacy	4	Ea.	5	\$4,382	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	6	Ea.	5	\$6,591	Rollup
	<b>Sub Total for System</b>	<b>2</b>	<b>items</b>		<b>\$10,973</b>	

### Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	7	Ea.	3	\$39,660	Rollup
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$39,660</b>	

### Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	6	Ea.	3	\$27,196	Rollup
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$27,196</b>	
	<b>Sub Total for Building 01 - Main Building</b>	<b>7</b>	<b>items</b>		<b>\$294,479</b>	
	<b>Total for Campus</b>	<b>11</b>	<b>items</b>		<b>\$989,480</b>	



## Pocasset School - Life Cycle Summary Yrs 1-5

### Site Level Life Cycle Items

#### Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	38,861	SF	\$136,013	1
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	38,861	SF	\$136,013	2
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	38,861	SF	\$136,013	3
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	38,861	SF	\$136,013	4
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	38,861	SF	\$136,013	5
	<b>Sub Total for System</b>	<b>5</b>	<b>items</b>	<b>\$680,067</b>	
	<b>Sub Total for Building -</b>	<b>5</b>	<b>items</b>	<b>\$680,067</b>	
	<b>Total for: Pocasset School</b>	<b>5</b>	<b>items</b>	<b>\$680,067</b>	



## Supporting Photos



Site Aerial



# Facility Condition Assessment

Tiverton - Tiverton High School

June 2017

100 North Brayton Road, Tiverton, RI 02878





## Introduction

Tiverton High School, located at 100 North Brayton Road in Tiverton, Rhode Island, was built in 1966. It comprises 145,236 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.

Tiverton High School serves grades 9 - 12, has 57 instructional spaces, and has an enrollment of 542. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Tiverton High School is 825 with a resulting utilization of 66%.

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 Tiverton High School the 5-year need is \$25,802,076. 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 Tiverton 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.

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**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.

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## System Summaries

The following tables summarize major building systems at the Tiverton 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
	Asphalt Pedestrian Pavement
	Concrete Pedestrian Pavement

### Building Envelope

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

<b>01 - Main Building:</b>	Stucco Exterior Wall
	Vinyl Siding Exterior Wall
	Brick Exterior Wall
	Metal Panel Exterior Wall
	Aluminum Exterior Windows
	Storefront / Curtain Wall
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors
<b>02 - Building 02:</b>	CMU Exterior Wall
	Steel Exterior Entrance Doors
<b>03 - Building 03:</b>	CMU Exterior Wall
	Steel Exterior Entrance Doors
<b>04 - Building 04:</b>	CMU Exterior Wall
	Overhead Exterior Utility Doors
<b>05 - Maintenance Shed:</b>	Metal Panel Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors
<b>06 - Septic House:</b>	CMU Exterior Wall
	Steel Exterior Entrance Doors
	Wood Exterior Doors
<b>07 - Septic House 02:</b>	Wood Siding Exterior Wall
	Wood Exterior Doors

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

<b>01 - Main Building:</b>	Single Ply Roofing
<b>02 - Building 02:</b>	Composition Shingle Roofing
<b>03 - Building 03:</b>	Composition Shingle Roofing
<b>04 - Building 04:</b>	Composition Shingle Roofing



<b>05 - Maintenance Shed:</b>	Metal Steep Slope Roofing
<b>06 - Septic House:</b>	Composition Shingle Roofing
<b>07 - Septic House 02:</b>	Composition Shingle Roofing

## Interior

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

<b>01 - Main Building:</b>	Foldable Interior Partition
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	Ceramic Tile Wall
	Wood Wall Paneling
	Vinyl/Fabric Wall Covering
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Quarry Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Terrazzo Flooring
	Carpet
<b>02 - Building 02:</b>	Painted Ceilings
	CMU Wall
	Concrete Flooring
<b>03 - Building 03:</b>	Overhead Interior Coiling Doors
	Painted Ceilings
	CMU Wall
	Concrete Flooring
<b>04 - Building 04:</b>	Painted Ceilings
	Interior Wall Painting
	Concrete Flooring
<b>05 - Maintenance Shed:</b>	Wood Interior Doors
	Interior Door Hardware
	Exposed Metal Structure Ceiling
	Painted Ceilings
	Ceramic Tile Wall
	Vinyl/Fabric Wall Covering
	Interior Wall Painting
	Concrete Flooring



<b>05 - Maintenance Shed:</b>	Ceramic Tile Flooring
	Vinyl Composition Tile Flooring
	Carpet
<b>06 - Septic House:</b>	Painted Ceilings
	CMU Wall
	Concrete Flooring
<b>07 - Septic House 02:</b>	Door Hardware
	Interior Wall Painting
	Concrete Flooring

## Mechanical

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

<b>01 - Main Building:</b>	8,375 MBH Steel Tube Boiler
	Finned Wall Radiator
	Steam/Hot Water Heating Unit Vent
	Radiant Water Heater
	12 MBH Steam Unit Heater
	Pneumatic Heating System Controls
	5 Ton Heat Pump
	5 Ton Condensing Unit
	Window Units
	2-Pipe Hot Water Hydronic Distribution System
	1 HP or Smaller Pump
	5 HP Pump
	10 HP Pump
	25 HP Pump
	2,000 CFM Interior AHU
	Ductwork
	Roof Exhaust Fan
	Kitchen Exhaust Hoods
<b>02 - Building 02:</b>	3 kW Electric Unit Heater
	Small Roof Exhaust Fan
<b>03 - Building 03:</b>	3 kW Electric Unit Heater
<b>05 - Maintenance Shed:</b>	12 MBH Steam Unit Heater
<b>06 - Septic House:</b>	10 kW Electric Unit Heater
	Wall Exhaust Fan

## Plumbing

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

<b>01 - Main Building:</b>	1,000 Gallon Water Storage Tank
	4" Backflow Preventers



<b>01 - Main Building:</b>	Gas Piping System
	100 Gallon Gas Water Heater
<b>05 - Maintenance Shed:</b>	10 Gallon Electric Water Heater
<b>01 - Main Building:</b>	Domestic Water Piping System
<b>03 - Building 03:</b>	Domestic Water Piping System
<b>05 - Maintenance Shed:</b>	Domestic Water Piping System
<b>06 - Septic House:</b>	Domestic Water Piping System
<b>01 - Main Building:</b>	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
<b>03 - Building 03:</b>	Mop/Service Sinks
	Restroom Lavatories
	Toilets
	Urinals
<b>05 - Maintenance Shed:</b>	Restroom Lavatories
	Toilets
<b>06 - Septic House:</b>	Lavatories
<b>01 - Main Building:</b>	Air Compressor (2 hp)
	5,000 Gallon Above Ground Fuel Oil Storage Tank

**Electrical**

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

<b>01 - Main Building:</b>	1200 kW Emergency Generator
	1,600 Amp Switchgear
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Electrical Disconnect
	Light Fixtures
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
<b>02 - Building 02:</b>	Panelboard - 120/208 100A
	Light Fixtures
<b>03 - Building 03:</b>	Panelboard - 120/208 100A
	Building Mounted Lighting Fixtures
	Light Fixtures
<b>04 - Building 04:</b>	Panelboard - 120/208 225A



# Facility Condition Assessment

Tiverton - Tiverton High School

<b>04 - Building 04:</b>	Light Fixtures
<b>05 - Maintenance Shed:</b>	Panelboard - 120/208 225A
	Light Fixtures
<b>06 - Septic House:</b>	Panelboard - 120/208 100A
	Panelboard - 120/240 100A
	Panelboard - 277/480 225A
	Building Mounted Lighting Fixtures
	Light Fixtures
<b>07 - Septic House 02:</b>	Panelboard - 120/208 100A
	Light 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.



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	-	-	\$179,888	\$349,508	\$94,430	\$623,825	2.78 %
Roofing	-	\$1,429,611	-	-	-	\$1,429,611	6.37 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	\$2,365,021	-	\$27,139	\$2,183	\$2,394,343	10.66 %
Interior	-	-	\$2,365,024	\$5,004,528	\$24,911	\$7,394,463	32.93 %
Mechanical	-	\$2,828,284	\$323,593	\$2,054,065	-	\$5,205,942	23.18 %
Electrical	-	\$594,186	\$109,445	\$15,164	\$99,253	\$818,047	3.64 %
Plumbing	-	-	\$1,696,083	\$190,862	\$32,438	\$1,919,383	8.55 %
Fire and Life Safety	\$111,787	-	-	-	-	\$111,787	0.50 %
Technology	-	-	\$2,451,182	-	-	\$2,451,182	10.92 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$41,070	\$23,427	\$42,781	\$107,279	0.48 %
<b>Total</b>	<b>\$111,787</b>	<b>\$7,217,101</b>	<b>\$7,166,286</b>	<b>\$7,664,693</b>	<b>\$295,995</b>	<b>\$22,455,861</b>	

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

The building systems with the most need include:

Interior	-	\$7,394,463
Mechanical	-	\$5,205,942
Technology	-	\$2,451,182

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

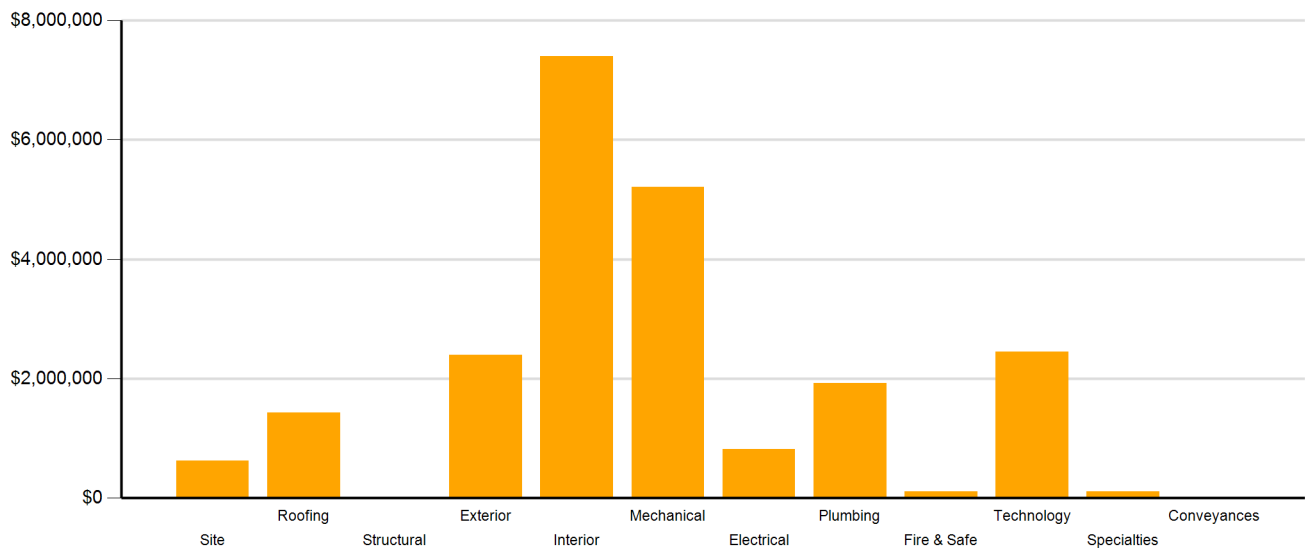


Figure 2: System Deficiencies



## 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	-	-	\$748,084	\$86,989	-	\$835,072
Barrier to Accessibility	-	-	\$18,253	\$129,295	-	\$147,548
Capital Renewal	\$31,928	\$7,217,101	\$3,762,776	\$4,752,528	\$17,853	\$15,782,186
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	\$79,859	-	\$96,971	\$180,204	\$278,142	\$635,176
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	\$2,515,677	-	\$2,515,677
Technology	-	-	\$2,377,028	-	-	\$2,377,028
Traffic	-	-	\$163,174	-	-	\$163,174
<b>Total</b>	<b>\$111,787</b>	<b>\$7,217,101</b>	<b>\$7,166,286</b>	<b>\$7,664,693</b>	<b>\$295,995</b>	<b>\$22,455,861</b>

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

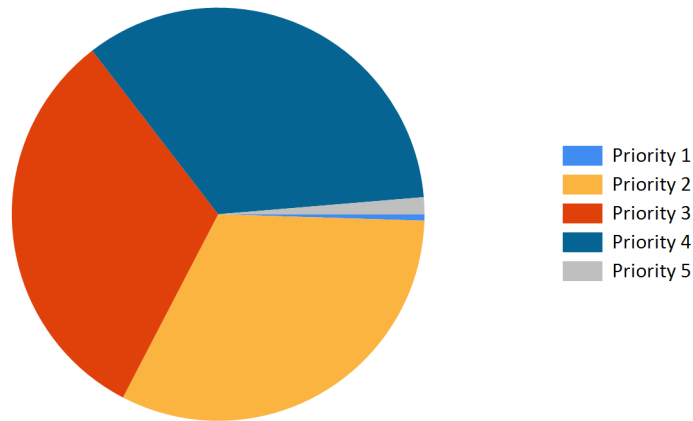


Figure 3: Current deficiencies by priority



### 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	\$623,825	\$0	\$0	\$0	\$0	\$514,254	\$514,254	\$1,138,079
Roofing	\$1,429,611	\$0	\$0	\$0	\$0	\$0	\$0	\$1,429,611
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$2,394,343	\$0	\$0	\$0	\$665,488	\$140,388	\$805,876	\$3,200,219
Interior	\$7,394,463	\$0	\$0	\$653,562	\$1,606	\$1,066,426	\$1,721,594	\$9,116,056
Mechanical	\$5,205,942	\$0	\$0	\$0	\$0	\$0	\$0	\$5,205,942
Electrical	\$818,047	\$0	\$0	\$0	\$0	\$164,204	\$164,204	\$982,251
Plumbing	\$1,919,383	\$0	\$0	\$0	\$0	\$6,383	\$6,383	\$1,925,766
Fire and Life Safety	\$111,787	\$0	\$0	\$0	\$0	\$0	\$0	\$111,787
Technology	\$2,451,182	\$0	\$0	\$0	\$0	\$0	\$0	\$2,451,182
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$107,279	\$0	\$0	\$67,127	\$0	\$59,038	\$126,165	\$233,444
<b>Total</b>	<b>\$22,455,861</b>	<b>\$0</b>	<b>\$0</b>	<b>\$720,689</b>	<b>\$667,094</b>	<b>\$1,950,693</b>	<b>\$3,338,476</b>	<b>\$25,794,337</b>

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

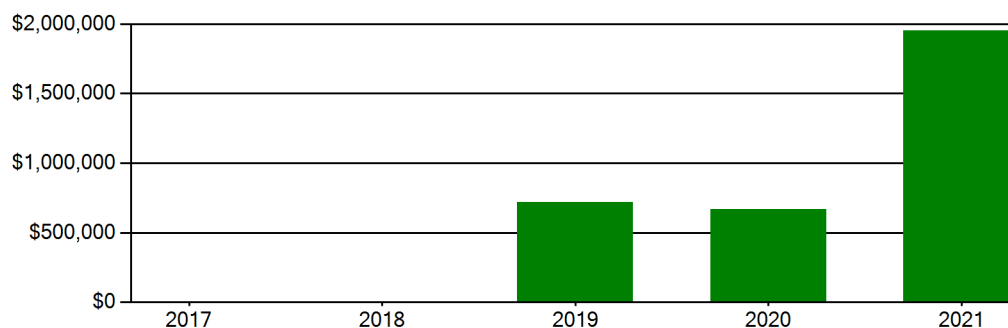
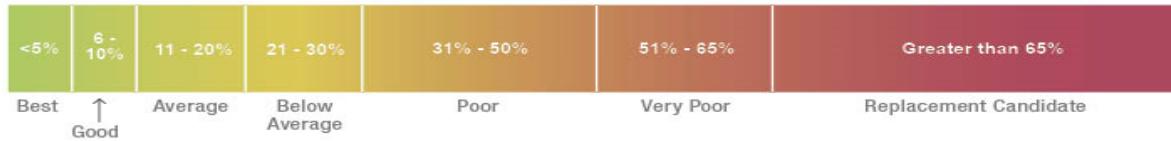


Figure 4: Life Cycle Capital Renewal Forecast



## 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 \$52,284,960. For planning purposes, the total 5-year need at the Tiverton High School is \$25,802,076 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Tiverton High School facility has a 5-year FCI of 49.33%.

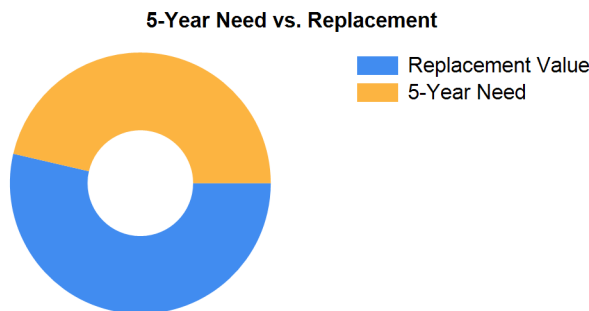


Figure 5: 5-Year FCI

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 730 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 Tiverton High School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$588,254.



### Summary of Findings

The Tiverton High School comprises 145,236 square feet and was constructed in 1966. Current deficiencies at this school total \$22,463,600. Five year capital renewal costs total \$3,338,476. The total identified need for the Tiverton High School (current deficiencies and 5-year capital renewal costs) is \$25,802,076. The 5-year FCI is 49.33%.

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
Tiverton High School Totals	145,236	1966	\$22,463,600	\$3,338,476	\$25,802,076	49.33%

*\*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 <b>Note:</b> Front entry	Capital Renewal	600	SF	3	\$12,181	1686
Parking Or Roadway Curbs Require Replacement	Capital Renewal	60	LF	3	\$4,533	1687
Sidewalk Requires Replacement <b>Note:</b> Upgrade sidewalks along North Brayton Road from school driveway to Bulgarmarsh Road (6' sidewalk)	Traffic	7,200	SF	3	\$163,174	4461
Asphalt Paving Requires Replacement	Capital Renewal	96	CAR	4	\$315,479	1685
Backstops Require Replacement <b>Note:</b> Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28599
Concrete Site Wall Requires Repair <b>Note:</b> Wall at courtyard window well and wall at patio stair east side of building needs repair.	Capital Renewal	2	Ea.	4	\$5,700	1690
School has insufficient football/soccer fields. <b>Note:</b> School has insufficient football/soccer fields.	Educational Adequacy	1	Ea.	5	\$94,430	28200
<b>Sub Total for System</b>		<b>7</b>	<b>items</b>		<b>\$623,825</b>	

### Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Handrail Requires Repainting	Capital Renewal	50	LF	4	\$519	1689
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$519</b>	

### Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Pole Lighting Requires Replacement <b>Note:</b> The existing pole lighting should be replaced with brighter and more energy efficient lighting.	Capital Renewal	9	Ea.	3	\$69,145	1668
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$69,145</b>	
<b>Sub Total for School and Site Level</b>		<b>9</b>	<b>items</b>		<b>\$693,490</b>	

## Building: 01 - Main Building

### Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Single-Ply Membrane Roof Covering Requires Replacement <b>Note:</b> Roof is holding substantial amounts of water.	Capital Renewal	102,500	SF	2	\$1,315,527	1700
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$1,315,527</b>	

### Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement <b>Note:</b> Windows leak when it rains, sills are water damaged, and ceiling tiles at window heads are water stained.	Capital Renewal	5,808	SF	2	\$982,853	1696
The Metal Exterior Door Requires Replacement <b>Note:</b> Exterior doors don't operate well, hardware is nonfunctional and gaps are visible.	Capital Renewal	35	Door	2	\$224,602	1694
The Storefront/Curtain Wall Requires Replacement (Bldg SF) <b>Note:</b> Glass is broken and wood frame is deteriorating.	Capital Renewal	567	SF	2	\$45,711	1684
The Stucco Exterior Wall Requires Replacement (Bldg SF) <b>Note:</b> Stucco is peeling off in large pieces and is stained.	Capital Renewal	32,657	SF	2	\$1,092,603	1699
<b>Sub Total for System</b>		<b>4</b>	<b>items</b>		<b>\$2,345,769</b>	

### Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation <b>Note:</b> All classroom	Acoustics	51	Ea.	3	\$424,491	4738
Interior Doors Require Replacement	Capital Renewal	149	Door	3	\$687,021	1644
The Acoustical Ceiling Tiles Require Replacement <b>Note:</b> Tiles are old and damaged.	Capital Renewal	133,000	SF	3	\$1,201,206	1688
The Carpet Flooring Requires Replacement <b>Note:</b> Carpet is torn and separating.	Capital Renewal	600	SF	3	\$13,054	1698



# Facility Condition Assessment

Tiverton - Tiverton High School

## Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Terrazzo Flooring Requires Replacement <b>Location:</b> West main corridor	Capital Renewal	500	SF	3	\$37,077	1621
Asbestos 9x9 Tile is Present. Limited Areas of Lifting or Broken Tiles Exist	Hazardous Material	84,000	SF	4	\$2,395,756	Rollup
Caulking - significant areas of broken pieces &/or deteriorating caulk	Hazardous Material	1,450	LF	4	\$27,570	Rollup
Ceiling Grid Requires Replacement <b>Note:</b> Discolored, rusty and sagging ceiling grid.	Capital Renewal	133,000	SF	4	\$1,577,447	1596
Interior Wood Walls Require Replacement <b>Note:</b> Wood paneling in cafe and auditorium is damaged and delaminating.	Capital Renewal	1,400	SF	4	\$12,777	1697
Moveable Partitions Require Replacement	Capital Renewal	4,000	SF Wall	4	\$462,039	1652
Moveable Partitions Require Replacement <b>Note:</b> Partitions are damaged and poorly functioning.	Capital Renewal	1,500	SF Wall	4	\$173,265	1654
Paint (probable pre-1978 in base (layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	229	Ea.	4	\$65,313	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - linear feet)	Hazardous Material	185	LF	4	\$4,221	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - square feet)	Hazardous Material	1,640	SF	4	\$15,591	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - adults only (measurement unit - square feet)	Hazardous Material	200	SF	4	\$1,901	Rollup
Room Is Excessively Reverberant <b>Note:</b> Gym	Acoustics	10,000	SF	4	\$86,989	4740
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	486	SF	4	\$18,519	Rollup
The Handrails In The Stair Area Are Not ADA Compliant <b>Note:</b> No hand rail extension at top or bottom.	Barrier to Accessibility	1,000	LF	4	\$129,295	1702
Vinyl/Fabric Wall Covering Requires Replacement <b>Note:</b> Wall covering has been painted and is peeling.	Capital Renewal	4,000	SF	4	\$28,521	1620
Wall/ceiling materials - area < 9 sq. ft. AND in children-accessible area	Hazardous Material	20	SF	4	\$190	Rollup
Wall/ceiling materials - large areas (> 10 sq. ft.) of damage & area in active use - children	Hazardous Material	290	SF	4	\$2,757	Rollup
Wall/ceiling materials - large areas (> 10 sq. ft.) of damage & area in active use - adults only	Hazardous Material	250	SF	4	\$2,377	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	1	Ea.	5	\$2,282	Rollup
Room lacks appropriate sound control.	Educational Adequacy	200	SF	5	\$6,959	Rollup
The Concrete Flooring Requires Repair Or Repainting <b>Location:</b> Girls locker room	Capital Renewal	1,600	SF	5	\$12,169	1577
The Gypsum Board Ceilings Require Repainting	Capital Renewal	200	SF	5	\$837	Rollup
	<b>Sub Total for System</b>	<b>26</b>	<b>items</b>		<b>\$7,389,623</b>	

## Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Steam/HW Unit Heater Requires Replacement	Capital Renewal	11	Ea.	2	\$26,270	2417
The Air Handler HVAC Component Requires Replacement <b>Note:</b> Very old units are not working well.	Capital Renewal	8	Ea.	2	\$345,095	1636
The Exterior Condensing Unit Requires Replacement <b>Note:</b> Old condensing units.	Capital Renewal	3	Ea.	2	\$34,071	1608
The Fin Tube Water Radiant Heater Requires Replacement	Capital Renewal	63	Ea.	2	\$105,533	2937
The Heat Pump HVAC Component Requires Replacement	Capital Renewal	5	Ea.	2	\$166,372	2418
The Mechanical / HVAC Piping / System Is Beyond Its Useful Life <b>Note:</b> System leaks and staff is constantly repairing leaky pipes.	Capital Renewal	140,000	SF	2	\$1,079,147	1589
The Steam/Hot Water Radiant Heater Requires Replacement <b>Note:</b> Original radiant heaters.	Capital Renewal	63	Ea.	2	\$325,464	1637
The Steel Tube Boiler Requires Replacement <b>Note:</b> Boilers are always breaking and one is inoperable. If the only one that works stops working the school will have no operating boiler.	Capital Renewal	2	Ea.	2	\$737,642	1645
Unit Ventilators Are Excessively Noisy <b>Note:</b> All classrooms	Acoustics	51	Ea.	3	\$323,593	4739



## Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
1200 KW Emergency Generator	Capital Renewal	1	Ea.	4	\$713,023	4394
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	140,000	SF	4	\$945,658	2932
Lab lacks an appropriate fume hood.	Educational Adequacy	5	Ea.	4	\$109,929	Rollup
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	5	Ea.	4	\$38,142	1635
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	3	Ea.	4	\$28,589	2419
The Exhaust Hood Requires Replacement	Capital Renewal	41	Ea.	4	\$213,369	1648
<b>Note:</b> None of the exhaust fans work.						
<b>Sub Total for System</b>		<b>15</b>	<b>items</b>		<b>\$5,191,896</b>	

## Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Lighting Fixtures Require Replacement	Capital Renewal	100,000	SF	2	\$594,186	1650
<b>Note:</b> Older style lighting system.						
The Mounted Building Lighting Requires Replacement	Capital Renewal	24	Ea.	3	\$35,822	1664
<b>Note:</b> Building mounted lights are having issues constantly and do not give off enough light.						
The Canopy Lighting Requires Replacement	Capital Renewal	11	Ea.	4	\$15,164	1665
<b>Note:</b> The original canopy lighting is fading and not energy efficient.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	200	Ea.	5	\$99,253	Rollup
<b>Sub Total for System</b>		<b>4</b>	<b>items</b>		<b>\$744,425</b>	

## Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Gas Water Heater Requires Replacement	Capital Renewal	1	Ea.	3	\$5,322	1649
The Plumbing / Domestic Water Piping System Is Beyond Its Useful Life	Capital Renewal	140,000	SF	3	\$1,126,424	1574
<b>Note:</b> Domestic water piping is original to the building and requires constant repairs.						
The Sanitary Sewer Piping Requires Replacement	Capital Renewal	750	LF	3	\$116,765	1573
<b>Note:</b> Sanitary sewer piping is constantly leaking.						
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	36	Ea.	3	\$273,801	1639
<b>Note:</b> Shower fixtures leak badly and have poor water pressure.						
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	28	Ea.	3	\$37,214	1642
<b>Note:</b> Original non-low flow urinals.						
Water Storage Tank Requires Replacement	Capital Renewal	3	Ea.	3	\$136,558	1638
<b>Note:</b> Original leaking water tanks.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	59	Ea.	4	\$187,681	1640
Room lacks a drinking fountain.	Educational Adequacy	2	Ea.	5	\$2,206	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	20	Ea.	5	\$30,232	Rollup
<b>Sub Total for System</b>		<b>9</b>	<b>items</b>		<b>\$1,916,202</b>	

## Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Kitchen Exhaust Hood	Capital Renewal	2	Ea.	1	\$31,928	1579
<b>Note:</b> No fire suppression on the kitchen hoods. This is a full size kitchen that should have a built in fire suppression system in the hood.						
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	7	Ea.	1	\$79,859	Rollup
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$111,787</b>	

## Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	13	Ea.	3	\$74,154	Rollup
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	\$95,070	3979
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	\$95,070	3984
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$9,507	3974



## Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	44	Ea.	3	\$878,444	3975
Technology: Instructional spaces do not have local sound reinforcement.	Technology	44	Ea.	3	\$209,153	3972
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,324	3955
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,324	3961
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,324	3967
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,648	3954
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,648	3960
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,648	3966
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	3958
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	3964
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	3971
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$6,655	3951
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$50,197	3949
Technology: Main Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$42,591	3985
Technology: Main Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$9,032	3953
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	78	Ea.	3	\$33,369	3952
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	24	Ea.	3	\$10,268	3957
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	15	Ea.	3	\$6,417	3963
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	15	Ea.	3	\$6,417	3969
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	192	Ea.	3	\$82,140	3982
Technology: Network system inadequate and/or near end of useful life	Technology	8	Ea.	3	\$60,845	3977
Technology: Network system inadequate and/or near end of useful life	Technology	56	Ea.	3	\$266,195	3978
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	30,000	SF	3	\$51,338	3983
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$54,190	3973
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	8	Room	3	\$152,112	3976
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,606	3950



# Facility Condition Assessment

Tiverton - Tiverton High School

## Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	3956
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	3962
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	3968
Technology: Telecommunications Room fiber connectivity infrastructure is outdated and/or inadequate.	Technology	1	Ea.	3	\$6,275	3959
Technology: Telecommunications Room fiber connectivity infrastructure is outdated and/or inadequate.	Technology	1	Ea.	3	\$6,275	3965
Technology: Telecommunications Room fiber connectivity infrastructure is outdated and/or inadequate.	Technology	1	Ea.	3	\$6,275	3970
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	44	Ea.	3	\$66,929	3981
Technology: Telephone system is inadequate and/or non-existent.	Technology	1	Ea.	3	\$7,225	3980
<b>Sub Total for System</b>		<b>38</b>	<b>items</b>		<b>\$2,451,182</b>	

## Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	5	Ea.	3	\$22,817	Rollup
The Counter Heights Exceed Maximum ADA Height Requirements  <b>Note:</b> Main office counter is not ADA accessible.	Barrier to Accessibility	48	LF	3	\$18,253	1693
Welding Bays Are Required	Educational Adequacy	3	Ea.	4	\$16,257	Rollup
Work Tables Are Required	Educational Adequacy	2	Ea.	4	\$7,170	Rollup
Room lacks an appropriate refrigerator.	Educational Adequacy	5	Ea.	5	\$42,781	Rollup
<b>Sub Total for System</b>		<b>5</b>	<b>items</b>		<b>\$107,279</b>	
<b>Sub Total for Building 01 - Main Building</b>		<b>104</b>	<b>items</b>		<b>\$21,573,689</b>	

## Building: 03 - Building 03

### Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Shingle Roof Requires Replacement	Capital Renewal	2,000	SF	2	\$57,042	1683
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$57,042</b>	

### Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement	Capital Renewal	3	Door	2	\$19,252	3033
The Exterior Requires Painting (Bldg SF)	Capital Renewal	2,000	SF	4	\$26,620	4391
The Exterior Soffit Requires Repair	Capital Renewal	100	SF	5	\$2,183	1701
<b>Sub Total for System</b>		<b>3</b>	<b>items</b>		<b>\$48,054</b>	

### Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Gypsum Board Ceilings Require Repainting	Capital Renewal	100	SF	5	\$418	Rollup
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$418</b>	

### Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electric Unit Heater Requires Replacement	Capital Renewal	1	Ea.	2	\$1,263	4390
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$1,263</b>	



Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Mounted Building Lighting Requires Replacement	Capital Renewal	3	Ea.	3	\$4,478	1678
<b>Note:</b> Lighting should be replaced with brighter, more efficient fixtures.						
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$4,478</b>	
	<b>Sub Total for Building 03 - Building 03</b>	<b>7</b>	<b>items</b>		<b>\$111,255</b>	

Building: 04 - Building 04

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Shingle Roof Requires Replacement	Capital Renewal	2,000	SF	2	\$57,042	1876
<b>Note:</b> Shingles are deteriorating.						
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$57,042</b>	
	<b>Sub Total for Building 04 - Building 04</b>	<b>1</b>	<b>items</b>		<b>\$57,042</b>	

Building: 05 - Maintenance Shed

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Carpet Flooring Requires Replacement	Capital Renewal	100	SF	3	\$2,176	4386
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	150	SF	5	\$991	Rollup
The Gypsum Board Ceilings Require Repainting	Capital Renewal	300	SF	5	\$1,255	Rollup
	<b>Sub Total for System</b>	<b>3</b>	<b>items</b>		<b>\$4,422</b>	
	<b>Sub Total for Building 05 - Maintenance Shed</b>	<b>3</b>	<b>items</b>		<b>\$4,422</b>	

Building: 06 - Septic House

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electric Unit Heater Requires Replacement	Capital Renewal	3	Ea.	2	\$7,427	1873
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	2	Ea.	4	\$5,355	1875
	<b>Sub Total for System</b>	<b>2</b>	<b>items</b>		<b>\$12,782</b>	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	1	Ea.	4	\$3,181	1874
	<b>Sub Total for System</b>	<b>1</b>	<b>items</b>		<b>\$3,181</b>	
	<b>Sub Total for Building 06 - Septic House</b>	<b>3</b>	<b>items</b>		<b>\$15,963</b>	
	<b>Total for Campus</b>	<b>127</b>	<b>items</b>		<b>\$22,455,861</b>	

Buildings with no reported deficiencies

02 - Building 02

07 - Septic House 02



## Tiverton 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
Pedestrian Pavement	Sidewalks - Concrete	3,000	SF	\$61,319	5
Playfield Areas	HS Athletic Components	1	Ea.	\$452,935	5
		<b>Sub Total for System</b>	<b>2 items</b>	<b>\$514,254</b>	
		<b>Sub Total for Building -</b>	<b>2 items</b>	<b>\$514,254</b>	

### Building: 01 - Main Building

#### Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	Metal Panel - Bldg SF basis	7,000	SF	\$665,488	4
Exterior Wall Veneer	Vinyl siding - clapboard style	14,000	SF	\$112,467	5
		<b>Sub Total for System</b>	<b>2 items</b>	<b>\$777,955</b>	

#### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	89,600	SF	\$592,018	3
Carpeting	Carpet	1,400	SF	\$30,459	3
Suspended Plaster and	Painted ceilings	6,800	SF	\$28,445	5
Tile Wall Finish	Ceramic Tile wall	7,000	SF	\$155,724	5
Flooring Treatment	Concrete Floor - Finished	21,000	SF	\$273,424	5
Tile Flooring	Ceramic Tile	11,200	SF	\$300,762	5
Wall Coverings	Vinyl/Fabric Wall Covering	38,000	SF	\$270,949	5
		<b>Sub Total for System</b>	<b>7 items</b>	<b>\$1,651,780</b>	

#### Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Electrical Service	Switchgear - Main Dist Panel (1600 Amps)	2	Ea.	\$164,204	5
		<b>Sub Total for System</b>	<b>1 items</b>	<b>\$164,204</b>	

#### Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Compressed-Air Systems	Air Compressor (2 hp)	1	Ea.	\$6,383	5
		<b>Sub Total for System</b>	<b>1 items</b>	<b>\$6,383</b>	

#### Specialties

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Casework	Fixed Cabinetry	6	Room	\$67,127	3
Casework	Lockers	120	Ea.	\$59,038	5

**Note:** Girl's gym lockers

**Sub Total for System** 2 items \$126,165  
**Sub Total for Building 01 - Main Building** 13 items \$2,726,488

### Building: 02 - Building 02

#### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings	72	SF	\$301	3
		<b>Sub Total for System</b>	<b>1 items</b>	<b>\$301</b>	
		<b>Sub Total for Building 02 - Building 02</b>	<b>1 items</b>	<b>\$301</b>	

### Building: 03 - Building 03

#### Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	CMU - Bldg SF Basis	2,000	SF	\$26,422	5
		<b>Sub Total for System</b>	<b>1 items</b>	<b>\$26,422</b>	

#### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings	1,900	SF	\$7,948	3



# Facility Condition Assessment

Tiverton - Tiverton High School

## Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Interior Coiling Doors	Overhead	1	Door	\$36,792	5
		<b>Sub Total for System</b>		<b>\$44,740</b>	
		<b>Sub Total for Building 03 - Building 03</b>		<b>\$71,162</b>	

## Building: 04 - Building 04

### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings	2,000	SF	\$8,366	3
Wall Painting and Coating	Painting/Staining (Bldg SF)	2,000	SF	\$13,215	3
		<b>Sub Total for System</b>		<b>\$21,581</b>	
		<b>Sub Total for Building 04 - Building 04</b>		<b>\$21,581</b>	

## Building: 05 - Maintenance Shed

### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Resilient Flooring	Vinyl Composition Tile Flooring	140	SF	\$1,606	4
		<b>Sub Total for System</b>		<b>\$1,606</b>	
		<b>Sub Total for Building 05 - Maintenance Shed</b>		<b>\$1,606</b>	

## Building: 06 - Septic House

### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings	300	SF	\$1,255	3
		<b>Sub Total for System</b>		<b>\$1,255</b>	
		<b>Sub Total for Building 06 - Septic House</b>		<b>\$1,255</b>	

## Building: 07 - Septic House 02

### Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	Wood Siding - Bldg SF basis	50	SF	\$1,499	5
		<b>Sub Total for System</b>		<b>\$1,499</b>	

### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	50	SF	\$330	5
		<b>Sub Total for System</b>		<b>\$330</b>	
		<b>Sub Total for Building 07 - Septic House 02</b>		<b>\$1,829</b>	
		<b>Total for: Tiverton High School</b>		<b>\$3,338,475</b>	



Supporting Photos



Site Aerial



Cracked Concrete Flooring



Septic House Exterior



Ponding On Roof



# Facility Condition Assessment

Tiverton - Tiverton High School



Chipped And Worn Wood Door



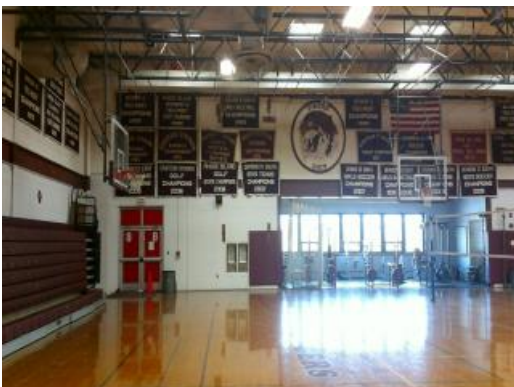
Cracked 9X9 Tile



West Elevation



Cracked Terrazzo Flooring



Gym



Maintenance Shed Electrical Panel



# Facility Condition Assessment

Tiverton - Tiverton High School



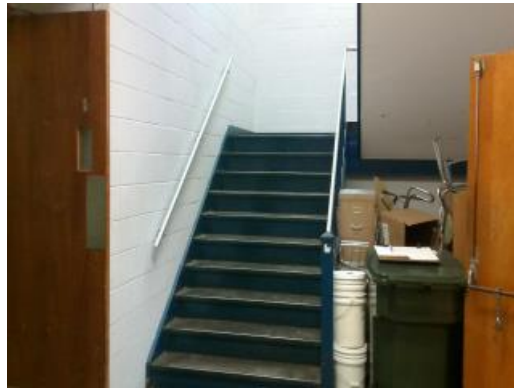
Music Room



Typical Light Fixtures



Exterior Finishes



No Handrail Extension At Top Or Bottom



Ponding At Gym Roof Edge



Stained Ceiling Tiles



# Facility Condition Assessment

Tiverton - Tiverton High School



Courtyard Window Well



Building 3 Building Mounted Light



Non-Functional Exhaust Fan



Building 3 Stained Concession Ceiling



Diesel Storage Tank



Cafeteria



# Facility Condition Assessment

Tiverton - Tiverton High School



Damaged Library Roof Soffit



Building 4 Electrical Panel



Auditorium



Main Power



Staining At Drain



East Elevation



Bubbled Carpet



Shop Class



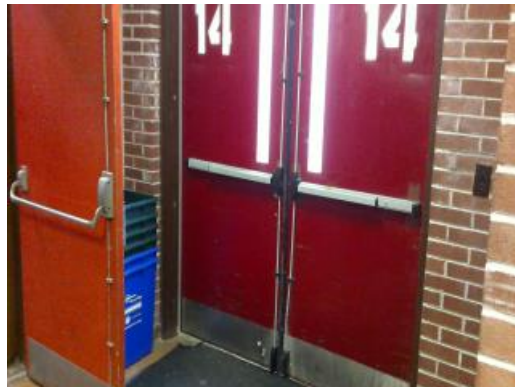
Stained Gypsum Ceiling



Library



Kitchen Sink



Exterior Doors



# Facility Condition Assessment

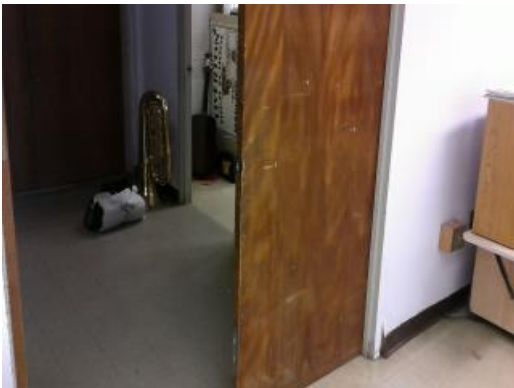
Tiverton - Tiverton High School



Courtyard



Scratched And Delaminating Wood Wall



Chipped And Worn Wood Door



Typical Window Condition



Septic House 2 Elevation



Building 3 Decaying Roof



Typical Stained And Torn Partition



Building 3 Damaged Roof Fascia



Showers



Ponding At Expansion Joint



Boys Toilet Room



Auditorium



Air Compressor



Stained And Weathered Stucco



Chipped 9X9 Tile



Original Water Storage Tank



Steel Tube Boilers



Original Lavatories



# Facility Condition Assessment

Tiverton - Tiverton High School



Science Room



Typical Classroom



Stained Ceiling Grid



Broken Concrete Retaining Wall



Steel Tube Boilers



Stained Gypsum Ceiling



Exterior Elevation



Peeling Stucco



Signage



East Roadway Asphalt Paving



Septic House Lavatory



Typical Classroom



Water Damaged Sill



Chipped Paint Window Well Railing



Concessions Sink



Gymnasium Partition



Front Entry Cracked Sidewalk



Evidence Of Water Damage At Window



# Facility Condition Assessment

Tiverton - Tiverton High School



Building 2 Elevation



Damaged Soffit At Library



Art Class



Original Radiant Heaters



Building 3 Exterior



Septic House Exhaust Fans



# Facility Condition Assessment

Tiverton - Tiverton High School



Original Urinals



Cafeteria



Peeling Wall Covering



Building 4



Maintenance Shed Elevation



Courtyard



Kitchen Hood



Maintenance Shed Unit Heater



Home Economics



HVAC Circulating Pump



Maintenance Shed Restroom Fixtures



Original Canopy Lighting



# Facility Condition Assessment

Tiverton - Tiverton High School



Air Compressors



Front Entry



Library



Ponding At Roof Edge



Concessions Lighting



Ponding On Low Roof Above Music Room



# Facility Condition Assessment

Tiverton - Tiverton High School



Septic House Electric Unit Heater



Front Entry



Wood Frame Windows



Septic House Updated Electrical



Main Office Counters



Locker Room



# Facility Condition Assessment

Tiverton - Tiverton Middle School

June 2017

10 Quintal Drive, Tiverton, RI 02878





## Introduction

Tiverton Middle School, located at 10 Quintal Drive in Tiverton, Rhode Island, was built in 1976. It comprises 142,000 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.

Tiverton Middle School serves grades 5 - 8, has 55 instructional spaces, and has an enrollment of 562. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Tiverton Middle School is 825 with a resulting utilization of 68%.

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 Tiverton Middle School the 5-year need is \$25,190,668. 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 Tiverton Middle 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 Tiverton Middle School campus, identified by discipline and building.

### Site

The site level systems for this campus include:

<b>Site</b>	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

### Building Envelope

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

<b>01 - Main Building:</b>	Brick Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors
	Overhead Exterior Utility Doors

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

<b>01 - Main Building:</b>	EPDM Roofing
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### Interior

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

<b>01 - Main Building:</b>	Foldable Interior Partition
	Steel Interior Doors
	Interior Door Hardware
	Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Ceramic Tile Wall
	Wood Wall Paneling
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Carpet

### Mechanical

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

<b>01 - Main Building:</b>	1,275 MBH Cast Iron Water Boiler
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<b>01 - Main Building:</b>	14,000 MBH Cast Iron Boiler
	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	Pneumatic Heating System Controls
	3 Ton D/X Fan Coil
	3 Ton Outside Air Cooled Condenser
	Window Units
	Make-up Air Unit
	5 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	Wall Exhaust Fan
	Kitchen Exhaust Hoods
	Fire Sprinkler System

## Plumbing

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

<b>01 - Main Building:</b>	2,000 Gallon Water Storage Tank
	4" Backflow Preventers
	Gas Piping System
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Sump Pump
	Air Compressor (2 hp)
	5,000 Gallon Above Ground Fuel Oil Storage Tank

## Electrical

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

<b>01 - Main Building:</b>	150 kW Emergency Generator
	Automatic Transfer Switch
	1,200 Amp Switchgear
	15 KVA Transformer
	75 KVA Transformer
	1600 Amp Distribution Panel



# Facility Condition Assessment

Tiverton - Tiverton Middle School

<b>01 - Main Building:</b>	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 277/480 100A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Light 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.



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	-	-	\$270,233	\$1,207,296	\$330,645	\$1,808,174	8.59 %
Roofing	-	\$3,561,796	-	-	-	\$3,561,796	16.92 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	\$852,296	-	-	\$99,576	\$951,872	4.52 %
Interior	-	-	\$2,683,275	\$1,324,179	\$1,536	\$4,008,990	19.04 %
Mechanical	-	\$2,688,722	\$763,521	\$1,033,753	-	\$4,485,996	21.31 %
Electrical	\$9,819	\$1,532,544	\$308,069	-	\$100,556	\$1,950,988	9.27 %
Plumbing	-	\$27,547	\$460,246	\$520,061	\$85,408	\$1,093,261	5.19 %
Fire and Life Safety	\$111,034	-	-	-	-	\$111,034	0.53 %
Technology	-	-	\$2,344,779	-	-	\$2,344,779	11.14 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$9,065	\$666,748	\$59,491	\$735,304	3.49 %
<b>Total</b>	\$120,853	\$8,662,905	\$6,839,187	\$4,752,037	\$677,212	\$21,052,194	

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

The building systems with the most need include:

Mechanical	-	\$4,485,996
Interior	-	\$4,008,990
Roofing	-	\$3,561,796

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

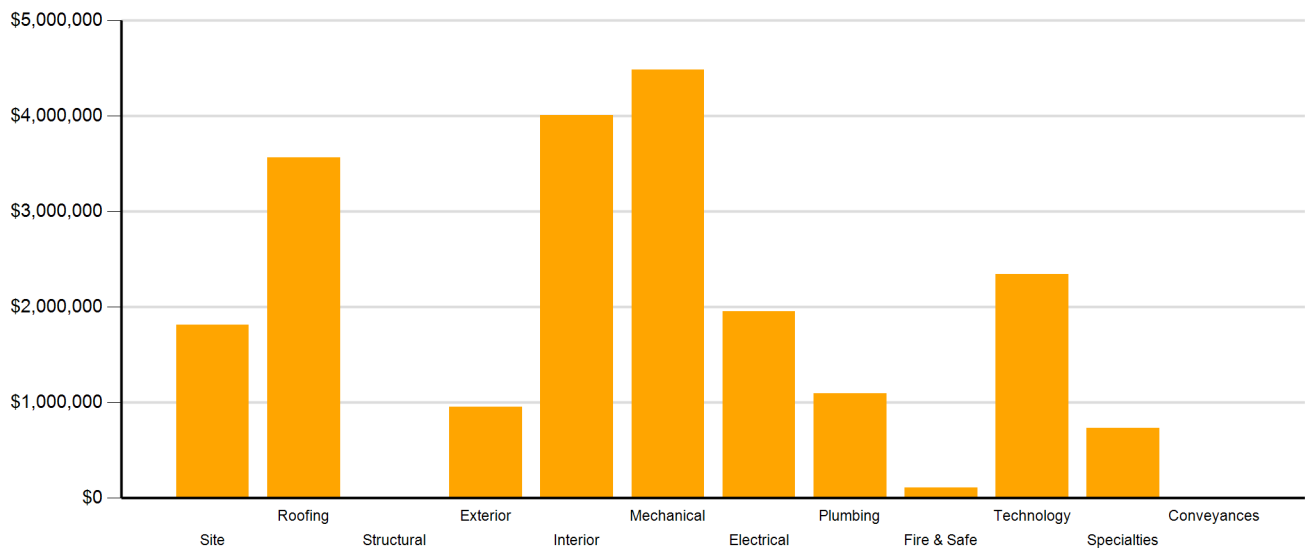


Figure 2: System Deficiencies



## 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	-	-	\$815,894	-	-	\$815,894
Barrier to Accessibility	-	-	-	-	-	\$0
Capital Renewal	\$31,713	\$8,662,905	\$3,629,562	\$4,682,495	\$156,234	\$17,162,909
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	\$89,140	-	\$128,046	-	\$520,978	\$738,165
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	\$69,542	-	\$69,542
Technology	-	-	\$2,225,798	-	-	\$2,225,798
Traffic	-	-	\$39,887	-	-	\$39,887
<b>Total</b>	<b>\$120,853</b>	<b>\$8,662,905</b>	<b>\$6,839,187</b>	<b>\$4,752,037</b>	<b>\$677,212</b>	<b>\$21,052,194</b>

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

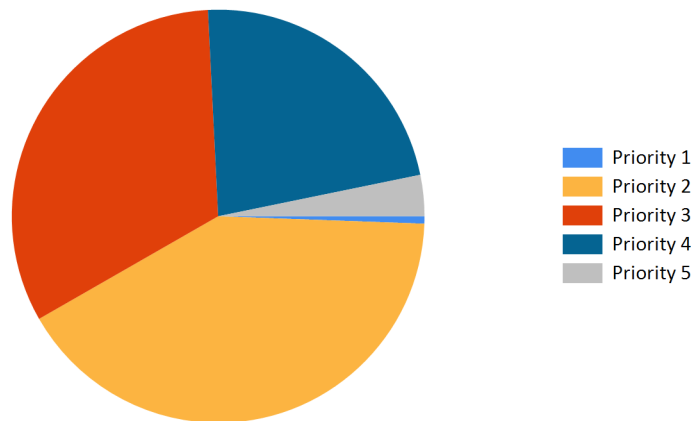


Figure 3: Current deficiencies by priority



### 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	\$1,808,174	\$0	\$0	\$339,701	\$0	\$0	\$339,701	\$2,147,875
Roofing	\$3,561,796	\$0	\$0	\$0	\$0	\$89,774	\$89,774	\$3,651,570
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$951,872	\$0	\$0	\$0	\$0	\$0	\$0	\$951,872
Interior	\$4,008,990	\$0	\$831,204	\$0	\$156,865	\$470,595	\$1,458,664	\$5,467,654
Mechanical	\$4,485,996	\$0	\$0	\$1,094,563	\$0	\$0	\$1,094,563	\$5,580,559
Electrical	\$1,950,988	\$0	\$0	\$0	\$0	\$123,591	\$123,591	\$2,074,579
Plumbing	\$1,093,261	\$0	\$0	\$0	\$0	\$0	\$0	\$1,093,261
Fire and Life Safety	\$111,034	\$0	\$0	\$0	\$0	\$0	\$0	\$111,034
Technology	\$2,344,779	\$0	\$0	\$0	\$0	\$0	\$0	\$2,344,779
Conveyances	\$0	\$0	\$0	\$0	\$0	\$285,209	\$285,209	\$285,209
Specialties	\$735,304	\$0	\$0	\$0	\$737,979	\$0	\$737,979	\$1,473,283
<b>Total</b>	<b>\$21,052,194</b>	<b>\$0</b>	<b>\$831,204</b>	<b>\$1,434,264</b>	<b>\$894,844</b>	<b>\$969,169</b>	<b>\$4,129,481</b>	<b>\$25,181,675</b>

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

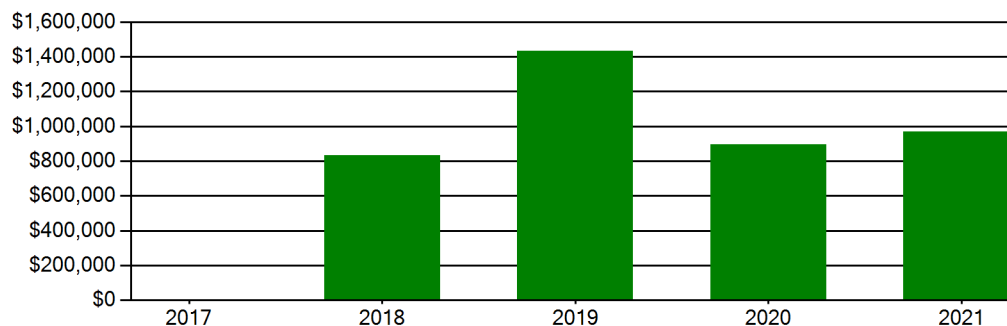
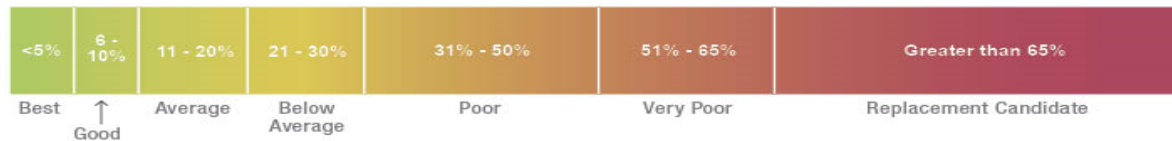


Figure 4: Life Cycle Capital Renewal Forecast



## 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 \$46,860,000. For planning purposes, the total 5-year need at the Tiverton Middle School is \$25,190,668 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Tiverton Middle School facility has a 5-year FCI of 53.74%.

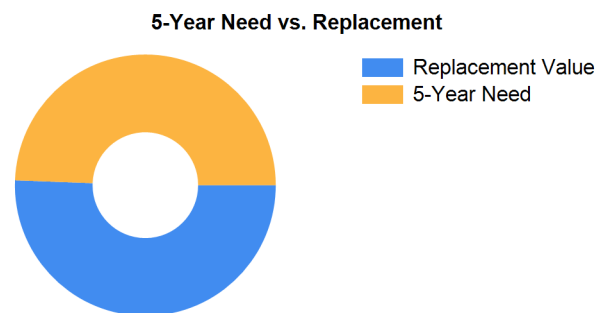


Figure 5: 5-Year FCI

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 780 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 Tiverton Middle School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$1,235,995.



### Summary of Findings

The Tiverton Middle School comprises 142,000 square feet and was constructed in 1976. Current deficiencies at this school total \$21,061,187. Five year capital renewal costs total \$4,129,481. The total identified need for the Tiverton Middle School (current deficiencies and 5-year capital renewal costs) is \$25,190,668. The 5-year FCI is 53.74%.

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
Tiverton Middle School Totals	142,000	1976	\$21,061,187	\$4,129,481	\$25,190,668	53.74%

*\*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 <b>Note:</b> Sidewalks are splitting and cracking and steps are settling.	Capital Renewal	11,346	SF	3	\$230,346	2685
Install New Paving <b>Note:</b> Construct exit further down Quintal Road	Traffic	1,920	SF	3	\$39,887	4492
Asphalt Paving Requires Replacement <b>Note:</b> Alligating, cracking, and splitting throughout.	Capital Renewal	128	CAR	4	\$420,639	2682
Asphalt Paving Requires Replacement <b>Note:</b> Cracking, splitting, and ponding throughout.	Capital Renewal	230	CAR	4	\$755,835	2684
Fencing Requires Replacement (4' Chain Link Fence) <b>Note:</b> Fencing is falling and poles and chain link are rusting.	Capital Renewal	480	LF	4	\$30,822	2681
Exterior Basketball Goals are Required <b>Note:</b> Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28813
School lacks a competition track. <b>Note:</b> School lacks a competition track.	Educational Adequacy	1	Ea.	5	\$324,837	28276
<b>Sub Total for System</b>		<b>7</b>	<b>items</b>		<b>\$1,808,174</b>	

### Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Pole Lighting Requires Replacement <b>Note:</b> Mercury vapor lights with broken or clouded lenses.	Capital Renewal	33	Ea.	3	\$253,532	2680
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$253,532</b>	
<b>Sub Total for School and Site Level</b>		<b>8</b>	<b>items</b>		<b>\$2,061,706</b>	

## Building: 01 - Main Building

### Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
EPDM Roofing Requires Replacement (Bldg SF) <b>Note:</b> The roof has ongoing issues. There are bubbles throughout and there is evidence of water infiltration.	Capital Renewal	75,300	SF	2	\$945,702	2946
The Tectum Decking Requires Replacement <b>Note:</b> Tectum is aged, with warping and general wear.	Capital Renewal	35,500	SF	2	\$2,616,094	2948
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$3,561,796</b>	

### Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement <b>Note:</b> 81 @ 3x6 - Windows are aged with many not operational.	Capital Renewal	1,458	SF	2	\$245,067	2938
The Aluminum Window Requires Replacement <b>Note:</b> 85 @ 2x6 - Windows are aged with many not operational.	Capital Renewal	1,020	SF	2	\$171,446	2939
The Aluminum Window Requires Replacement <b>Note:</b> 30 @ 4x6 - Windows are aged with many not operational.	Capital Renewal	720	SF	2	\$121,021	2940
The Aluminum Window Requires Replacement <b>Note:</b> 9 @ 3x3 - Windows are aged with many not operational.	Capital Renewal	81	SF	2	\$13,615	2941
The Aluminum Window Requires Replacement <b>Note:</b> 8 @ 1x6 - Windows are aged with many not operational.	Capital Renewal	48	SF	2	\$8,068	2942
The Aluminum Window Requires Replacement <b>Note:</b> 22 @ 1x3 - Windows are aged with many not operational.	Capital Renewal	66	SF	2	\$11,094	2943
The Aluminum Window Requires Replacement <b>Note:</b> 10 @ 1x18 - Windows are aged with many not operational.	Capital Renewal	180	SF	2	\$30,255	2944
The Aluminum Window Requires Replacement <b>Note:</b> 5 @ 4x18 - Windows are aged with many not operational.	Capital Renewal	360	SF	2	\$60,510	2945
The Metal Exterior Door Requires Replacement <b>Note:</b> Original exterior doors are worn with some not fully operation. They should be replaced.	Capital Renewal	30	Door	2	\$191,220	2716



# Facility Condition Assessment

Tiverton - Tiverton Middle School

## Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Exterior Requires Cleaning	Capital Renewal	37,000	SF Wall	5	\$99,576	3023
<b>Note:</b> Exterior brick facade should be cleaned.						
<b>Sub Total for System</b>		<b>10</b>	<b>items</b>		<b>\$951,872</b>	

## Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation	Acoustics	56	Ea.	3	\$462,969	4741
<b>Note:</b> All classrooms						
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	104,145	SF	3	\$934,264	2711
The Carpet Flooring Requires Replacement	Capital Renewal	7,100	SF	3	\$153,429	2949
<b>Note:</b> There is carpet in the main office and library. The carpet has been patched and in some areas is fraying.						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	99,400	SF	3	\$1,132,613	2714
<b>Note:</b> Original tile is chipped, aged, and very worn out.						
Acoustic ceiling tile - large area (>10%) of broken or falling broken tiles	Hazardous Material	2,355	SF	4	\$27,379	Rollup
Caulking - significant areas of broken pieces &/or deteriorating caulk	Hazardous Material	100	LF	4	\$1,889	Rollup
Ceiling Grid Requires Replacement	Capital Renewal	106,500	SF	4	\$1,254,637	2947
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	2	Ea.	4	\$567	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas (> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - square feet)	Hazardous Material	3,725	SF	4	\$35,175	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas(> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - each)	Hazardous Material	4	Ea.	4	\$1,133	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas(> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - linear feet)	Hazardous Material	150	LF	4	\$3,399	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	1	Ea.	5	\$1,536	Rollup
<b>Sub Total for System</b>		<b>12</b>	<b>items</b>		<b>\$4,008,990</b>	

## Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Unit Vent	Capital Renewal	48	Ea.	2	\$806,443	2689
<b>Note:</b> Units are aged with clogged fins, blowers, and coils.						
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	2	Ea.	2	\$1,578,219	2728
<b>Note:</b> 11,074 MBH oil fired - propane pilot boilers						
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	1	Ea.	2	\$74,797	2737
The Exterior Condenser Requires Replacement	Capital Renewal	1	Ea.	2	\$8,066	2738
<b>Note:</b> Coils have collapsed.						
The Fan Coil HVAC Component Requires Replacement	Capital Renewal	1	Ea.	2	\$5,666	2740
The Radiant Heat HVAC Component Requires Replacement	Capital Renewal	25	Ea.	2	\$189,001	2705
<b>Note:</b> Aged with corroded connections and clogged fins.						
The Window AC Unit Component Requires Replacement	Capital Renewal	8	Ea.	2	\$26,531	2712
<b>Note:</b> Units are missing parts or are non-functional.						
The Large Diameter Exhausts/Hoods Require Replacement	Capital Renewal	21	Ea.	3	\$289,798	2709
<b>Note:</b> Units are rusted and damaged, missing hoods and/or belts.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	4	Ea.	3	\$63,170	2720
<b>Note:</b> Gym units are non-functional. Locker room units do not heat.						
<b>Location:</b> 2 in gym, 2 in locker rooms						
The Small Diameter Exhausts/Hoods Require Replacement	Capital Renewal	22	Ea.	3	\$57,628	2708
<b>Note:</b> Units are rusted and damaged, missing hoods and/or belts.						
Unit Ventilators Are Excessively Noisy	Acoustics	56	Ea.	3	\$352,925	4742
<b>Note:</b> All classrooms						
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	2	Ea.	4	\$5,319	2723
<b>Note:</b> Units are aged and blades and louvers are packed with dirt.						
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	142,000	SF	4	\$952,709	2744
<b>Note:</b> System has leaks throughout.						
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	8	Ea.	4	\$75,725	2713
<b>Note:</b> Pumps leak.						
<b>Sub Total for System</b>		<b>14</b>	<b>items</b>		<b>\$4,485,996</b>	



# Facility Condition Assessment

Tiverton - Tiverton Middle School

## Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	7	Ea.	1	\$9,819	Rollup
Switchgear Is Needed Or Requires Replacement <b>Note:</b> Switchgear and breakers are aged and not tested.	Capital Renewal	5	Ea.	2	\$342,968	2717
The Distribution Panel Requires Replacement	Capital Renewal	1	Ea.	2	\$51,559	2950
The Distribution Panel Requires Replacement	Capital Renewal	1	Ea.	2	\$51,559	2951
The Electrical Disconnect Requires Replacement <b>Note:</b> Corrosion at contact tabs	Capital Renewal	3	Ea.	2	\$5,462	2721
The Electrical Transformer Requires Replacement	Capital Renewal	1	Ea.	2	\$10,450	2734
The Lighting Fixtures Require Replacement	Capital Renewal	142,000	SF	2	\$838,062	2743
The Panelboard Requires Replacement <b>Note:</b> Panels have corroded connections.	Capital Renewal	26	Ea.	2	\$149,765	2704
The Panelboard Requires Replacement <b>Note:</b> Panels have corrosion at connections and are missing twist outs.	Capital Renewal	14	Ea.	2	\$67,423	2715
The Panelboard Requires Replacement <b>Note:</b> Aged panelboards missing covers.	Capital Renewal	2	Ea.	2	\$15,298	2724
The Mounted Building Lighting Requires Replacement	Capital Renewal	32	Ea.	3	\$47,441	2702
Transfer Switch Requires Replacement <b>Note:</b> Contacts are burned.	Capital Renewal	200	Amps	3	\$7,095	2688
Room Has Insufficient Electrical Outlets	Educational Adequacy	204	Ea.	5	\$100,556	Rollup
<b>Sub Total for System</b>		<b>13 items</b>			<b>\$1,697,456</b>	

## Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Backflow Preventer Requires Replacement <b>Note:</b> Backflow preventer is aged and connections are rusted.	Capital Renewal	3	Ea.	2	\$27,547	2731
Sump Pump Requires Replacement <b>Note:</b> Pumps are failing. Sump is full.	Capital Renewal	2	Ea.	3	\$2,878	2729
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	56	Ea.	3	\$423,044	2699
The Urinal Plumbing Fixtures Require Replacement <b>Note:</b> Aged urinals are stained and cracking.	Capital Renewal	26	Ea.	3	\$34,323	2703
The Classroom Lavatories Plumbing Fixtures Require Replacement <b>Note:</b> Classroom lavatories are stained and rusted and the science units are non-functional.	Capital Renewal	67	Ea.	4	\$180,946	2692
The Custodial Mop Or Service Sink Requires Replacement <b>Note:</b> Sinks are corroded and stained.	Capital Renewal	6	Ea.	4	\$15,354	2718
The Refrigerated Water Cooler Requires Replacement <b>Note:</b> Units are aged and rusted. Some have missing parts or are broken.	Capital Renewal	14	Ea.	4	\$102,588	2710
The Restroom Lavatories Plumbing Fixtures Require Replacement <b>Note:</b> Restroom lavatories are aged and stained.	Capital Renewal	47	Ea.	4	\$148,502	2700
The Restroom Lavatories Plumbing Fixtures Require Replacement <b>Note:</b> Lavatories aged, stained, and drains are clogged.	Capital Renewal	23	Ea.	4	\$72,671	2707
Above Ground Fuel/Oil Storage Tank Requires Replacement <b>Note:</b> There is no tank gauging system and the concrete protection is cracked with damaged insulation.	Capital Renewal	1	Ea.	5	\$56,658	2745
Room lacks a drinking fountain.	Educational Adequacy	6	Ea.	5	\$6,572	Rollup
Room lacks a private shower area.	Educational Adequacy	1	Ea.	5	\$10,166	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	8	Ea.	5	\$12,011	Rollup
<b>Sub Total for System</b>		<b>13 items</b>			<b>\$1,093,261</b>	

## Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Kitchen Exhaust Hood <b>Note:</b> System is aged and has damaged and clogged filters.	Capital Renewal	2	Ea.	1	\$31,713	2722
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	7	Ea.	1	\$79,321	Rollup
<b>Sub Total for System</b>		<b>2 items</b>			<b>\$111,034</b>	



# Facility Condition Assessment

Tiverton - Tiverton Middle School

## Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	21	Ea.	3	\$118,981	Rollup
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	\$94,430	4003
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$9,443	3998
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	48	Ea.	3	\$951,849	3999
Technology: Instructional spaces do not have local sound reinforcement.	Technology	48	Ea.	3	\$226,631	3996
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,288	3991
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,394	3990
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,721	3995
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$6,610	3987
Technology: Main Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$8,971	3989
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	78	Ea.	3	\$33,145	3988
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	166	Ea.	3	\$70,539	3993
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	192	Ea.	3	\$81,587	4005
Technology: Network system inadequate and/or near end of useful life	Technology	8	Ea.	3	\$60,435	4001
Technology: Network system inadequate and/or near end of useful life	Technology	44	Ea.	3	\$207,745	4002
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	142,000	SF	3	\$241,362	4004
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$53,825	3997
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	6	Room	3	\$113,315	4000
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	3986
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,721	3992
Technology: Telecommunications Room fiber connectivity infrastructure is outdated and/or inadequate.	Technology	1	Ea.	3	\$6,232	3994
<b>Sub Total for System</b>		<b>21</b>	<b>items</b>		<b>\$2,344,779</b>	

## Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	2	Ea.	3	\$9,065	Rollup
Replace Cabinetry In Classes/Labs	Capital Renewal	60	Room	4	\$666,748	2952
Room lacks an appropriate refrigerator.	Educational Adequacy	7	Ea.	5	\$59,491	Rollup
<b>Sub Total for System</b>		<b>3</b>	<b>items</b>		<b>\$735,304</b>	
<b>Sub Total for Building 01 - Main Building</b>		<b>90</b>	<b>items</b>		<b>\$18,990,488</b>	
<b>Total for Campus</b>		<b>98</b>	<b>items</b>		<b>\$21,052,194</b>	



## Tiverton Middle School - Life Cycle Summary Yrs 1-5

### Site Level Life Cycle Items

#### Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Playfield Areas	MS Athletic Components	1	Ea.	\$339,701	3
		<b>Sub Total for System</b>		<b>\$339,701</b>	
		<b>Sub Total for Building -</b>		<b>\$339,701</b>	

### Building: 01 - Main Building

#### Roofing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Low-Slope Roofing	EPDM - Rubber Roofing Material	7,100	SF	\$89,774	5
		<b>Sub Total for System</b>		<b>\$89,774</b>	

#### Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	125,800	SF	\$831,204	2
Interior Operable Partitions	Foldable partition (Bldg SF)	1,200	SF Wall	\$138,612	4
Wall Paneling	Wood Panel wall	2,000	SF	\$18,253	4
<b>Note:</b> Stage area					
Interior Door Supplementary Components	Door Hardware	150	Door	\$470,595	5
		<b>Sub Total for System</b>		<b>\$1,458,664</b>	

#### Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Facility Hydronic Distribution	2-Pipe Water System (Hot)	142,000	SF	\$1,094,563	3
		<b>Sub Total for System</b>		<b>\$1,094,563</b>	

#### Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Packaged Generator Assemblies	Emergency Generator (150 KW)	1	Ea.	\$123,591	5
		<b>Sub Total for System</b>		<b>\$123,591</b>	

#### Conveyances

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Elevators	Hydraulic (Passenger Elev)	1	Ea.	\$285,209	5
		<b>Sub Total for System</b>		<b>\$285,209</b>	

#### Specialties

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Casework	Lockers	1,500	Ea.	\$737,979	4
		<b>Sub Total for System</b>		<b>\$737,979</b>	
		<b>Sub Total for Building 01 - Main Building</b>		<b>\$3,789,780</b>	
		<b>Total for: Tiverton Middle School</b>		<b>\$4,129,481</b>	



**Supporting Photos**



Site Aerial



Aged Pole Mounted Lights



Alligatoring Parking Lot Pavement



Cracked Concrete Walkway



Cracked Roadway Asphalt



Concrete Stairs Settling



Hallway Finishes



Condenser With Collapsed Coils



Science Room



100A Panelboard



# Facility Condition Assessment

Tiverton - Tiverton Middle School



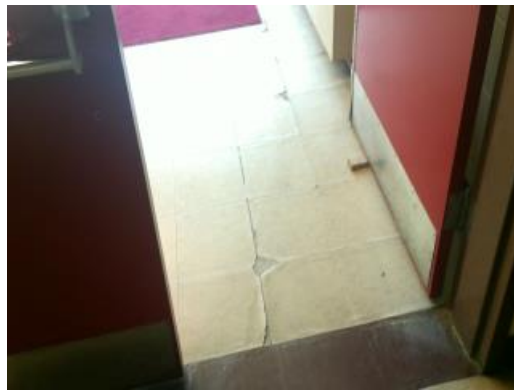
Roof General Condition



Transformer



Typical Restroom Lavatory Fixture



Peeling VCT Flooring



Aged Boilers



Original Exterior Doors



# Facility Condition Assessment

Tiverton - Tiverton Middle School



Pneumatic Controls Panel



Typical Urinal Fixture



Transfer Switch With Burned Contacts



Transformer Disconnect



Damaged Small Exhaust Fan

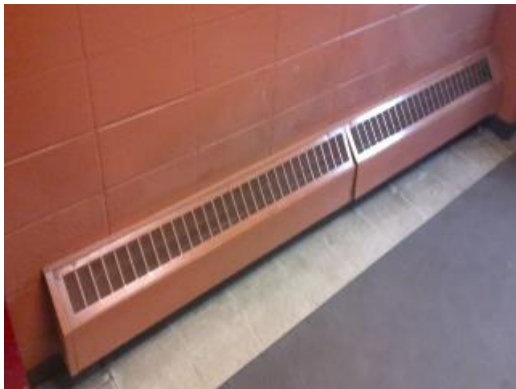


Typical Building Mounted Fixture



# Facility Condition Assessment

Tiverton - Tiverton Middle School



Aged Radiant Heaters



Non-Functional Make-up Air Unit



Damaged Drinking Fountain



Building Signage



Gymnasium



Fire Panel



# Facility Condition Assessment

Tiverton - Tiverton Middle School



Music Room



Aged Heating Unit



Damaged And Missing Ceiling Tiles



Typical Classroom



Exhaust Fan Missing Hood



Window Unit



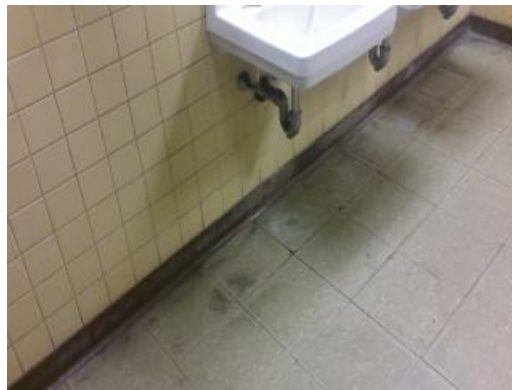
Switchgear



Non-Functional Heating Unit



Stained Mop Sink



Curling VCT Flooring In Restroom



Failing Sump Pump



Compressor For Pneumatic Controls



# Facility Condition Assessment

Tiverton - Tiverton Middle School



Cafeteria



225A Panel With Corroded Connections



Aged Boiler For Hot Water



Aged Water Pumps



Worn VCT Flooring



Boys Bathroom



# Facility Condition Assessment

Tiverton - Tiverton Middle School



Shower Fixtures



Fuel Storage Tank



Damaged Insulation At Fuel Tank



Cracked Concrete On Fuel Tank



Main Entrance



Aged Wall Exhaust



# Facility Condition Assessment

Tiverton - Tiverton Middle School



Stained Lavatory



Stained And Corroded Service Sink



Aged Backflow Preventer



Stained And Worn Classroom Lavatory



# Facility Condition Assessment

Tiverton - Walter E. Ranger School

*June 2017*

278 North Brayton Road, Tiverton, RI 02878



## Introduction

Walter E. Ranger School, located at 278 North Brayton Road in Tiverton, Rhode Island, was built in 2007. It comprises 41,500 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.

Walter E. Ranger School serves grades PK - 4, has 22 instructional spaces, and has an enrollment of 235. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Walter E. Ranger School is 330 with a resulting utilization of 71%.

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 Walter E. Ranger School the 5-year need is \$1,478,758. 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 Walter E. Ranger 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 Walter E. Ranger School campus, identified by discipline and building.

### Site

The site level systems for this campus include:

### Building Envelope

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

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

### Interior

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

### Mechanical

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

### Plumbing

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

### Electrical

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



## 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.



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	-	-	-	\$28,329	\$703,225	\$731,554	92.01 %
Roofing	-	-	-	-	-	\$0	0.00 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	-	-	-	-	\$0	0.00 %
Interior	-	-	-	-	-	\$0	0.00 %
Mechanical	-	-	-	-	-	\$0	0.00 %
Electrical	-	-	-	-	\$41,405	\$41,405	5.21 %
Plumbing	-	-	-	-	\$13,086	\$13,086	1.65 %
Fire and Life Safety	-	-	-	-	-	\$0	0.00 %
Technology	-	-	-	-	-	\$0	0.00 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$9,065	-	-	\$9,065	1.14 %
<b>Total</b>	\$0	\$0	\$9,065	\$28,329	\$757,717	\$795,111	

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

The building systems with the most need include:

Site	-	\$731,554
Electrical	-	\$41,405
Plumbing	-	\$13,086

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

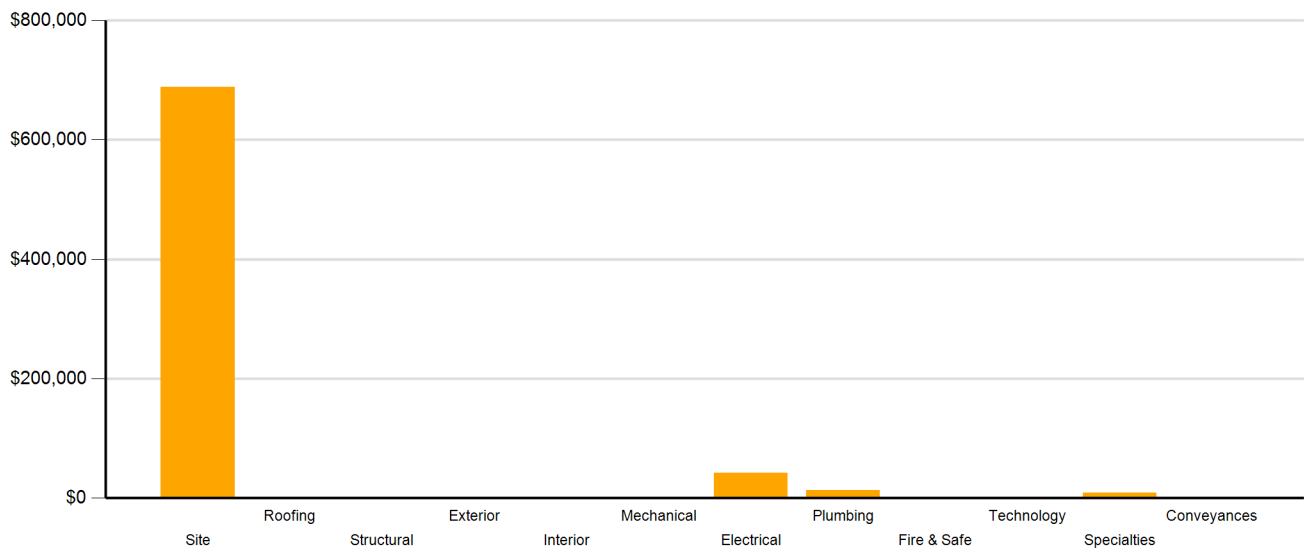


Figure 2: System Deficiencies



## 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	-	-	-	-	-	\$0
Capital Renewal	-	-	-	-	\$697,418	\$697,418
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	-	-	\$9,065	\$28,329	\$60,299	\$97,693
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	-	-	\$0
Technology	-	-	-	-	-	\$0
Traffic	-	-	-	-	-	\$0
<b>Total</b>	\$0	\$0	\$9,065	\$28,329	\$757,717	\$795,111

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

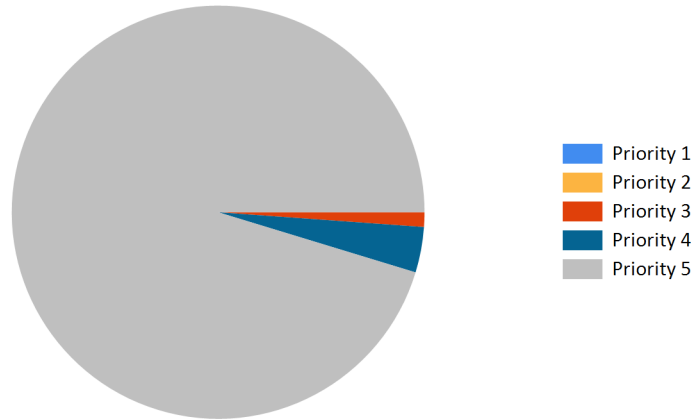


Figure 3: Current deficiencies by priority



### 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	\$731,554	\$145,250	\$145,250	\$145,250	\$145,250	\$145,250	\$726,250	\$1,457,804
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interior	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mechanical	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electrical	\$41,405	\$0	\$0	\$0	\$0	\$0	\$0	\$41,405
Plumbing	\$13,086	\$0	\$0	\$0	\$0	\$0	\$0	\$13,086
Fire and Life Safety	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Technology	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$9,065	\$0	\$0	\$0	\$0	\$0	\$0	\$9,065
<b>Total</b>	<b>\$795,111</b>	<b>\$145,250</b>	<b>\$145,250</b>	<b>\$145,250</b>	<b>\$145,250</b>	<b>\$145,250</b>	<b>\$726,250</b>	<b>\$1,521,361</b>

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

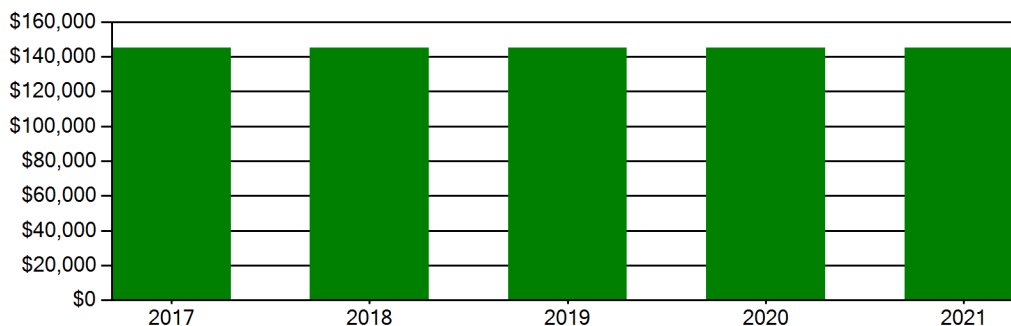
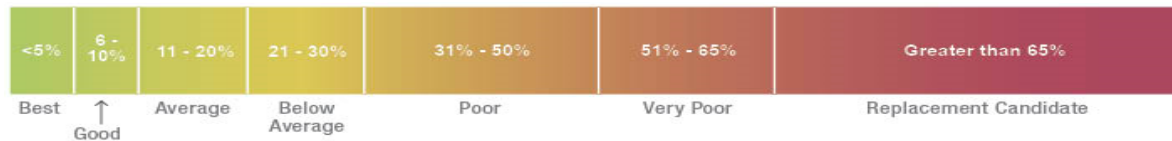


Figure 4: Life Cycle Capital Renewal Forecast



### 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 \$14,525,000. For planning purposes, the total 5-year need at the Walter E. Ranger School is \$1,478,758 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Walter E. Ranger School facility has a 5-year FCI of 10.47%.

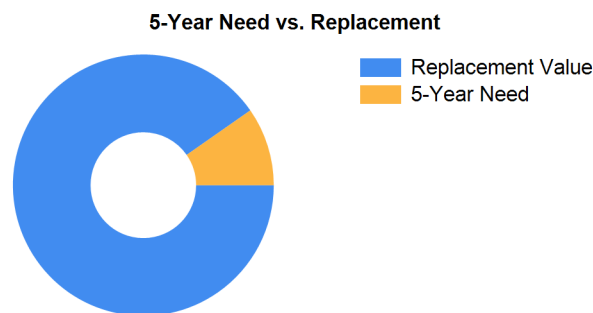


Figure 5: 5-Year FCI

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 231 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 Walter E. Ranger School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$0.



### Summary of Findings

The Walter E. Ranger School comprises 41,500 square feet and was constructed in 2007. Current deficiencies at this school total \$752,508. Five year capital renewal costs total \$726,250. The total identified need for the Walter E. Ranger School (current deficiencies and 5-year capital renewal costs) is \$1,478,758. The 5-year FCI is 10.47%.

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
Walter E. Ranger School Totals	41,500	2007	\$752,508	\$726,250	\$1,478,758	10.47%

*\*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
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28596
<b>Note:</b> Backstops Require Replacement						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28810
<b>Note:</b> Exterior Basketball Goals are Required						
Maintenance allowance. Facility Condition Assessment not performed.	Capital Renewal	1	LS	5	\$697,418	53594
<b>Note:</b> Annual maintenance allowance. Condition assessment not performed.						
<b>Sub Total for System</b>		<b>3</b>	<b>items</b>		<b>\$731,554</b>	
<b>Sub Total for School and Site Level</b>		<b>3</b>	<b>items</b>		<b>\$731,554</b>	

## Building: 01 - Main Building

### Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Has Insufficient Electrical Outlets	Educational Adequacy	84	Ea.	5	\$41,405	Rollup
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$41,405</b>	

### Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks a drinking fountain.	Educational Adequacy	5	Ea.	5	\$5,477	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	7	Ea.	5	\$7,609	Rollup
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$13,086</b>	

### Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	2	Ea.	3	\$9,065	Rollup
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$9,065</b>	
<b>Sub Total for Building 01 - Main Building</b>		<b>4</b>	<b>items</b>		<b>\$63,557</b>	
<b>Total for Campus</b>		<b>7</b>	<b>items</b>		<b>\$795,111</b>	



**Walter E. Ranger School - Life Cycle Summary Yrs 1-5**

**Site Level Life Cycle Items**

**Site**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	41,500	SF	\$145,250	1
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	41,500	SF	\$145,250	2
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	41,500	SF	\$145,250	3
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	41,500	SF	\$145,250	4
Facility Maintenance	ES Annual Maintenance Allowance - 1% Replacement Value (CCI 106.7)	41,500	SF	\$145,250	5
<b>Sub Total for System</b>		<b>5</b>	<b>items</b>	<b>\$726,249</b>	
<b>Sub Total for Building -</b>		<b>5</b>	<b>items</b>	<b>\$726,249</b>	
<b>Total for: Walter E. Ranger School</b>		<b>5</b>	<b>items</b>	<b>\$726,249</b>	



**Supporting Photos**



Site Aerial