South Kingstown

LEA Summary

South Kingstown totals 683,619 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 from April-May 2016. This report provides LEA summary findings for the statewide assessment program.

School Type by Count

School Type	SqFt
Pre-K	37,350
Elementary School	207,388
Middle School	177,478
High School	261,403
Total:	**683,619**

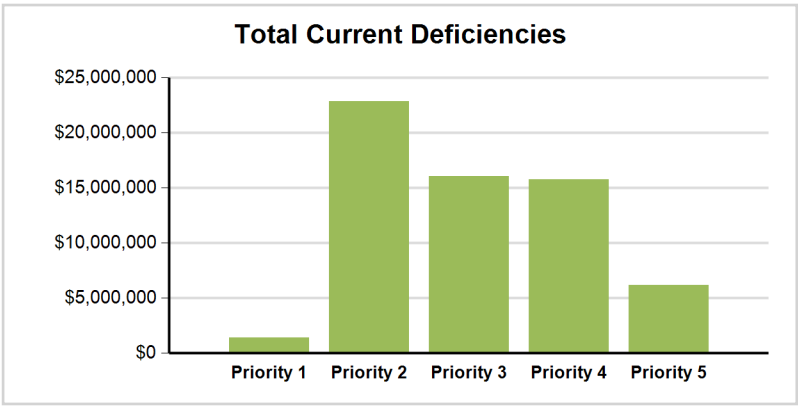
Demographics

Enrollment is projected to decrease by 12.1% over the next 10 years in South Kingstown. The total LEA enrollment at 9 school (s) is 3,231 students with a total capacity of 5,043 as reported by the LEA. Utilization is calculated by dividing enrollment by capacity, resulting in 64.1% utilization at South Kingstown.

64.1 % Utilization

Educational Program Space Analysis

In South Kingstown there are 333 instructional spaces; of these spaces 27.9% meet or exceed the space size standards. Of the total current deficiencies identified, $5,829,632 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 $62,223,053, with 36.7% categorized as Priority 2 and another 25.8% as Priority 3. The building systems with the highest current deficiency costs are Mechanical and Interior.

The projected life cycle need in Years 1 through 5 is $27,751,270. 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 55.5% of the combined 5-Year need at South Kingstown.

School(s) with Greatest Need	Combined 5-Year Need
South Kingstown High School	$24,701,149
Curtis Corner Middle School	$15,663,052
Peace Dale Elementary School	$9,604,036

Five Year Facility Condition Index (FCI)

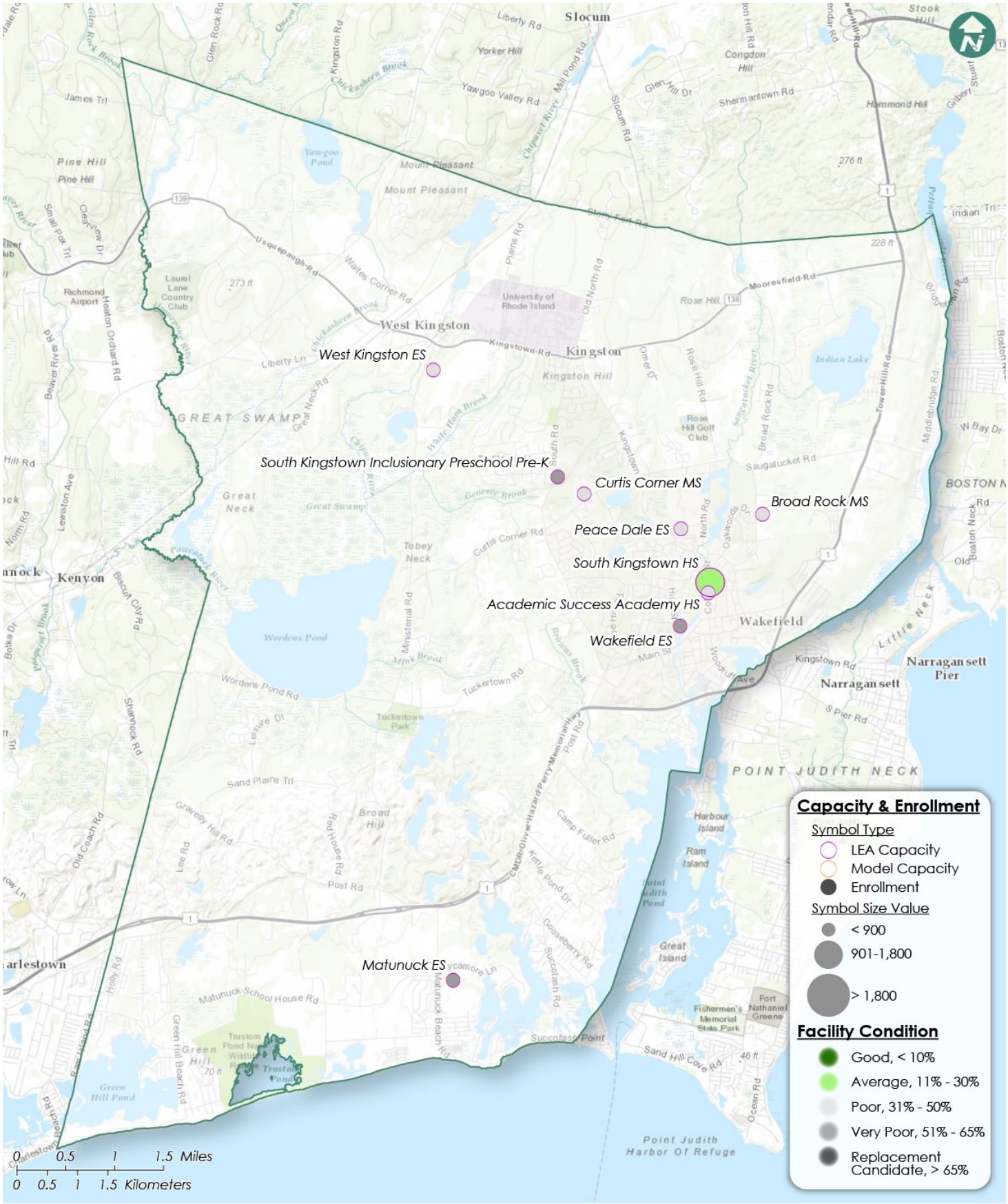
For master planning purposes, the total current deficiencies, less new construction, and the first 5 years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-Year FCI was calculated by dividing the 5-Year need by the total replacement cost. The 5-Year need is $89,974,323 with a district replacement value of $238,331,120. The resulting 5-Year FCI is 37.8%.

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
683,619	1960	$62,223,053	$27,751,270	$89,974,323	37.8%

South Kingstown

LEA Summary



Facility Condition Assessment

South Kingstown - Academic Success Academy | *June 2017*

153 School Street, Wakefield, RI 02879

Introduction

Academic Success Academy, located at 153 School Street in Wakefield, Rhode Island, was built in 1920. It comprises 26,503 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.

Academic Success Academy serves grades HS, has 7 instructional spaces, and enrollment was not provided. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Academic Success Academy is 112 with a resulting utilization of 0%.

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 Academic Success Academy the 5-year need is $3,678,702. 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 Academic Success Academy

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 Academic Success Academy campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	Painted Exterior Wall
	Stucco Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors

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

01 - Main Building:	Composition Shingle Roofing

Interior

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

01 - Main Building:	Steel Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Non-Painted Plaster/Gypsum Board Ceiling
	CMU Wall
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Vinyl Composition Tile Flooring
	Carpet
	Athletic/Sport Flooring

Mechanical

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

01 - Main Building:	1,275 MBH Cast Iron Water Boiler
	Steam/Hot Water Heating Unit Vent

01 - Main Building:	Fin Tube Water Radiant Heater
	Pneumatic Heating System Controls
	1 Ton Ductless Split System
	2 Ton Ductless Split System
	5 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	5,000 CFM Interior AHU
	Roof Exhaust Fan
	Fire Sprinkler System

Plumbing

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

01 - Main Building:	2" Backflow Preventers
	Gas Piping System
	75 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
	Air Compressor (2 hp)

Electrical

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

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

Facility Deficiency Priority Levels

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

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

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

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

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

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

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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$6,043	$264,938	$1,003,716	$1,274,698	50.49 %
Roofing	-	-	-	-	-	$0	0.00 %
Structural	$47,215	-	-	-	-	$47,215	1.87 %
Exterior	-	-	-	-	-	$0	0.00 %
Interior	-	-	$257,923	$750,828	$15,864	$1,024,615	40.59 %
Mechanical	-	-	-	$18,931	-	$18,931	0.75 %
Electrical	-	-	-	-	$13,802	$13,802	0.55 %
Plumbing	-	-	-	$2,559	-	$2,559	0.10 %
Fire and Life Safety	-	-	-	-	-	$0	0.00 %
Technology	-	-	$110,860	-	-	$110,860	4.39 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$31,728	-	-	$31,728	1.26 %
Total	$47,215	$0	$406,555	$1,037,256	$1,033,382	$2,524,409	

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

The building systems with the most need include:

Site	-	$1,274,698
Interior	-	$1,024,615
Technology	-	$110,860

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

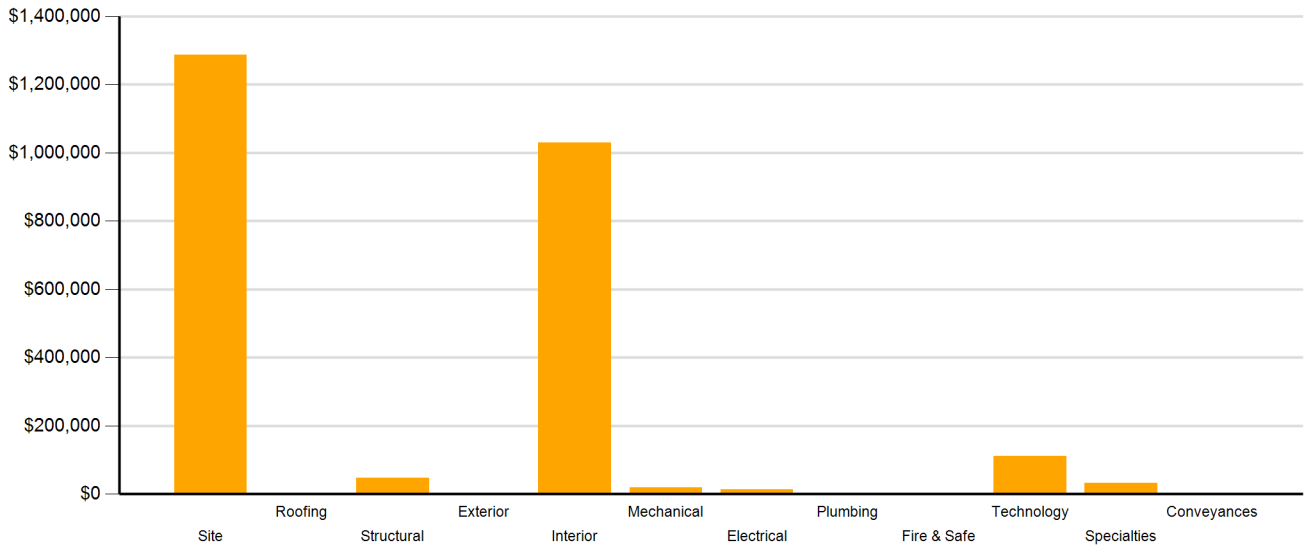


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	$205,044	-	$205,044
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	$47,215	-	$257,923	$333,046	-	$638,185
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	-	-	$71,389	$303,668	$1,033,382	$1,408,439
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$195,497	-	$195,497
Technology	-	-	$71,200	-	-	$71,200
Traffic	-	-	$6,043	-	-	$6,043
Total	$47,215	$0	$406,555	$1,037,256	$1,033,382	$2,524,409

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

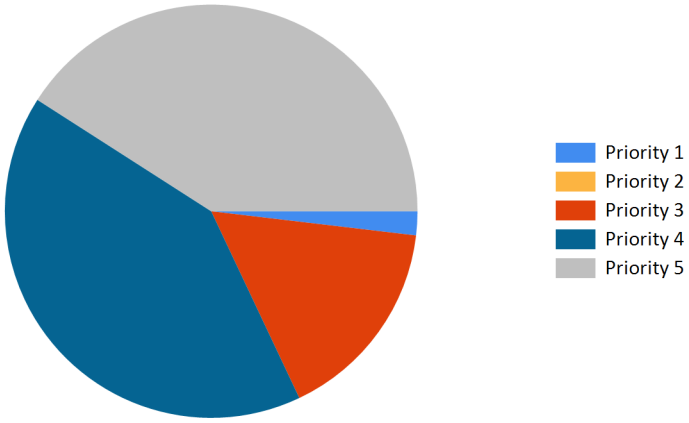


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$1,274,698	$0	$0	$0	$44,588	$168,165	$212,753	$1,487,451
Roofing	$0	$0	$0	$0	$0	$0	$0	$0
Structural	$47,215	$0	$0	$0	$0	$0	$0	$47,215
Exterior	$0	$0	$117,592	$0	$0	$0	$117,592	$117,592
Interior	$1,024,615	$0	$0	$0	$0	$0	$0	$1,024,615
Mechanical	$18,931	$0	$0	$0	$329,652	$194,632	$524,284	$543,215
Electrical	$13,802	$0	$0	$0	$8,956	$157,477	$166,433	$180,235
Plumbing	$2,559	$0	$0	$0	$35,893	$0	$35,893	$38,452
Fire and Life Safety	$0	$0	$0	$77,680	$0	$0	$77,680	$77,680
Technology	$110,860	$0	$0	$0	$0	$0	$0	$110,860
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$31,728	$0	$0	$0	$0	$0	$0	$31,728
Total	**$2,524,409**	**$0**	**$117,592**	**$77,680**	**$419,089**	**$520,274**	**$1,134,635**	**$3,659,044**

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

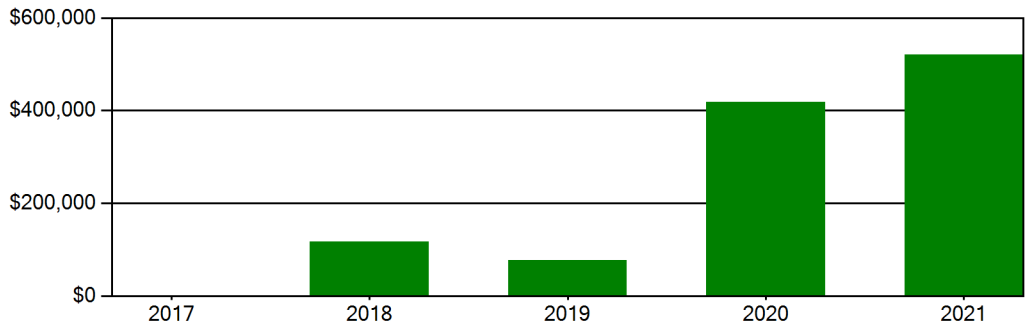
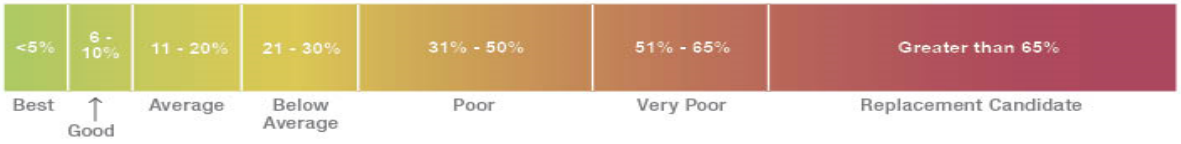


Figure 4: Life Cycle Capital Renewal Forecast

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 $9,541,080. For planning purposes, the total 5-year need at the Academic Success Academy is $3,678,702 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Academic Success Academy facility has a 5-year FCI of 38.35%.

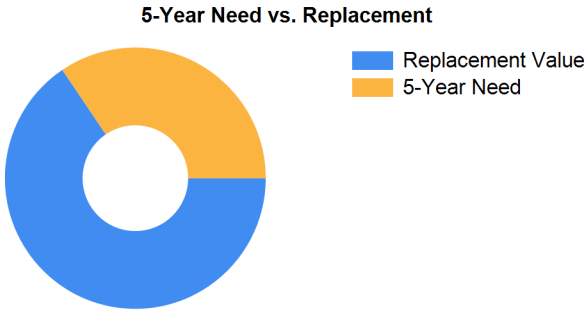


Figure 5: 5-Year FCI

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 129 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 Academic Success Academy cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $0.

Summary of Findings

The Academic Success Academy comprises 26,503 square feet and was constructed in 1920. Current deficiencies at this school total $2,544,067. Five year capital renewal costs total $1,134,635. The total identified need for the Academic Success Academy (current deficiencies and 5-year capital renewal costs) is $3,678,702. The 5-year FCI is 38.35%.

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
Academic Success Academy Totals	26,503	1920	$2,544,067	$1,134,635	$3,678,702	38.35%

**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
Crosswalk Requires Repainting	Traffic	2	Ea.	3	$1,511	9300
Note: Repaint crosswalks on north and east sides of school in circular driveway.						
Traffic Signage Is Required	Traffic	2	Ea.	3	$4,533	9299
Note: Add flashing beacons to school zone speed limit signs.						
Asphalt Paving Requires Replacement	Capital Renewal	72	CAR	4	$236,609	4596
Note: Cracked & alligatoring.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28663
Note: Backstops Require Replacement						
PE / Recess Playfield is Missing and is Needed	Educational Adequacy	1	Ea.	5	$64,020	54992
Note: PE / Recess Playfield is Missing and is Needed						
School has insufficient # of tennis courts.	Educational Adequacy	1	Ea.	5	$161,597	29072
Note: School has insufficient # of tennis courts.						
School has insufficient baseball fields.	Educational Adequacy	1	Ea.	5	$207,745	28345
Note: School has insufficient baseball fields.						
School has insufficient football/soccer fields.	Educational Adequacy	1	Ea.	5	$94,430	28213
Note: School has insufficient football/soccer fields.						
School has insufficient softball fields.	Educational Adequacy	1	Ea.	5	$151,087	28388
Note: School has insufficient softball fields.						
School lacks a competition track.	Educational Adequacy	1	Ea.	5	$324,837	28298
Note: School lacks a competition track.						
	Sub Total for System	**10**	**items**		**$1,274,698**	
	Sub Total for School and Site Level	**10**	**items**		**$1,274,698**	

Building: 01 - Main Building

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Structural Condition Exists	Capital Renewal	1	Job	1	$47,215	8352
Note: There are cracks on walls on the second floor, north of the building by both stairwells and on the perimeter foundation walls in the basement. Plaster at the columns is dissolving due to water damage. Investigate further to address structural condition.						
	Sub Total for System	**1**	**items**		**$47,215**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Athletic Sport Flooring Requires Replacement	Capital Renewal	1,040	SF	3	$35,354	8717
The Carpet Flooring Requires Replacement	Capital Renewal	2,280	SF	3	$49,270	8350
Note: Existing carpet frayed, faded, and stained.						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	15,209	SF	3	$173,299	8351
Note: VCT througout building is chipped, faded or lifting.						
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	20,703	SF	4	$195,497	Rollup
Room Is Excessively Reverberant	Acoustics	1,440	SF	4	$31,955	27934
Location: Weight room						
Room Is Excessively Reverberant	Acoustics	7,800	SF	4	$173,089	27937
Location: Gym						
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	7,275	SF	4	$275,339	Rollup
The Gypsum Board Ceilings Require Replacement	Capital Renewal	6,614	SF	4	$74,947	8349
Note: Holes in ceiling at basement.						

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Door Requires Vision Panel	Educational Adequacy	7	Ea.	5	$15,864	Rollup
	Sub Total for System	**9**	**items**		**$1,024,615**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	2	Ea.	4	$18,931	4598
Note: Pumps and seals are corroded.						
	Sub Total for System	**1**	**items**		**$18,931**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Has Insufficient Electrical Outlets	Educational Adequacy	28	Ea.	5	$13,802	Rollup
	Sub Total for System	**1**	**items**		**$13,802**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	1	Ea.	4	$2,559	4597
Note: Custodial sink is original to the building and is rusted and leaking.						
	Sub Total for System	**1**	**items**		**$2,559**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	7	Ea.	3	$39,660	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	72	Ea.	3	$33,995	13136
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,610	13134
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	72	Ea.	3	$30,595	13135
	Sub Total for System	**4**	**items**		**$110,860**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	7	Ea.	3	$31,728	Rollup
	Sub Total for System	**1**	**items**		**$31,728**	
	Sub Total for Building 01 - Main Building	**18**	**items**		**$1,249,711**	
	Total for Campus	**28**	**items**		**$2,524,409**	

Academic Success Academy - 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	ES Playgrounds		1	Ea.	$44,588	4
Parking Lot Lighting	Pole Mounted Fixtures (Ea.)		8	Ea.	$61,879	5
Pedestrian Pavement	Sidewalks - Concrete		5,200	SF	$106,286	5
		Sub Total for System	**3**	**items**	**$212,753**	
		Sub Total for Building -	**3**	**items**	**$212,753**	

Building: 01 - Main Building

Exterior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	Exterior Painting - Bldg SF basis		8,835	SF	$117,592	2
		Sub Total for System	**1**	**items**	**$117,592**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Decentralized Heating Equipment	Heating Unit Vent - Steam/Hot water		13	Ea.	$219,892	4
Decentralized Cooling	Ductless Split System (2 Ton)		14	Ea.	$95,644	4
Decentralized Cooling	Ductless Split System (1 Ton)		1	Ea.	$14,116	4
Heating System Supplementary Components	Controls - Pneumatic (Bldg.SF)		26,503	SF	$179,020	5
Exhaust Air	Roof Exhaust Fan		3	Ea.	$15,612	5
		Sub Total for System	**5**	**items**	**$524,285**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Building Mounted Fixtures (Ea.)		6	Ea.	$8,956	4
Lighting Fixtures	Light Fixtures (Bldg SF)		26,503	SF	$157,477	5
		Sub Total for System	**2**	**items**	**$166,433**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Compressed-Air Systems	Air Compressor (2 hp)		1	Ea.	$6,383	4
Plumbing Fixtures	Refrigerated Drinking Fountain		4	Ea.	$29,510	4
		Sub Total for System	**2**	**items**	**$35,893**	

Fire and Life Safety

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm		26,503	SF	$77,680	3
		Sub Total for System	**1**	**items**	**$77,680**	
		Sub Total for Building 01 - Main Building	**11**	**items**	**$921,882**	
		Total for: Academic Success Academy	**14**	**items**	**$1,134,634**	

Supporting Photos

Site Aerial

Renovation Plaque

Elevation East

Elevation

Weight Room


Typical Classroom


Science Lab


Elevation North

School Signage


Holes In Gypsum Board Ceiling


Elevation West


Chipped VCT Flooring


Frayed Carpet


Water Damaged Basement Wall


Water Damage At Basement Windows


Damaged Basement Wall

Crack At Stairwell Wall


Cracked Parking Lot Pavement


Peeling Paint


Corroded Pump


Rusted And Leaking Custodial Sink

Facility Condition Assessment

South Kingstown - Broad Rock Middle School | *June 2017*

351 Broad Rock Road, Wakefield, RI 02879

Introduction

Broad Rock Middle School, located at 351 Broad Rock Road in Wakefield, Rhode Island, was built in 2001. It comprises 77,781 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.

Broad Rock Middle School serves grades 5 - 6, has 48 instructional spaces, and has an enrollment of 526. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Broad Rock Middle School is 672 with a resulting utilization of 78%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Broad Rock Middle School the 5-year need is $8,264,829. 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 Broad Rock 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 Broad Rock Middle School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	CMU Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors

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

01 - Main Building:	Built-Up Roofing With Ballast
	Canopy Roofing

Interior

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

01 - Main Building:	Foldable Interior Partition
	Steel Interior Doors
	Aluminum/Glass Storefront Interior Doors
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Non-Painted Plaster/Gypsum Board Ceiling
	CMU Wall
	Interior Wall Painting
	Concrete Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Rubber Tile Flooring
	Epoxy Coated Flooring
	Carpet

01 - Main Building:	Athletic/Sport Flooring

Mechanical

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

01 - Main Building:	1,275 MBH Cast Iron Water Boiler
	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	DDC Heating System Controls
	1 Ton Ductless Split System
	3 Ton Ductless Split System
	5 Ton Package DX Unit
	10 Ton Package DX Unit
	2 Ton Thru-Wall A/C
	Make-up Air Unit
	5 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	2,000 CFM Interior AHU
	Ductwork
	Laboratory Fume Hood
	Roof Exhaust Fan
	Wall Exhaust Fan

Plumbing

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

01 - Main Building:	250 Gallon Water Storage Tank
	2" Backflow Preventers
	4" Backflow Preventers
	Gas Piping System
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals

Electrical

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

01 - Main Building:	50 kW Emergency Generator
	480v Switch
	800 Amp Switchgear
	225 KVA Transformer
	45 KVA Transformer
	400 Amp Distribution Panel
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 277/480 100A
	Panelboard - 277/480 225A
	Panelboard - 277/480 400A
	Building Mounted Lighting Fixtures
	Canopy 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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$100,473	$1,194,944	$330,645	$1,626,062	47.86 %
Roofing	-	-	-	$1,439	-	$1,439	0.04 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	-	-	-	-	$0	0.00 %
Interior	-	-	$165,326	$82,815	$109,774	$357,915	10.54 %
Mechanical	-	-	-	-	-	$0	0.00 %
Electrical	$2,806	-	$42,994	-	-	$45,799	1.35 %
Plumbing	-	-	-	-	$24,995	$24,995	0.74 %
Fire and Life Safety	$22,663	-	-	-	-	$22,663	0.67 %
Technology	-	-	$1,284,436	-	-	$1,284,436	37.81 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	-	-	$33,995	$33,995	1.00 %
Total	$25,469	$0	$1,593,229	$1,279,198	$499,409	$3,397,305	

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

The building systems with the most need include:

Site	-	$1,626,062
Technology	-	$1,284,436
Interior	-	$357,915

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

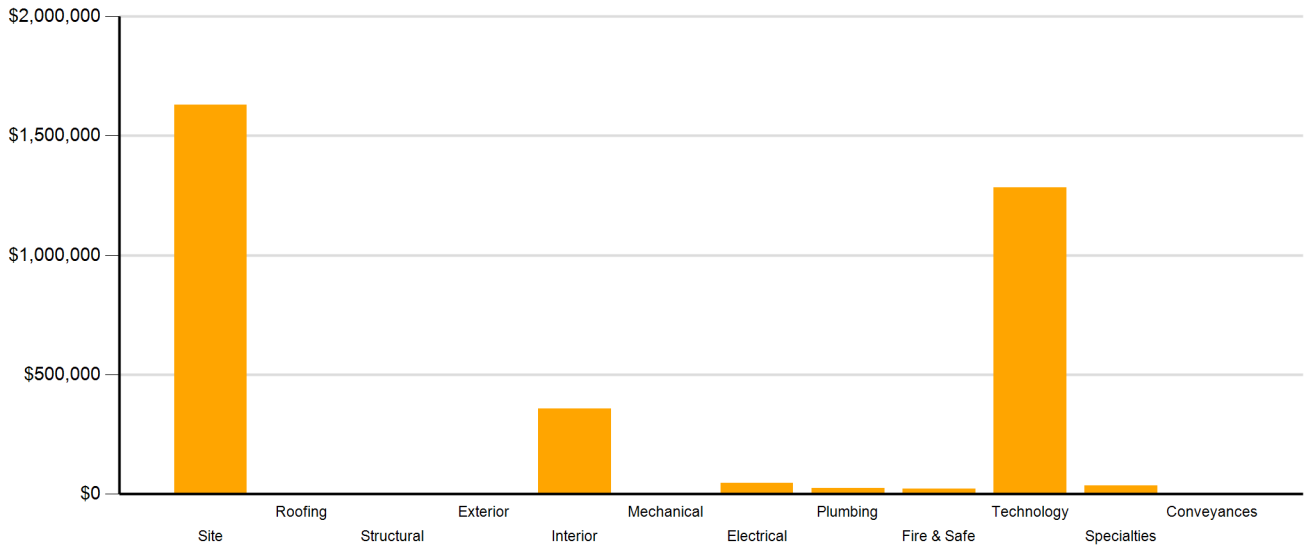


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	-	-	$0
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	-	-	$208,320	$1,250,869	$106,318	$1,565,508
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	$25,469	-	$11,332	$28,329	$393,091	$458,220
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	-	-	$0
Technology	-	-	$1,273,104	-	-	$1,273,104
Traffic	-	-	$100,473	-	-	$100,473
Total	$25,469	$0	$1,593,229	$1,279,198	$499,409	$3,397,305

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

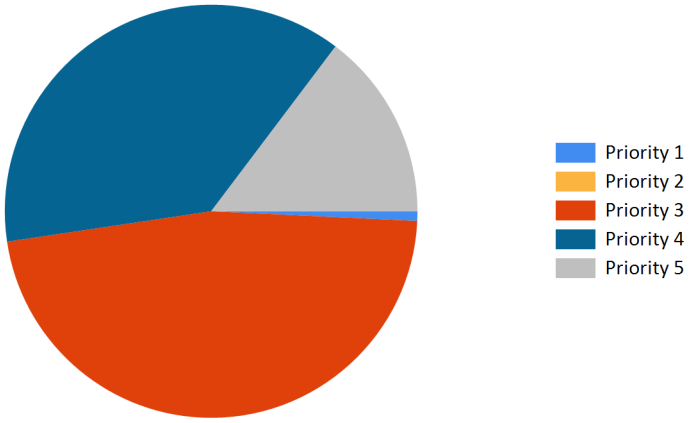


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$1,626,062	$0	$0	$0	$398,736	$329,598	$728,334	$2,354,396
Roofing	$1,439	$0	$0	$0	$0	$0	$0	$1,439
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$0	$0	$0	$0	$0	$0	$0	$0
Interior	$357,915	$0	$0	$33,626	$1,041,393	$149,701	$1,224,720	$1,582,635
Mechanical	$0	$0	$0	$0	$1,271,250	$853,036	$2,124,286	$2,124,286
Electrical	$45,799	$0	$0	$0	$11,028	$538,220	$549,248	$595,047
Plumbing	$24,995	$0	$0	$0	$7,377	$0	$7,377	$32,372
Fire and Life Safety	$22,663	$0	$0	$227,976	$0	$0	$227,976	$250,639
Technology	$1,284,436	$0	$0	$0	$0	$0	$0	$1,284,436
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$33,995	$0	$0	$0	$0	$0	$0	$33,995
Total	**$3,397,305**	**$0**	**$0**	**$261,602**	**$2,729,784**	**$1,870,555**	**$4,861,941**	**$8,259,246**

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

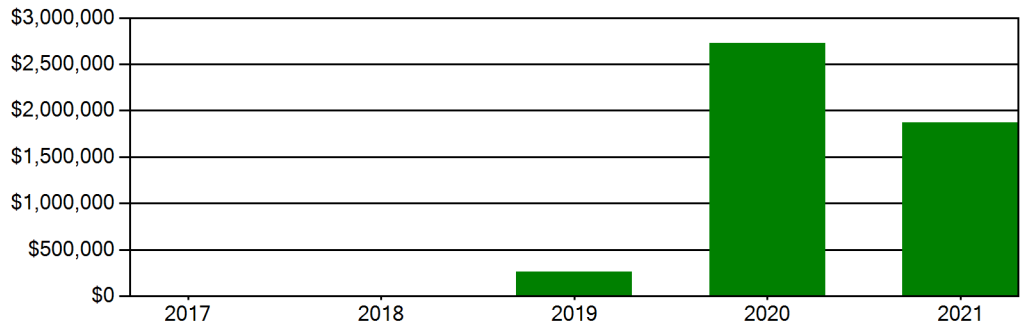
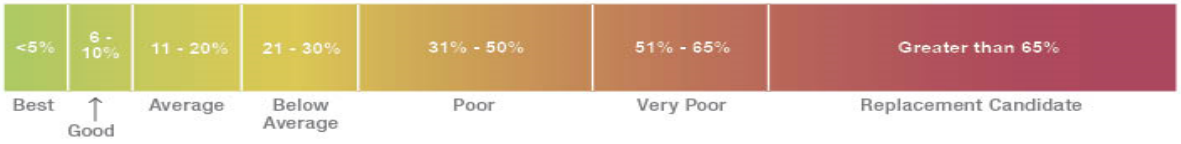


Figure 4: Life Cycle Capital Renewal Forecast

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 $25,667,730. For planning purposes, the total 5-year need at the Broad Rock Middle School is $8,264,829 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Broad Rock Middle School facility has a 5-year FCI of 32.18%.

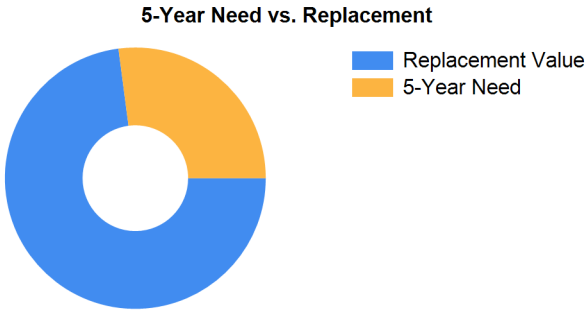


Figure 5: 5-Year FCI

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 409 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 Broad Rock Middle School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $807,959.

Summary of Findings

The Broad Rock Middle School comprises 77,781 square feet and was constructed in 2001. Current deficiencies at this school total $3,402,888. Five year capital renewal costs total $4,861,941. The total identified need for the Broad Rock Middle School (current deficiencies and 5-year capital renewal costs) is $8,264,829. The 5-year FCI is 32.18%.

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
Broad Rock Middle School Totals	77,781	2001	$3,402,888	$4,861,941	$8,264,829	32.18%

**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.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Crosswalk Requires Repainting	Traffic	2	Ea.	3	$1,511	9323
Note: Repaint crosswalk on Broad Rock Rd and crosswalk on south side of campus						
Pavement Markings: Words/Symbols Are Required	Traffic	14	Ea.	3	$5,288	9322
Note: Change flow of buses and parents around campus to be counterclockwise to allow for safer drop off/pick up (paint arrows on pavement to show direction of flow)						
Traffic Signage Is Required	Traffic	8	Ea.	3	$18,130	9320
Note: Add signs to show where parents/buses drop off/pick up (2), one way signs around campus (4), and do not enter signs (2)						
Traffic Signage Is Required	Traffic	2	Ea.	3	$75,544	9321
Note: Add flashing beacons to school zone speed limit signs						
Asphalt Paving Requires Replacement	Capital Renewal	177	CAR	4	$581,665	8818
Note: Roadway asphalt top is splitting and alligatoring.						
Asphalt Paving Requires Replacement	Capital Renewal	178	CAR	4	$584,951	8819
Note: Parking asphalt top is splitting and alligatoring.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28595
Note: Backstops Require Replacement						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	$5,807	28809
Note: Exterior Basketball Goals are Required						
School lacks a competition track.	Educational Adequacy	1	Ea.	5	$324,837	28275
Note: School lacks a competition track.						
	Sub Total for System	**9**	**items**		**$1,626,062**	
	Sub Total for School and Site Level	**9**	**items**		**$1,626,062**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Canopies Require Painting	Capital Renewal	120	SF	4	$1,439	8823
	Sub Total for System	**1**	**items**		**$1,439**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Carpet Flooring Requires Replacement	Capital Renewal	5,668	SF	3	$122,484	8820
Location: Offices and library						
The Wood Flooring Requires Replacement	Capital Renewal	1,300	SF	3	$42,843	8821
Note: Wood floor is scratched and worn.						
Location: Stage						
Epoxy Flooring Requires Repair Or Replacement	Capital Renewal	4,000	SF	4	$75,544	8825
Location: Kitchen and locker rooms						
Stair Treads Require Replacement	Capital Renewal	175	LF	4	$7,271	8827
Note: Stair treads at rubber tiles are worn and should be replaced.						
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	16,200	SF	5	$106,318	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,456	Rollup
	Sub Total for System	**6**	**items**		**$357,915**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	2	Ea.	1	$2,806	Rollup
The Mounted Building Lighting Requires Replacement	Capital Renewal	29	Ea.	3	$42,994	8822
Note: Fixtures are damaged or clouded.						
	Sub Total for System	**2**	**items**		**$45,799**	

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	13	Ea.	5	$19,519	Rollup
	Sub Total for System	**2**	**items**		**$24,995**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	2	Ea.	1	$22,663	Rollup
	Sub Total for System	**1**	**items**		**$22,663**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	2	Ea.	3	$11,332	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	264	Ea.	3	$124,647	13184
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	26	Ea.	3	$515,585	13186
Technology: Gymnasium sound system is nonexistent, inadequate, or near end of useful life.	Technology	1	Ea.	3	$9,065	13189
Technology: Instructional spaces do not have local sound reinforcement.	Technology	34	Ea.	3	$160,530	13194
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,288	13181
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$16,620	13180
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,721	13182
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,610	13179
Technology: Main Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$42,304	13178
Technology: Network cabling infrastructure is partially outdated and/or needs expansion.	Technology	32	Ea.	3	$13,598	13188
Technology: Network system inadequate and/or near end of useful life	Technology	21	Ea.	3	$99,151	13193
Technology: Number of current, up to date, network switch ports are insufficient to support campus technology.	Technology	48	Ea.	3	$22,663	13187
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	77,781	SF	3	$132,207	13190
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$53,825	13185
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,721	13183
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	36	Ea.	3	$54,391	13192
Technology: Telephone system is inadequate and/or non-existent.	Technology	1	Ea.	3	$7,177	13191
	Sub Total for System	**18**	**items**		**$1,284,436**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks an appropriate refrigerator.	Educational Adequacy	4	Ea.	5	$33,995	Rollup
	Sub Total for System	**1**	**items**		**$33,995**	
	Sub Total for Building 01 - Main Building	**31**	**items**		**$1,771,242**	
	Total for Campus	**40**	**items**		**$3,397,305**	

Broad Rock 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
Fences and Gates	Fencing - Chain Link (4 Ft)	830	LF	$53,657	4
Fences and Gates	Fencing - Chain Link (8 Ft)	80	LF	$5,378	4
Playfield Areas	MS Athletic Components	1	Ea.	$339,701	4
Fences and Gates	Wood	150	LF	$37,077	5
Pedestrian Pavement	Sidewalks - Concrete	6,743	SF	$137,824	5
Parking Lot Lighting	Pole Mounted Fixtures (Ea.)	20	Ea.	$154,697	5
Note:	Parking and tennis courts				
	Sub Total for System	**6**	**items**	**$728,336**	
	Sub Total for Building -	**6**	**items**	**$728,336**	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Resilient Flooring	Rubber Tile Flooring	1,800	SF	$33,626	3
Resilient Flooring	Vinyl Composition Tile Flooring	55,725	SF	$639,263	4
Wall Painting and Coating	Painting/Staining (Bldg SF)	60,861	SF	$402,130	4
Interior Operable Partitions	Foldable partition (Bldg SF)	1,296	SF Wall	$149,701	5
	Sub Total for System	**4**	**items**	**$1,224,719**	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Decentralized Heating Equipment	Heating Unit Vent - Steam/Hot water	53	Ea.	$896,484	4
Decentralized Cooling	Thru-Wall AC (2 Ton)	1	Ea.	$7,081	4
Decentralized Cooling	Ductless Split System (3 Ton)	2	Ea.	$15,565	4
Facility Hydronic Distribution	Pump - 5HP	2	Ea.	$19,060	4
Air Distribution	Make-up Air Unit	10	Ea.	$158,995	4
Decentralized Cooling	Ductless Split System (1 Ton)	3	Ea.	$42,348	4
Decentralized Cooling	Package DX Unit (10 Ton)	4	Ea.	$88,468	4
Note:	1 @ 7.5 ton, 3 @ 10 ton				
Decentralized Cooling	Package DX Unit (5 Ton)	3	Ea.	$43,249	4
Heating System Supplementary Components	Controls - DDC (Bldg.SF)	77,781	SF	$468,338	5
Exhaust Air	Laboratory Fume Hood	4	Ea.	$114,084	5
Exhaust Air	Roof Exhaust Fan	52	Ea.	$270,614	5
	Sub Total for System	**11**	**items**	**$2,124,285**	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	8	Ea.	$11,028	4
Packaged Generator Assemblies	Emergency Generator (50 KW)	1	Ea.	$76,056	5
Note:	25 kw				
Lighting Fixtures	Light Fixtures (Bldg SF)	77,781	SF	$462,164	5
	Sub Total for System	**3**	**items**	**$549,247**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Refrigerated Drinking Fountain	1	Ea.	$7,377	4
	Sub Total for System	**1**	**items**	**$7,377**	

Fire and Life Safety

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	77,781	SF	$227,976	3
	Sub Total for System	**1**	**items**	**$227,976**	
	Sub Total for Building 01 - Main Building	**20**	**items**	**$4,133,605**	
	Total for: Broad Rock Middle School	**26**	**items**	**$4,861,940**	

Supporting Photos

Cracked Asphalt Paving

Elevation

Site Aerial

Alligatored Asphalt


Kitchen


Hallway Finishes


Gymnasium


Front Entrance


Music Room


Computer Lab


Library


Typical Classroom


Stage

Plaque


Science Room


Cafeteria

Marquee


Typical Classroom With Partition


Worn Wood Floor At Stage


Worn Carpet


Canopy


Aged Building Light


Worn Wall Paint


Roof


Worn Stair Treads

Facility Condition Assessment

South Kingstown - Curtis Corner Middle School | *June 2017*

301 Curtis Corner Road, Wakefield, RI 02879

Introduction

Curtis Corner Middle School, located at 301 Curtis Corner Road in Wakefield, Rhode Island, was built in 1964. It comprises 99,697 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.

Curtis Corner Middle School serves grades 7 - 8, has 49 instructional spaces, and has an enrollment of 511. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Curtis Corner Middle School is 729 with a resulting utilization of 70%.

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 Curtis Corner Middle School the 5-year need is $15,663,052. 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 Curtis Corner 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 Curtis Corner Middle School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	CMU Exterior Wall
	Aluminum Exterior Windows
	Storefront / Curtain Wall
	Storefront Entrance Doors
	Steel Exterior Entrance Doors
02 - Concessions:	CMU Exterior Wall
	Wood Siding Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Wood Exterior Doors
03 - Storage:	Wood Siding Exterior Wall
	Steel Exterior Entrance Doors
04 - Greenhouse :	Clear Polycarbonate Exterior Wall
	Storefront Entrance Doors

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

01 - Main Building:	Built-Up Roofing With Ballast
	Modified Bitumen Roofing
	Canopy Roofing
02 - Concessions:	Composition Shingle Roofing
03 - Storage:	Composition Shingle Roofing
04 - Greenhouse :	Clear Polycarbonate Roofing

Interior

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

01 - Main Building:	Steel Interior Doors
	Aluminum/Glass Storefront Interior Doors
	Wood Interior Doors

01 - Main Building:	Interior Door Hardware
	Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	CMU Wall
	Interior Wall Painting
	Ceramic Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Carpet
	Athletic/Sport Flooring
02 - Concessions:	Steel Interior Doors
	Interior Door Hardware
	Painted Ceilings
	Wood Ceilings
	FRP Wall Finish
	Brick/Stone Veneer
	Interior Wall Painting
	Concrete Flooring
	Wood Flooring
	Rubber Tile Flooring
	Epoxy Coated Flooring
03 - Storage:	Wood Ceilings
	Wood Wall Paneling
	Concrete Flooring
04 - Greenhouse :	Concrete Flooring

Mechanical

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

01 - Main Building:	400 MBH Cast Iron Water Boiler
	4,488 MBH Cast Iron Water Boiler
	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	DDC Heating System Controls
	Pneumatic Heating System Controls
	2 Ton Ductless Split System
	3 Ton Ductless Split System
	5 Ton Package DX Unit
	10 Ton Package DX Unit
	Window Units

01 - Main Building:	Make-up Air Unit
	2-Pipe Hot Water Hydronic Distribution System
	1 HP or Smaller Pump
	5 HP Pump
	10 HP Pump
	Ductwork
	Kitchen Exhaust Hoods
	Laboratory Fume Hood
	Roof Exhaust Fan
	Supply Fan
	Wall Exhaust Fan
02 - Concessions:	10 kW Electric Unit Heater
	Electronic Heating System Controls
	Roof Exhaust Fan
04 - Greenhouse :	100 MBH Gas Furnace
	10 kW Electric Unit Heater
	5,000 CFM Interior AHU
	Ductwork
	Wall Exhaust Fan

Plumbing

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

01 - Main Building:	2" Backflow Preventers
	Gas Piping System
	50 Gallon Gas Water Heater
	60 Gallon Gas Water Heater
02 - Concessions:	2" Backflow Preventers
	30 Gallon Electric Water Heater
01 - Main Building:	Domestic Water Piping System
02 - Concessions:	Domestic Water Piping System
04 - Greenhouse :	Domestic Water Piping System
01 - Main Building:	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
02 - Concessions:	Lavatories
	Mop/Service Sinks

02 - Concessions:	Non-Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
01 - Main Building:	Sump Pump
	Air Compressor (2 hp)
	Air Compressor (5 hp)
04 - Greenhouse :	550 Gallon Above Ground Fuel Oil Storage Tank

Electrical

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

01 - Main Building:	75 kW Emergency Generator
	Automatic Transfer Switch
	600 Amp Switchgear
	800 Amp Switchgear
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
	Light Fixtures
02 - Concessions:	Panelboard - 120/208 225A
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
	Light Fixtures
03 - Storage:	Panelboard - 120/208 100A
	Light Fixtures
04 - Greenhouse :	Panelboard - 120/208 225A
	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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$263,009	$1,080,135	$69,827	$1,412,971	13.61 %
Roofing	-	$1,388,018	-	-	-	$1,388,018	13.37 %
Structural	$1,365	-	-	-	-	$1,365	0.01 %
Exterior	-	$342,437	$415	-	$199,646	$542,499	5.23 %
Interior	-	-	$611,442	$1,115,142	$637,218	$2,363,803	22.77 %
Mechanical	-	$1,963,441	$172,888	$292,627	$15,648	$2,444,605	23.55 %
Electrical	$7,061	$139,787	$46,270	$45,491	$35,082	$273,692	2.64 %
Plumbing	-	-	$213,063	$193,684	$25,802	$432,548	4.17 %
Fire and Life Safety	$84,414	-	-	-	-	$84,414	0.81 %
Technology	-	-	$1,286,535	-	-	$1,286,535	12.39 %
Conveyances	-	-	$47,535	-	-	$47,535	0.46 %
Specialties	-	-	$13,690	$30,995	$59,894	$104,579	1.01 %
Total	$92,841	$3,833,683	$2,654,847	$2,758,074	$1,043,119	$10,382,564	

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

The building systems with the most need include:

Mechanical	-	$2,444,605
Interior	-	$2,363,803
Site	-	$1,412,971

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

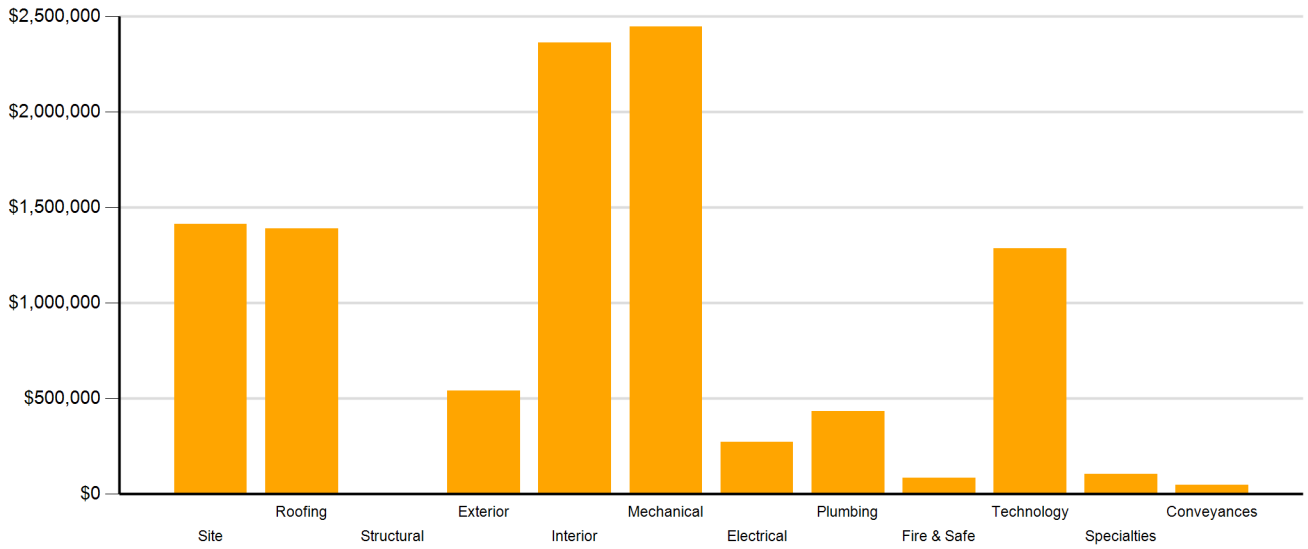


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	$85,563	-	$85,563
Barrier to Accessibility	-	-	$65,218	-	-	$65,218
Capital Renewal	$17,329	$3,833,683	$1,286,383	$2,237,178	$868,517	$8,243,089
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	$75,511	-	$25,098	$28,329	$174,602	$303,541
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$407,005	-	$407,005
Technology	-	-	$1,275,127	-	-	$1,275,127
Traffic	-	-	$3,022	-	-	$3,022
Total	$92,841	$3,833,683	$2,654,847	$2,758,074	$1,043,119	$10,382,564

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

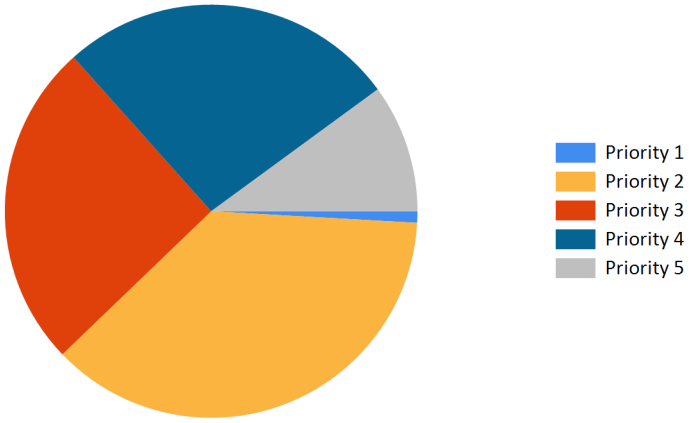


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$1,412,971	$0	$0	$0	$339,701	$30,939	$370,640	$1,783,611
Roofing	$1,388,018	$0	$0	$2,308,178	$0	$11,408	$2,319,586	$3,707,604
Structural	$1,365	$0	$0	$0	$0	$0	$0	$1,365
Exterior	$542,499	$0	$0	$0	$0	$21,391	$21,391	$563,890
Interior	$2,363,803	$0	$0	$3,651	$421,044	$0	$424,695	$2,788,498
Mechanical	$2,444,605	$0	$0	$0	$57,240	$706,425	$763,665	$3,208,270
Electrical	$273,692	$0	$574,560	$0	$0	$41,308	$615,868	$889,560
Plumbing	$432,548	$0	$1,867	$0	$0	$5,246	$7,113	$439,661
Fire and Life Safety	$84,414	$0	$0	$288,109	$0	$0	$288,109	$372,523
Technology	$1,286,535	$0	$0	$0	$0	$0	$0	$1,286,535
Conveyances	$47,535	$0	$0	$47,535	$0	$0	$47,535	$95,070
Specialties	$104,579	$0	$0	$418,188	$0	$0	$418,188	$522,767
Total	**$10,382,564**	**$0**	**$576,427**	**$3,065,661**	**$817,985**	**$816,717**	**$5,276,790**	**$15,659,354**

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

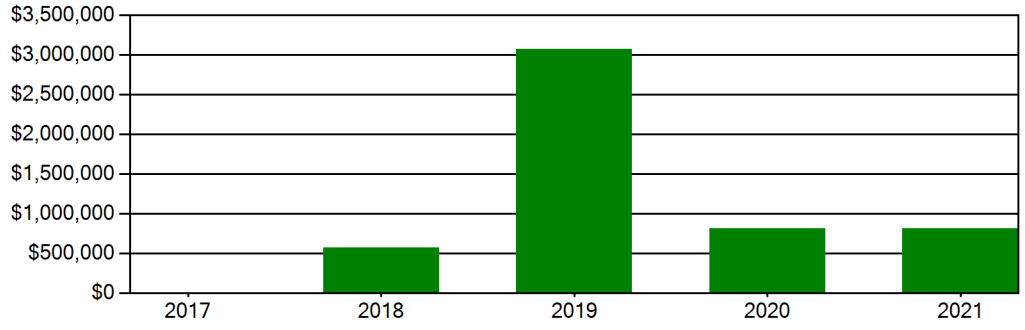
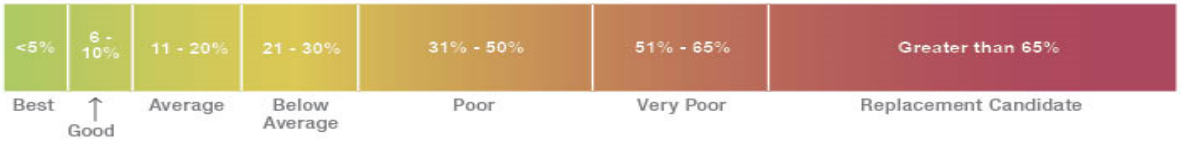


Figure 4: Life Cycle Capital Renewal Forecast

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 $32,900,010. For planning purposes, the total 5-year need at the Curtis Corner Middle School is $15,663,052 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Curtis Corner Middle School facility has a 5-year FCI of 47.60%.

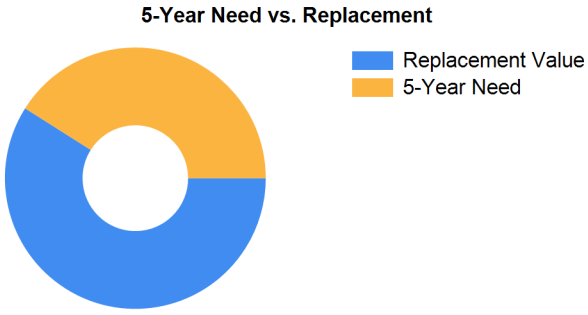


Figure 5: 5-Year FCI

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 570 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 Curtis Corner Middle School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $635,461.

Summary of Findings

The Curtis Corner Middle School comprises 99,697 square feet and was constructed in 1964. Current deficiencies at this school total $10,386,262. Five year capital renewal costs total $5,276,790. The total identified need for the Curtis Corner Middle School (current deficiencies and 5-year capital renewal costs) is $15,663,052. The 5-year FCI is 47.60%.

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
Curtis Corner Middle School Totals	99,697	1964	$10,386,262	$5,276,790	$15,663,052	47.60%

**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.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Walks Require Replacement	Capital Renewal	12,806	SF	3	$259,987	9278
Note: Concrete is cracked and spalling.						
Crosswalk Requires Repainting	Traffic	4	Ea.	3	$3,022	9344
Note: Repaint crosswalks on campus.						
Asphalt Paving Requires Replacement	Capital Renewal	134	CAR	4	$440,356	9276
Note: Asphalt is cracking and heaving.						
Asphalt Paving Requires Replacement	Capital Renewal	140	CAR	4	$460,074	9277
Note: Asphalt paving is alligatoring and heaving.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28594
Note: Backstops Require Replacement						
Fencing Requires Replacement (4' Chain Link Fence)	Capital Renewal	340	LF	4	$21,832	9275
Fencing Requires Replacement (8' Chain Link Fence)	Capital Renewal	1,940	LF	4	$129,544	9274
Note: Fence is damaged and falling.						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	$5,807	28808
Note: Exterior Basketball Goals are Required						
PE / Recess Playfield is Missing and is Needed	Educational Adequacy	1	Ea.	5	$64,020	54953
Note: PE / Recess Playfield is Missing and is Needed						
	Sub Total for System	**9**	**items**		**$1,412,971**	
	Sub Total for School and Site Level	**9**	**items**		**$1,412,971**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Built-up Roofing With Aggregate Ballast Requires Replacement	Capital Renewal	12,000	SF	2	$456,335	9108
Note: Roof leaks at science wing.						
The Modified Roof Covering Requires Replacement	Capital Renewal	24,000	SF	2	$912,669	9088
Note: Water leak at north addition.						
	Sub Total for System	**2**	**items**		**$1,369,004**	

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Foundation Requires Minor Repairs	Capital Renewal	2	Ea.	1	$1,365	11449
Note: Concrete slab is cracked in two locations. One crack is near the new addition and runs from Room 507 to 516. The other crack is near the Science wing near Room 405.						
	Sub Total for System	**1**	**items**		**$1,365**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement	Capital Renewal	1,728	SF	2	$292,419	9087
Note: Single pane windows. Some are broken with paint peeling.						
The Exterior Soffit Requires Repainting	Capital Renewal	60,000	SF	5	$199,646	9086
Location: Original building						
	Sub Total for System	**2**	**items**		**$492,066**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	50,697	SF	3	$457,876	9089
Note: Stained ceiling tiles.						
The Carpet Flooring Requires Replacement	Capital Renewal	4,500	SF	3	$97,903	9091
Note: Carpet is worn in the library and Rooms 111, 112, and 109 at the original building.						
The Existing Toilet Stall Does Not Meet Minimum ADA Requirements	Barrier to Accessibility	2	Ea.	3	$5,894	9105
Location: Faculty restrooms						

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Wood Flooring Requires Replacement	Capital Renewal	1,500	SF	3	$49,769	9093
Note: Stage flooring is worn out and scratched.						
Ceiling Grid Requires Replacement	Capital Renewal	50,697	SF	4	$601,292	9130
Note: Bent and stained ceiling grid at the original building.						
Light Deterioration or Damage of 9x9 Asbestos Floor Tile is Present	Hazardous Material	12,000	SF	4	$342,251	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - square feet)	Hazardous Material	500	SF	4	$4,753	Rollup
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	107	Ea.	4	$30,517	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - linear feet)	Hazardous Material	678	LF	4	$15,470	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	1,474	SF	4	$14,013	Rollup
Room Is Excessively Reverberant (Install Fiberglass Wall Panel)	Acoustics	1,500	SF	4	$85,563	19688
Note: Gym						
Interior Doors Require Repainting	Capital Renewal	80	Door	5	$5,400	9090
Note: Paint on metal doors throughout the building is scratched and worn.						
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	95,097	SF	5	$628,339	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,480	Rollup
	Sub Total for System	**14**	**items**		**$2,342,520**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ductless Split System AC Requires Replacement	Capital Renewal	4	Ea.	2	$27,327	9126
Note: Aged units with damaged coils.						
Ductless Split System AC Requires Replacement	Capital Renewal	1	Ea.	2	$7,782	9127
Note: Aged unit with damaged coil.						
Package DX Unit Requires Replacement	Capital Renewal	2	Ea.	2	$28,833	9123
Note: Units are aged and rusted with damaged coils.						
Package DX Unit Requires Replacement	Capital Renewal	3	Ea.	2	$66,351	9124
Note: Units are aged and rusted with damaged coils.						
Replace Unit Vent	Capital Renewal	30	Ea.	2	$507,444	9132
Note: Unit vents are aged with non-functional motors and clogged coils.						
Replace Unit Vent	Capital Renewal	50	Ea.	2	$845,740	9133
Note: Unit vents are aged with non-functional motors and clogged coils.						
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	1	Ea.	2	$31,255	54849
Note: Per LEA review feedback - school needs new boiler.						
The Radiant Heat HVAC Component Requires Replacement	Capital Renewal	44	Ea.	2	$334,896	9134
Note: Radiant heaters are aged with corroded connections and clogged coils.						
The Large Diameter Exhausts/Hoods Require Replacement	Capital Renewal	1	Ea.	3	$13,893	9097
Note: Supply fan is rusted with broken connections.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	5	Ea.	3	$79,497	9109
Note: Units are aged with rusted and worn heat exchangers.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	5	Ea.	3	$79,497	9110
Note: Units are aged with broken connections. Some are non-functional.						
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	5	Ea.	4	$13,388	9098
Note: Wall exhaust fans are old and bearings are seizing.						
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	2	Ea.	4	$19,060	9117
Note: Pumps are old and leaking.						
The Chemistry Lab Fume Hood(s) Require Replacement	Capital Renewal	1	Ea.	4	$28,521	9084
Note: Wood shop paint hood						
The Exhaust Hood Requires Replacement	Capital Renewal	44	Ea.	4	$228,981	9131
Note: Units are rusted and bearings seizing. They have been painted and patched multiple times.						
Remove Abandoned Equipment	Capital Renewal	3	Ea.	5	$9,389	9113
Note: Fuel oil equipment (pump, filter, and line set) needs to be removed.						
Remove Abandoned Equipment	Capital Renewal	1	Ea.	5	$3,130	9114
Note: Incinerator						

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Remove Abandoned Equipment	Capital Renewal	1	Ea.	5	$3,130	9115
Note: Abandoned water storage tank						
	Sub Total for System	**18**	**items**		**$2,328,115**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	5	Ea.	1	$7,061	Rollup
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$19,280	9135
Note: Switchgear is aged and replacement parts are no longer manufactured.						
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$23,482	9136
Note: Switchgear is aged and replacement parts are no longer manufactured.						
The Electrical Disconnect Requires Replacement	Capital Renewal	2	Ea.	2	$3,666	9096
The Panelboard Requires Replacement	Capital Renewal	6	Ea.	2	$29,091	9120
Note: Kelek panelboards are aged and replacement parts are no longer available.						
The Panelboard Requires Replacement	Capital Renewal	9	Ea.	2	$52,193	9121
Note: 200 amps. Kelek panelboards are aged and replacement parts are no longer available.						
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$6,275	9122
Note: 250 amps. Kelek panelboards are aged and replacement parts are no longer available.						
The Mounted Building Lighting Requires Replacement	Capital Renewal	30	Ea.	3	$44,778	9095
The Canopy Lighting Requires Replacement	Capital Renewal	25	Ea.	4	$34,463	9094
Remove Abandoned Equipment	Capital Renewal	1	Ea.	5	$3,321	9116
Note: Generator						
Room Has Insufficient Electrical Outlets	Educational Adequacy	64	Ea.	5	$31,761	Rollup
	Sub Total for System	**11**	**items**		**$255,372**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Existing Lavatory/Sink Is Not ADA Compliant	Barrier to Accessibility	2	Ea.	3	$11,789	9106
Location: At faculty restroom						
The Gas Water Heater Requires Replacement	Capital Renewal	1	Ea.	3	$3,160	9118
Note: Gas water heater is aged and the connections are corroded.						
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	25	Ea.	3	$190,139	9102
Note: Showers are old with corroded nozzles.						
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	6	Ea.	3	$7,974	9111
Note: Urinal fixtures are aged and stained and wall mounts are cracked.						
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	7	Ea.	4	$71,540	9103
Note: Drinking fountains are old with corroded nozzles.						
The Classroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	2	Ea.	4	$5,438	9085
Note: Lavatories are aged, stained, and corroded.						
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	5	Ea.	4	$12,882	9107
Note: Service sinks are stained, corroded, and rusted.						
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	2	Ea.	4	$14,755	9112
Note: Refrigerated drinking fountains are aged and rusted and compressors are non-functional.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	18	Ea.	4	$57,259	9099
Note: Restroom lavatories and aged and stained with rusted valves.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	10	Ea.	4	$31,810	9100
Note: Lavatories are aged, stained, and corroded.						
Room lacks a drinking fountain.	Educational Adequacy	6	Ea.	5	$6,617	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	2	Ea.	5	$3,023	Rollup
	Sub Total for System	**12**	**items**		**$416,386**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Kitchen Exhaust Hood	Capital Renewal	1	Ea.	1	$15,964	9125
Note: Kitchen exhaust hood is aged with clogged filters.						
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	6	Ea.	1	$68,450	Rollup
	Sub Total for System	**2**	**items**		**$84,414**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	2	Ea.	3	$11,408	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	336	Ea.	3	$159,717	13228
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	33	Ea.	3	$313,730	13231
Technology: Gymnasium sound system is nonexistent, inadequate, or near end of useful life.	Technology	1	Ea.	3	$9,127	13235
Technology: Instructional spaces do not have local sound reinforcement.	Technology	35	Ea.	3	$166,372	13236
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$45,253	13217
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$45,253	13221
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$45,253	13225
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	13219
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	13223
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	13215
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	13218
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	13222
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	13226
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$50,197	13214
Technology: Network system inadequate and/or near end of useful life	Technology	1	Ea.	3	$7,606	13232
Technology: Network system inadequate and/or near end of useful life	Technology	23	Ea.	3	$109,330	13234
Technology: Number of current, up to date, network switch ports are insufficient to support campus technology.	Technology	96	Ea.	3	$45,633	13229
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	96,697	SF	3	$165,473	13233
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$54,190	13230
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$7,606	13216
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	13220
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	13224
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	13227
	Sub Total for System	**24**	**items**		**$1,286,535**	

Conveyances

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Access Is Not ADA Compliant And Requires A Platform Lift	Barrier to Accessibility	1	Ea.	3	$47,535	9104
Note: Lift by the nurse's office is not functional.						
	Sub Total for System	**1**	**items**		**$47,535**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	3	Ea.	3	$13,690	Rollup
The Metal Student Lockers Require Replacement	Capital Renewal	63	Ea.	4	$30,995	9128
Note: Boy's locker room lockers are dented and showing signs of wear.						
Room lacks an appropriate refrigerator.	Educational Adequacy	7	Ea.	5	$59,894	Rollup
	Sub Total for System	**3**	**items**		**$104,579**	
	Sub Total for Building 01 - Main Building	**90**	**items**		**$8,727,890**	

Building: 02 - Concessions

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Epoxy Flooring Requires Repair Or Replacement	Capital Renewal	640	SF	4	$12,169	9140
Note: Epoxy flooring is cracking.						
Location: Restrooms						
The Concrete Flooring Requires Replacement	Capital Renewal	700	SF	4	$9,114	9137
Note: Concrete finish is faded and worn.						
Location: First floor						
	Sub Total for System	**2**	**items**		**$21,283**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electric Unit Heater Requires Replacement	Capital Renewal	1	Ea.	2	$2,476	9141
	Sub Total for System	**1**	**items**		**$2,476**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Mounted Building Lighting Requires Replacement	Capital Renewal	1	Ea.	3	$1,493	9139
The Canopy Lighting Requires Replacement	Capital Renewal	8	Ea.	4	$11,028	9138
Note: Canopy fixtures are broken.						
	Sub Total for System	**2**	**items**		**$12,521**	
	Sub Total for Building 02 - Concessions	**5**	**items**		**$36,279**	

Building: 03 - Storage

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Exterior Wood Requires Replacement (Bldg SF)	Capital Renewal	400	SF	2	$11,990	9143
Note: Exterior wood is molding and should be replaced.						
Exterior Metal Door Requires Repainting	Capital Renewal	2	Door	3	$415	9142
Note: Paint is peeling at exterior double doors.						
	Sub Total for System	**2**	**items**		**$12,405**	
	Sub Total for Building 03 - Storage	**2**	**items**		**$12,405**	

Building: 04 - Greenhouse

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Plexiglass/Polycarbonate Sheet Roof Requires Replacement	Capital Renewal	1,000	SF	2	$19,014	9145
Note: Polycarbonate roof sheets are missing or broken.						
	Sub Total for System	**1**	**items**		**$19,014**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Greenhouse (polycarbonate) Walls Require Replacement (Bldg SF)	Capital Renewal	1,000	SF	2	$38,028	9150
Note: Polycarbonate is broken or missing.						
	Sub Total for System	**1**	**items**		**$38,028**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electric Unit Heater Requires Replacement	Capital Renewal	3	Ea.	2	$7,427	9146
The Air Handler HVAC Component Requires Replacement	Capital Renewal	1	Ea.	2	$101,258	9288
The Gas Furnace HVAC Component Requires Replacement	Capital Renewal	1	Ea.	2	$2,652	9148
Note: Vent is broken and rusting.						
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	1	Ea.	4	$2,678	9144
Note: Exhaust fan is rusted and non-functional.						
	Sub Total for System	**4**	**items**		**$114,015**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$5,799	9147
	Sub Total for System	**1**	**items**		**$5,799**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Above Ground Fuel/Oil Storage Tank Requires Replacement	Capital Renewal	1	Ea.	5	$16,162	9149
Note: Tank is rusting and there is no secondary containment or protection.						
	Sub Total for System	**1**	**items**		**$16,162**	
	Sub Total for Building 04 - Greenhouse	**8**	**items**		**$193,018**	
	Total for Campus	**114**	**items**		**$10,382,564**	

Curtis Corner 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	4
Parking Lot Lighting	Pole Mounted Fixtures (Ea.)		4	Ea.	$30,939	5
		Sub Total for System	**2**	**items**	**$370,641**	
		Sub Total for Building -	**2**	**items**	**$370,641**	

Building: 01 - Main Building

Roofing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Low-Slope Roofing	Built-Up Roofing (BUR) w/ballast		60,697	SF	$2,308,178	3
		Sub Total for System	**1**	**items**	**$2,308,178**	

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Resilient Flooring	Vinyl Composition Tile Flooring		36,000	SF	$412,983	4
		Sub Total for System	**1**	**items**	**$412,983**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Facility Hydronic Distribution	Pump - 1HP or Less (Ea.)		5	Ea.	$38,142	4
	Note: Booster pumps					
Decentralized Cooling	Window Units		1	Ea.	$3,339	4
Exhaust Air	Laboratory Fume Hood		2	Ea.	$57,042	5
Heating System Supplementary Components	Controls - Pneumatic (Bldg.SF)		77,358	SF	$522,530	5
Heating System Supplementary Components	Controls - DDC (Bldg.SF)		19,339	SF	$116,445	5
		Sub Total for System	**5**	**items**	**$737,498**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)		96,697	SF	$574,560	2
	Note: T5 bulbs					
Electrical Service	Switchgear - Main Dist Panel (800 Amps)		1	Ea.	$23,482	5
		Sub Total for System	**2**	**items**	**$598,042**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Gas - 60 gallon		1	Ea.	$3,797	5
Building Support Plumbing System Supplementary Components	Sump Pump		1	Ea.	$1,449	5
		Sub Total for System	**2**	**items**	**$5,246**	

Fire and Life Safety

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm		96,697	SF	$283,419	3
		Sub Total for System	**1**	**items**	**$283,419**	

Conveyances

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Lifts	ADA Wheelchair lift		1	Ea.	$47,535	3
		Sub Total for System	**1**	**items**	**$47,535**	

Specialties

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Casework	Lockers		850	Ea.	$418,188	3
		Sub Total for System	**1**	**items**	**$418,188**	
		Sub Total for Building 01 - Main Building	**14**	**items**	**$4,811,088**	

Building: 02 - Concessions

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		1,220	SF	$8,061	4
		Sub Total for System	**1**	**items**	**$8,061**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Decentralized Heating Equipment	Unit Heater Electric (10 KW)		2	Ea.	$4,951	4
Heating System Supplementary Components	Controls - Electronic (Bldg.SF)		1,600	SF	$10,808	4
Exhaust Air	Roof Exhaust Fan		2	Ea.	$10,408	5
		Sub Total for System	**3**	**items**	**$26,167**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)		1,600	SF	$9,507	5
		Sub Total for System	**1**	**items**	**$9,507**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Electric - 30 gallon		1	Ea.	$1,867	2
		Sub Total for System	**1**	**items**	**$1,867**	

Fire and Life Safety

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm		1,600	SF	$4,690	3
		Sub Total for System	**1**	**items**	**$4,690**	
		Sub Total for Building 02 - Concessions	**7**	**items**	**$50,292**	

Building: 03 - Storage

Roofing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Steep Slope Roofing	Composition Shingle		400	SF	$11,408	5
		Sub Total for System	**1**	**items**	**$11,408**	

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Paneling	Wood Panel wall		400	SF	$3,651	3
		Sub Total for System	**1**	**items**	**$3,651**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)		400	SF	$2,377	5
		Sub Total for System	**1**	**items**	**$2,377**	
		Sub Total for Building 03 - Storage	**3**	**items**	**$17,436**	

Building: 04 - Greenhouse

Exterior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Storefront Doors - Glass/Aluminum		3	Door	$21,391	5
		Sub Total for System	**1**	**items**	**$21,391**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)		1,000	SF	$5,942	5
		Sub Total for System	**1**	**items**	**$5,942**	
		Sub Total for Building 04 - Greenhouse	**2**	**items**	**$27,333**	
		Total for: Curtis Corner Middle School	**28**	**items**	**$5,276,789**	

Supporting Photos


Paint Peeling


Damaged Lockers


Aged Heating Unit


Roof Exhaust


Worn Floor Coating


Switchgear


Exterior Drinking Fountain


Unit Heater


Pressbox Interior


Concessions Rear Elevation


Paint Peeling On Exterior Door


Concessions Front Elevation


Storage Exterior


Molding Exterior


Damaged Chain Link Fence


Damaged Chain Link


Alligatored And Patched Asphalt Parking


Storage Interior


Rusted Wall Exhaust


Greenhouse Interior


Unit Heater

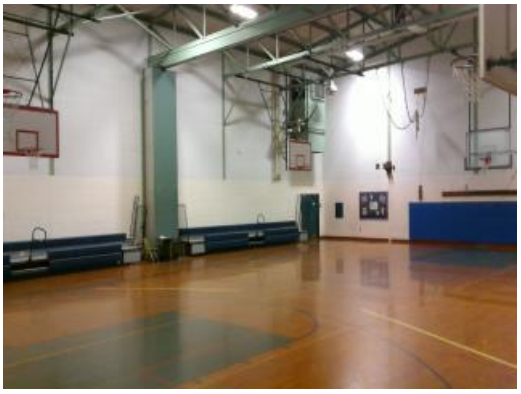

Greenhouse Panelboard


Greenhouse AHU


Greenhouse Exterior


Exterior


Typical Classroom


Gym


Science Room


Bleachers

Addition Plaque


Gym 2


Cafeteria

Marquee

Athletic Field Signage


Library


Music Room


Spalling Concrete Walkway


Alligatored Asphalt Paving


Site Aerial


Lab Exhaust Hood

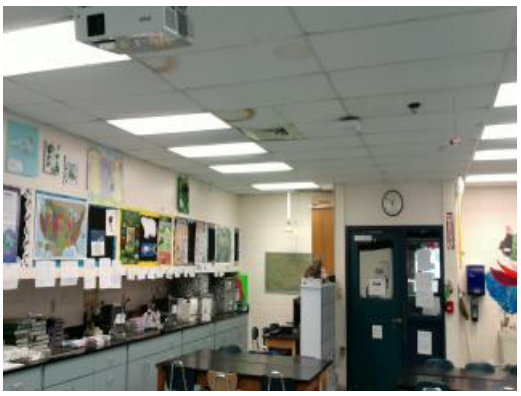

Classroom Lavatory


Peeling Exterior Paint


Broken Single-Pane Glass


Aged Windows


North Addition Roof


Stained And Broken Ceiling Tiles


Stained Ceiling Grid


Scratched Door Paint


Worn Carpet


9x9 Tile


VCT Curling


Worn Wood Floor At Stage


Damaged Canopy Light


Aged Building Mounted Light


Disconnect


Supply Fan


Typical Restroom Lavatory


Typical Toilet Fixture


Typical Showers


Drinking Fountain


ADA Lift


Evidence Of Ponding On Roof


MUA


Typical Urinal Fixtures


Drinking Fountains


Water Storage


Generator


Pumps


Water Heater


Cracked And Chipped VCT


100 Amp Panel


DX Unit


Kitchen Hood

Facility Condition Assessment

South Kingstown - Matunuck School | *June 2017*

380 Matunuck Beach Road, Wakefield, RI 02879

Introduction

Matunuck School, located at 380 Matunuck Beach Road in Wakefield, Rhode Island, was built in 1975. It comprises 44,332 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.

Matunuck School serves grades KG - 4, has 26 instructional spaces, and has an enrollment of 202. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Matunuck School is 400 with a resulting utilization of 51%.

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 Matunuck School the 5-year need is $7,358,769. 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 Matunuck 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 Matunuck School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	CMU Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors
02 - Storage:	Wood Siding Exterior Wall
	Overhead Exterior Utility Doors

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

01 - Main Building:	Metal Steep Slope Roofing
	Modified Bitumen Roofing
02 - Storage:	Composition Shingle Roofing
03 - Pavillion:	Composition Shingle Roofing

Interior

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

01 - Main Building:	Foldable Interior Partition
	Steel Interior Doors
	Aluminum/Glass Storefront Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Door Hardware
	Painted Ceilings
	Wood Wall Paneling
	Interior Wall Painting
	Concrete Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring

01 - Main Building:	Epoxy Coated Flooring
	Carpet
	Athletic/Sport Flooring
02 - Storage:	Wood Ceilings
	Concrete Flooring

Mechanical

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

01 - Main Building:	Electric Heating Unit Vent
	Fin Tube Water Radiant Heater
	5 kW Electric Unit Heater
	Pneumatic Heating System Controls
	2 Ton Ductless Split System
	Window Units
	Make-up Air Unit
	5,000 CFM Interior AHU
	Ductwork
	Kitchen Exhaust Hoods
	Wall Exhaust Fan

Plumbing

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

01 - Main Building:	2" Backflow Preventers
	Gas Piping System
	100 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Air Compressor (5 hp)
	550 Gallon Above Ground Fuel Oil Storage Tank

Electrical

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

01 - Main Building:	800 Amp Switchgear

01 - Main Building:	112.5 KVA Transformer
	800 Amp Distribution Panel
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Panelboard - 120/240 400A
	Panelboard - 277/480 100A
	Panelboard - 277/480 225A
	Panelboard - 277/480 400A
	Light Fixtures
	Building Mounted Lighting Fixtures

Facility Deficiency Priority Levels

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

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

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

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

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

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

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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$387,552	$623,139	$5,807	$1,016,498	16.29 %
Roofing	-	$151,087	-	-	-	$151,087	2.42 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	$310,356	-	-	-	$310,356	4.98 %
Interior	-	-	$317,005	$115,676	$299,300	$731,982	11.73 %
Mechanical	-	$1,847,529	$157,924	$316,002	-	$2,321,455	37.21 %
Electrical	-	$441,500	$51,487	-	$3,943	$496,931	7.97 %
Plumbing	-	-	$19,435	$153,871	$25,775	$199,082	3.19 %
Fire and Life Safety	$158,446	-	-	-	-	$158,446	2.54 %
Technology	-	-	$820,741	-	-	$820,741	13.16 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$31,728	-	-	$31,728	0.51 %
Total	$158,446	$2,750,473	$1,785,873	$1,208,688	$334,826	$6,238,306	

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

The building systems with the most need include:

Mechanical	-	$2,321,455
Site	-	$1,016,498
Technology	-	$820,741

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

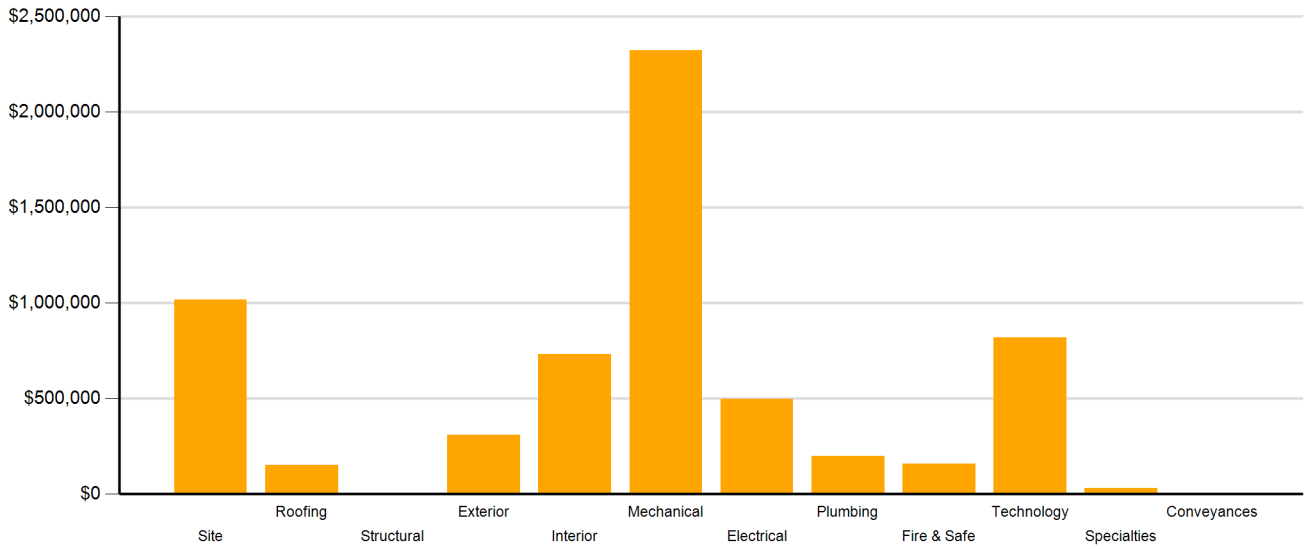


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	$33,995	-	$33,995
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	$31,713	$2,750,473	$841,346	$1,064,683	$311,897	$5,000,112
Code Compliance	$126,733	-	-	-	-	$126,733
Educational Adequacy	-	-	$54,391	$28,329	$22,929	$105,649
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$81,682	-	$81,682
Technology	-	-	$798,078	-	-	$798,078
Traffic	-	-	$92,057	-	-	$92,057
Total	$158,446	$2,750,473	$1,785,873	$1,208,688	$334,826	$6,238,306

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

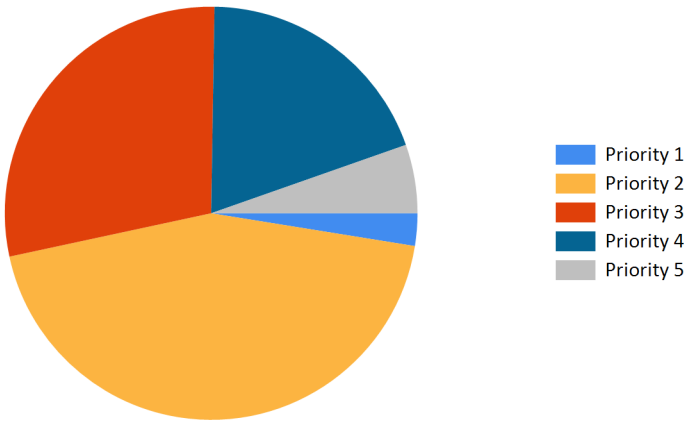


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$1,016,498	$0	$0	$0	$44,588	$0	$44,588	$1,061,086
Roofing	$151,087	$0	$0	$0	$0	$0	$0	$151,087
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$310,356	$0	$0	$0	$0	$102,675	$102,675	$413,031
Interior	$731,982	$0	$0	$413,350	$0	$522,338	$935,688	$1,667,670
Mechanical	$2,321,455	$0	$0	$0	$23,526	$0	$23,526	$2,344,981
Electrical	$496,931	$0	$0	$0	$0	$0	$0	$496,931
Plumbing	$199,082	$0	$0	$5,322	$7,377	$0	$12,699	$211,781
Fire and Life Safety	$158,446	$0	$0	$0	$0	$0	$0	$158,446
Technology	$820,741	$0	$0	$0	$0	$0	$0	$820,741
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$31,728	$0	$0	$0	$0	$0	$0	$31,728
Total	**$6,238,306**	**$0**	**$0**	**$418,672**	**$75,491**	**$625,013**	**$1,119,176**	**$7,357,482**

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

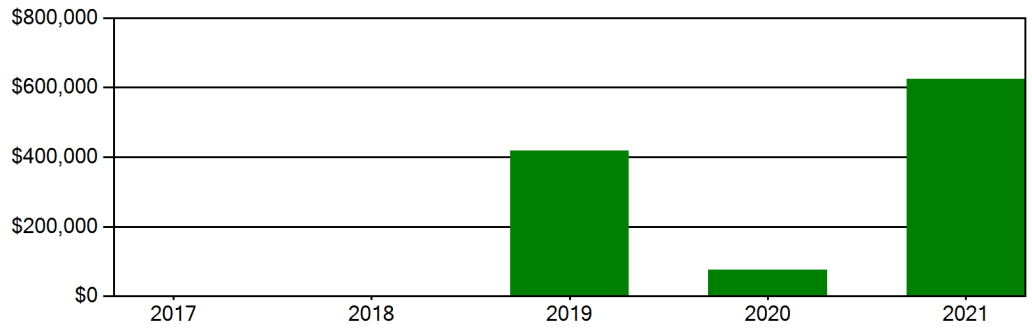
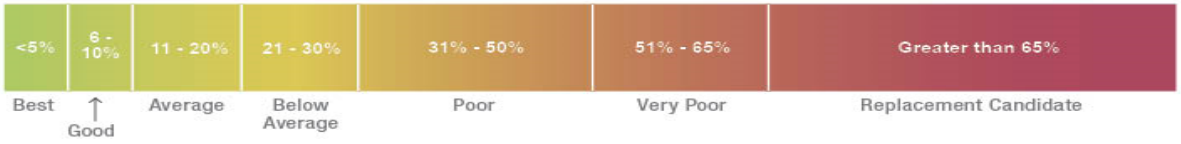


Figure 4: Life Cycle Capital Renewal Forecast

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 $15,516,200. For planning purposes, the total 5-year need at the Matunuck School is $7,358,769 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Matunuck School facility has a 5-year FCI of 47.42%.

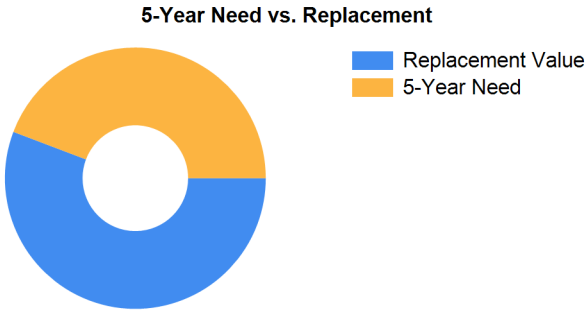


Figure 5: 5-Year FCI

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 246 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 Matunuck School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $0.

Summary of Findings

The Matunuck School comprises 44,332 square feet and was constructed in 1975. Current deficiencies at this school total $6,239,593. Five year capital renewal costs total $1,119,176. The total identified need for the Matunuck School (current deficiencies and 5-year capital renewal costs) is $7,358,769. The 5-year FCI is 47.42%.

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
Matunuck School Totals	44,332	1975	$6,239,593	$1,119,176	$7,358,769	47.42%

**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.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Walks Require Replacement	Capital Renewal	14,555	SF	3	$295,495	4506
Note: Cracked and spalling concrete sidewalks.						
New Sidewalk Is Required	Traffic	4,062	SF	3	$92,057	9290
Note: Install sidewalks from crosswalk at the front of the school to the intersection crosswalk (6' wide)						
Asphalt Paving Requires Replacement	Capital Renewal	83	CAR	4	$272,758	4503
Note: Parking lot is cracked and alligatored.						
Asphalt Paving Requires Replacement	Capital Renewal	89	CAR	4	$292,475	4504
Note: Pavement is cracked and alligatored.						
Asphalt Paving Requires Replacement	Capital Renewal	9	CAR	4	$29,576	4505
Note: Paved play area is depressed and cracked.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28592
Note: Backstops Require Replacement						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	$5,807	28807
Note: Exterior Basketball Goals are Required						
	Sub Total for System	**7**	**items**		**$1,016,498**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Pole Lighting Requires Replacement	Capital Renewal	4	Ea.	3	$30,731	4507
Note: Old sodium vapor lighting is insufficient.						
	Sub Total for System	**1**	**items**		**$30,731**	
	Sub Total for School and Site Level	**8**	**items**		**$1,047,230**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Modified Roof Covering Requires Replacement	Capital Renewal	4,000	SF	2	$151,087	4752
Note: Roof leaks at two classroom wings. Updated per LEA review feedback. Replaced all but 4,000 SF of roof during summer 2016.						
	Sub Total for System	**1**	**items**		**$151,087**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement	Capital Renewal	1,088	SF	2	$182,876	4510
Note: Windows have rusting frames with exterior caulk failing and air leaking in. All exterior windows should be replaced.						
The Metal Exterior Door Requires Replacement	Capital Renewal	20	Door	2	$127,480	4509
Note: Doors at the south side of the main building and east wing are rusted and faded and need to be replaced.						
	Sub Total for System	**2**	**items**		**$310,356**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Doors Require Replacement	Capital Renewal	20	Door	3	$91,597	4511
Note: Laminate is scratched and chipped on doors throughout the main building.						
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	18,382	SF	3	$164,901	4533
Location: Main building and kitchen						
The Carpet Flooring Requires Replacement	Capital Renewal	2,800	SF	3	$60,507	4755
Caulking - significant areas of broken pieces &/or deteriorating caulk	Hazardous Material	250	LF	4	$4,721	Rollup
Paint (probable pre-1978 in base (layers(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	245	Ea.	4	$69,406	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	800	SF	4	$7,554	Rollup
Room Is Excessively Reverberant (Install Fiberglass Wall Panel)	Acoustics	600	SF	4	$33,995	19712
Note: Gym						
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	43,352	SF	5	$284,513	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,456	Rollup

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Concrete Flooring Requires Repair Or Repainting	Capital Renewal	1,500	SF	5	$11,332	4754
Note: Painted concrete floor has chipped and faded paint.						
	Sub Total for System	**10**	**items**		**$731,982**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ductwork Requires Replacement (SF Basis)	Capital Renewal	13,060	SF	2	$190,704	9238
Note: Replace with MUA units.						
Electric Unit Heater Requires Replacement	Capital Renewal	1	Ea.	2	$1,349	4527
Note: Fans are non-functional.						
Replace Unit Vent	Capital Renewal	23	Ea.	2	$323,393	4534
Note: Unit vent is aged with clogged coils.						
Replace Unit Vent	Capital Renewal	2	Ea.	2	$28,121	4535
Note: Unit is old with clogged coils.						
Replace Unit Vent	Capital Renewal	2	Ea.	2	$33,602	4756
Note: Oil-filled electric heat.						
The Air Handler HVAC Component Requires Replacement	Capital Renewal	10	Ea.	2	$1,005,759	4521
Note: AHUs are old with very noisy bearings and blowers.						
The Radiant Heat HVAC Component Requires Replacement	Capital Renewal	35	Ea.	2	$264,601	4536
Note: Units are aged and fins are packed and not effectively dissipating heat.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	10	Ea.	3	$157,924	9239
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	9	Ea.	4	$23,936	4513
Note: Bearings and blowers are worn out.						
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	43,532	SF	4	$292,066	4532
Note: Pneumatic system is aged with numerous patches and leaks.						
	Sub Total for System	**10**	**items**		**$2,321,455**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$23,324	4537
Note: Switchgear is old and running excessively hot.						
The Distribution Panel Requires Replacement	Capital Renewal	1	Ea.	2	$28,971	9237
The Lighting Fixtures Require Replacement	Capital Renewal	43,532	SF	2	$256,919	4529
Note: Aged, low efficiency ballasted fixtures.						
The Panelboard Requires Replacement	Capital Renewal	2	Ea.	2	$15,298	4522
Note: Panels are aged and breakers are cracked.						
The Panelboard Requires Replacement	Capital Renewal	3	Ea.	2	$17,281	4523
Note: 150 amp single breaker panelboard with cracking breakers.						
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$6,232	4524
Note: Panel has multiple defective breakers.						
The Panelboard Requires Replacement	Capital Renewal	5	Ea.	2	$59,396	4525
The Panelboard Requires Replacement	Capital Renewal	3	Ea.	2	$34,080	4526
The Mounted Building Lighting Requires Replacement	Capital Renewal	14	Ea.	3	$20,756	4512
Note: Building mounted lights are old, low efficiency units with broken lenses.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	8	Ea.	5	$3,943	Rollup
	Sub Total for System	**10**	**items**		**$466,199**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	1	Ea.	3	$7,554	4517
Note: Shower is no longer functional.						
Location: Nurse's office						
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	9	Ea.	3	$11,881	4519
Note: Urinal fixtures are aged and stained.						
The Classroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	15	Ea.	4	$40,510	4508
Note: Sinks are old and stained.						

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	4	Ea.	4	$10,236	4518
Note: Concrete service sinks are aged, stained, and leaking.						
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	2	Ea.	4	$14,655	4520
Note: Compressors are non-functional.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	10	Ea.	4	$31,596	4514
Note: Sinks are aged, stained, and pitted.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	18	Ea.	4	$56,873	4515
Note: Restroom lavatories are aged and stained.						
Above Ground Fuel/Oil Storage Tank Requires Replacement	Capital Renewal	1	Ea.	5	$16,053	4531
Note: Tank is old and has no testing or monitoring performed.						
Room lacks a drinking fountain.	Educational Adequacy	1	Ea.	5	$1,095	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	8	Ea.	5	$8,627	Rollup
	Sub Total for System	**10**	**items**		**$199,082**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fire Alarm Is Missing Or Inadequate (NFPA 72 and NFPA 101, Section 9.6)	Code Compliance	43,532	SF	1	$126,733	54850
Note: Per LEA review feedback - fire alarm system should be replaced.						
Replace Kitchen Exhaust Hood	Capital Renewal	2	Ea.	1	$31,713	4528
Note: Hoods are aged and clogged.						
	Sub Total for System	**2**	**items**		**$158,446**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	4	Ea.	3	$22,663	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	144	Ea.	3	$67,989	13123
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	20	Ea.	3	$188,859	13128
Technology: Instructional spaces do not have local sound reinforcement.	Technology	23	Ea.	3	$108,594	13133
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,610	13122
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$21,530	13121
Technology: Network cabling infrastructure is partially outdated and/or needs expansion.	Technology	60	Ea.	3	$25,496	13124
Technology: Network system inadequate and/or near end of useful life	Technology	2	Ea.	3	$15,109	13131
Technology: Network system inadequate and/or near end of useful life	Technology	25	Ea.	3	$118,037	13132
Technology: Number of current, up to date, network switch ports are insufficient to support campus technology.	Technology	96	Ea.	3	$45,326	13125
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	43,532	SF	3	$73,993	13130
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$53,825	13126
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$53,825	13127
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	1	Room	3	$18,886	13129
	Sub Total for System	**14**	**items**		**$820,741**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	7	Ea.	3	$31,728	Rollup
	Sub Total for System	**1**	**items**		**$31,728**	
	Sub Total for Building 01 - Main Building	**60**	**items**		**$5,191,077**	
	Total for Campus	**68**	**items**		**$6,238,306**	

Buildings with no reported deficiencies

02 - Building-02

03 - Pavillion

Matunuck 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	ES Playgrounds		1	Ea.	$44,588	4
		Sub Total for System	**1**	**items**	**$44,588**	
		Sub Total for Building -	**1**	**items**	**$44,588**	

Building: 01 - Main Building

Exterior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Steel - Insulated and Painted		16	Door	$102,675	5
		Sub Total for System	**1**	**items**	**$102,675**	

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Resilient Flooring	Vinyl Composition Tile Flooring		36,032	SF	$413,350	3
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System		18,382	SF	$218,020	5
Interior Swinging Doors	Wood		66	Door	$304,318	5
		Sub Total for System	**3**	**items**	**$935,688**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Window Units		5	Ea.	$16,694	4
Decentralized Cooling	Ductless Split System (2 Ton)		1	Ea.	$6,832	4
		Sub Total for System	**2**	**items**	**$23,526**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Gas - 100 Gallon		1	Ea.	$5,322	3
Plumbing Fixtures	Refrigerated Drinking Fountain		1	Ea.	$7,377	4
		Sub Total for System	**2**	**items**	**$12,699**	
		Sub Total for Building 01 - Main Building	**8**	**items**	**$1,074,588**	
		Total for: Matunuck School	**9**	**items**	**$1,119,176**	

Supporting Photos

Cracked And Worn Parking

Alligatored Parking Lot Paving

Cracked Concrete Walkway

Sinking And Cracking Pavement

Site Aerial

Old Pole Lights

Entrance

Cafeteria

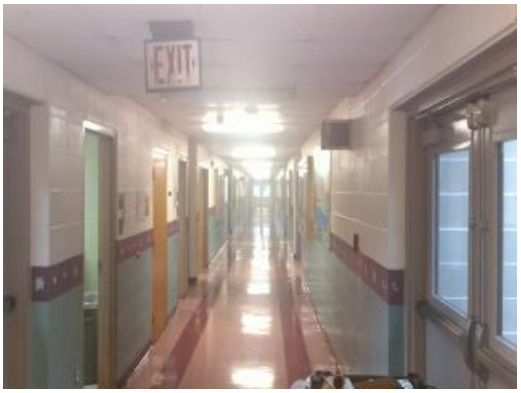
Music Room

School Signage


Gymnasium


Building Entrance


Typical Classroom



Hallway Finishes


Typical Classroom Lavatory


Exterior Door Rusting

Faded And Worn Exterior Door

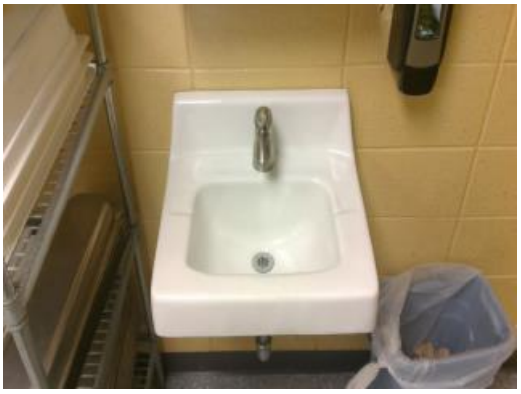
Failed Window Caulking

Rusting Window

Chipped Laminate Wood Door

Low Efficiency Building Mounted Light

Exhaust Fan



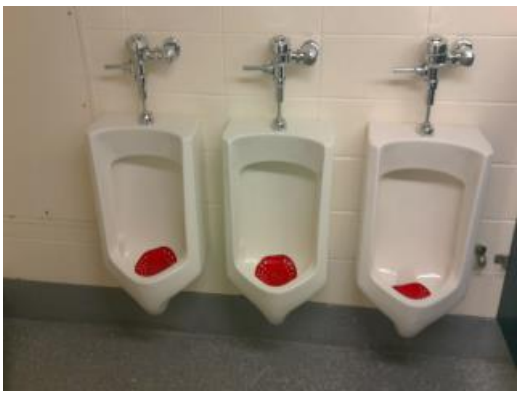
Handwashing Kitchen Sink

Stainless Kitchen Sinks

Aged And Stained Restroom Lavatory

Nurse's Office Shower

Stained And Leaking Service Sink



Typical Urinals

Refrigerated Drinking Fountain With Non-Functional Compressor


Aged Air Handling Unit


Air Handling Unit


Aged Panel


Panelboards


400 Amp Panel


Non-Functional Electric Unit Heater


Kitchen Exhaust Hood


Kitchen Exhaust Hood


Aged Fuel Storage Tank


Pneumatics System


stained ceiling


Unit Vent


1991 Fan Coil


Radiant Heater


Switchgear


Library


Rusted Window Frame


Classroom Cabinetry


Storage Building


Storage Building


Pavilion

Facility Condition Assessment

South Kingstown - Peace Dale Elementary School | *June 2017*

109 Kersey Road, Peace Dale, RI 02879

Introduction

Peace Dale Elementary School, located at 109 Kersey Road in Peace Dale, Rhode Island, was built in 1924. It comprises 85,500 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.

Peace Dale Elementary School serves grades KG - 4, has 42 instructional spaces, and has an enrollment of 360. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Peace Dale Elementary School is 560 with a resulting utilization of 64%.

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 Peace Dale Elementary School the 5-year need is $9,604,036. 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.

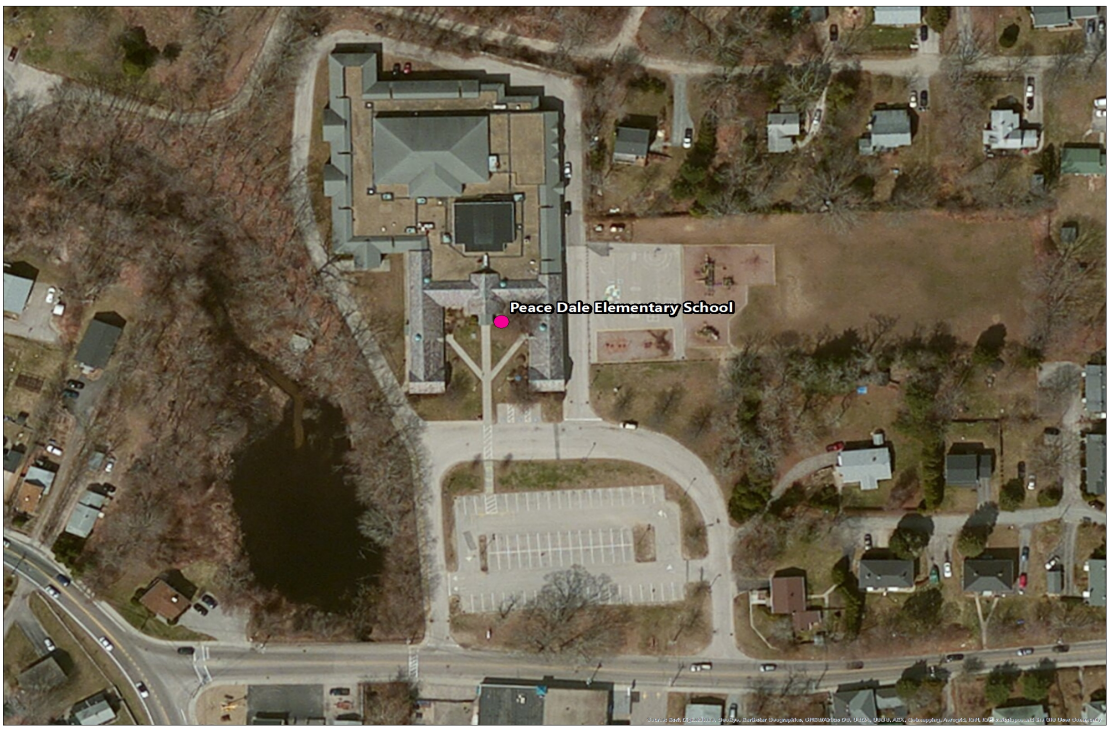


Figure 1: Aerial view of Peace Dale Elementary School

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 Peace Dale Elementary School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	CMU 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:

01 - Main Building:	Composition Shingle Roofing
	Slate Roofing
	Modified Bitumen Roofing
	Built-Up Roofing With Ballast
	Canopy Roofing

Interior

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

01 - Main Building:	Steel Interior Doors
	Aluminum/Glass Storefront Interior Doors
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	CMU Wall
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring

01 - Main Building:	Wood Flooring
	Vinyl Composition Tile Flooring
	Rubber Tile Flooring
	Carpet

Mechanical

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

01 - Main Building:	3,264 MBH Cast Iron Water Boiler
	400 MBH Cast Iron Water Boiler
	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	Pneumatic Heating System Controls
	2 Ton Ductless Split System
	Make-up Air Unit
	10 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	10,000 CFM Interior AHU
	10,000 CFM Outdoor AHU
	Ductwork
	10 Ton DX Gas Roof Top Unit
	5 Ton DX Gas Roof Top Unit
	Wall Exhaust Fan
	Roof Exhaust Fan
	Fire Sprinkler System

Plumbing

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

01 - Main Building:	4" Backflow Preventers
	Gas Piping System
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Sump Pump
	Air Compressor (10 hp)

Electrical

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

01 - Main Building:	150 kW Emergency Generator
	Automatic Transfer Switch
	800 Amp Switchgear
	30 KVA Transformer
	45 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 277/480 225A
	Panelboard - 277/480 400A
	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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$2,644	$1,027,314	$5,807	$1,035,765	20.15 %
Roofing	-	$926,930	-	-	-	$926,930	18.04 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	-	-	-	-	$0	0.00 %
Interior	-	-	$694,728	$14,519	$564,134	$1,273,381	24.78 %
Mechanical	-	$451,406	$51,673	$84,567	-	$587,647	11.43 %
Electrical	-	-	$43,658	-	$75,432	$119,091	2.32 %
Plumbing	-	-	-	$11,164	$13,372	$24,537	0.48 %
Fire and Life Safety	-	-	-	-	-	$0	0.00 %
Technology	-	-	$1,171,922	-	-	$1,171,922	22.80 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	-	-	-	$0	0.00 %
Total	$0	$1,378,336	$1,964,625	$1,137,565	$658,746	$5,139,272	

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

The building systems with the most need include:

Interior	-	$1,273,381
Technology	-	$1,171,922
Site	-	$1,035,765

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

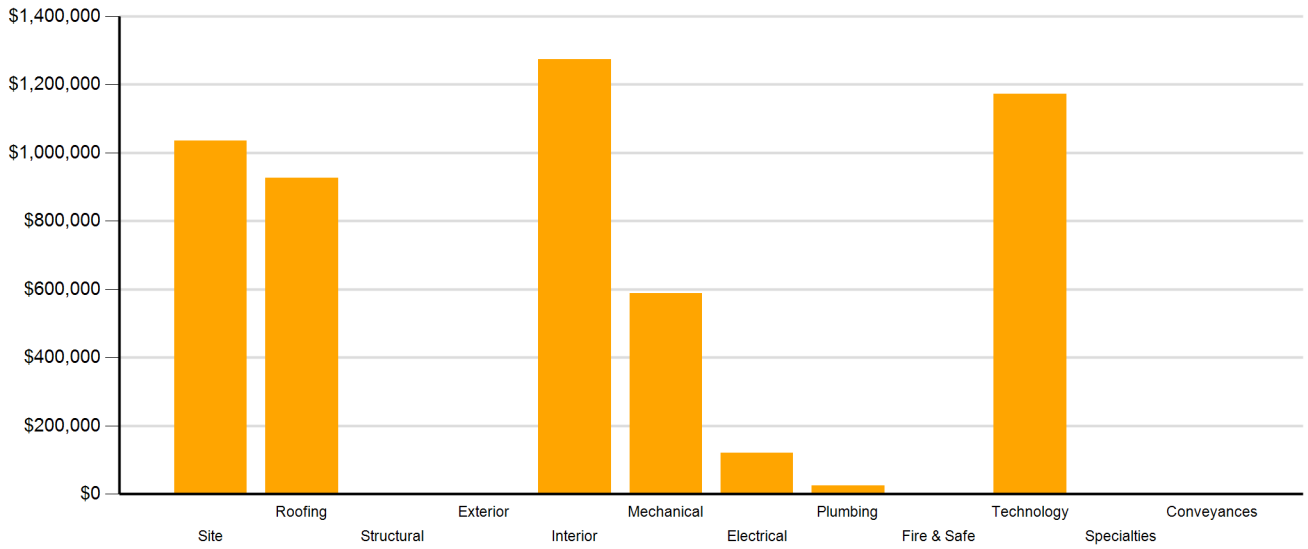


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	-	-	$0
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	-	$1,378,336	$790,059	$1,094,716	$557,175	$3,820,287
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	-	-	$5,704	$34,197	$101,571	$141,472
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$8,651	-	$8,651
Technology	-	-	$1,166,218	-	-	$1,166,218
Traffic	-	-	$2,644	-	-	$2,644
Total	$0	$1,378,336	$1,964,625	$1,137,565	$658,746	$5,139,272

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

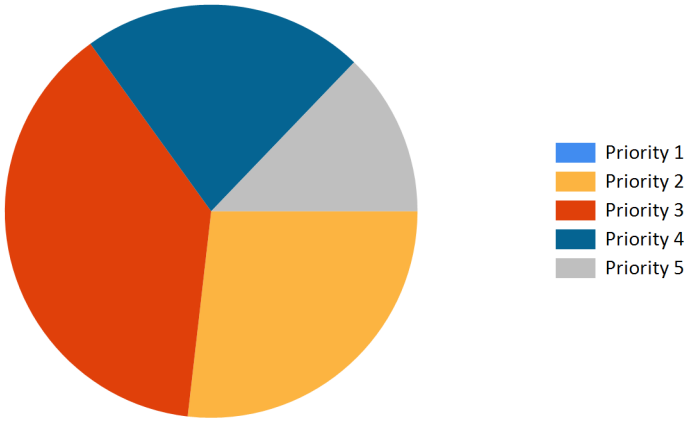


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$1,035,765	$0	$0	$0	$44,588	$141,873	$186,461	$1,222,227
Roofing	$926,930	$0	$0	$0	$0	$555,968	$555,968	$1,482,898
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$0	$0	$0	$0	$0	$0	$0	$0
Interior	$1,273,381	$0	$0	$0	$0	$1,010,163	$1,010,163	$2,283,545
Mechanical	$587,647	$0	$0	$0	$659,677	$580,205	$1,239,882	$1,827,529
Electrical	$119,091	$0	$0	$0	$0	$678,584	$678,584	$797,675
Plumbing	$24,537	$0	$0	$0	$35,033	$2,898	$37,931	$62,468
Fire and Life Safety	$0	$0	$0	$250,600	$0	$0	$250,600	$250,600
Technology	$1,171,922	$0	$0	$0	$0	$0	$0	$1,171,922
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$0	$0	$0	$0	$0	$503,451	$503,451	$503,451
Total	**$5,139,272**	**$0**	**$0**	**$250,600**	**$739,298**	**$3,473,142**	**$4,463,040**	**$9,602,312**

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

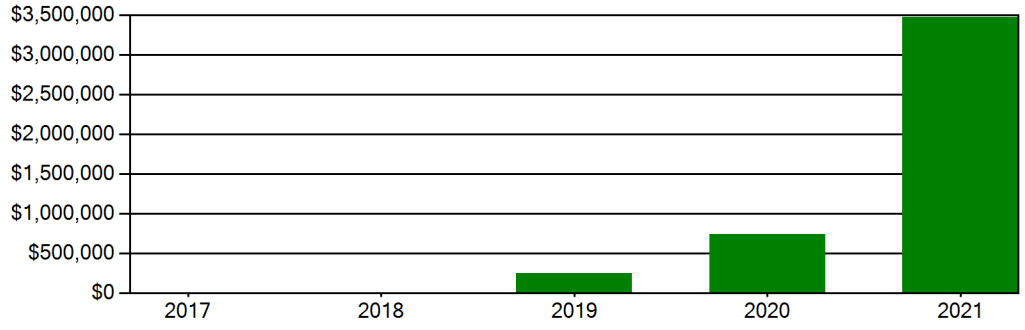
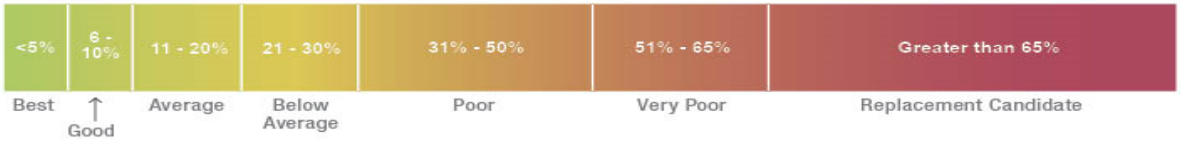


Figure 4: Life Cycle Capital Renewal Forecast

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 $29,925,000. For planning purposes, the total 5-year need at the Peace Dale Elementary School is $9,604,036 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Peace Dale Elementary School facility has a 5-year FCI of 32.09%.

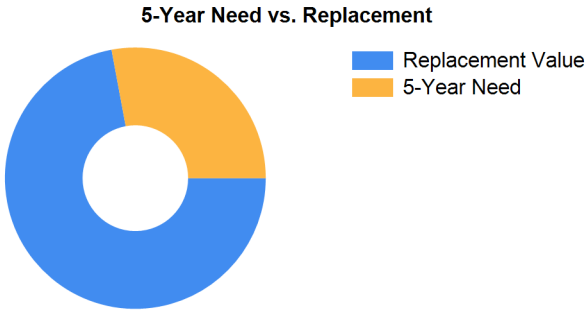


Figure 5: 5-Year FCI

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 574 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 Peace Dale Elementary School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $352,296.

Summary of Findings

The Peace Dale Elementary School comprises 85,500 square feet and was constructed in 1924. Current deficiencies at this school total $5,140,996. Five year capital renewal costs total $4,463,040. The total identified need for the Peace Dale Elementary School (current deficiencies and 5-year capital renewal costs) is $9,604,036. The 5-year FCI is 32.09%.

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
Peace Dale Elementary School Totals	85,500	1924	$5,140,996	$4,463,040	$9,604,036	32.09%

**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
Crosswalk Requires Repainting	Traffic	1	Ea.	3	$755	9332
Note: Repaint crosswalks on school campus						
Pavement Markings: Words/Symbols Are Required	Traffic	5	Ea.	3	$1,889	9333
Note: Repaint arrows on campus						
Asphalt Paving Requires Replacement	Capital Renewal	137	CAR	4	$450,215	8880
Note: Asphalt is cracked and alligatoring						
Asphalt Paving Requires Replacement	Capital Renewal	79	CAR	4	$259,613	8881
Note: Asphalt cracked, splitting, and alligatoring						
Asphalt Paving Requires Replacement	Capital Renewal	34	CAR	4	$111,732	9261
Note: Play area pavement.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28589
Note: Backstops Require Replacement						
Exterior Basketball Goals Require Replacement	Capital Renewal	4	Ea.	4	$30,520	8882
Fencing Requires Replacement (8' Chain Link Fence)	Capital Renewal	2,200	LF	4	$146,905	8879
Note: Fence falling and rusted						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	$5,807	28806
Note: Exterior Basketball Goals are Required						
	Sub Total for System	**9**	**items**		**$1,035,765**	
	Sub Total for School and Site Level	**9**	**items**		**$1,035,765**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Slate Roof Requires Replacement	Capital Renewal	15,000	SF	2	$926,930	8883
Note: Slate Shingle requires replacement.						
	Sub Total for System	**1**	**items**		**$926,930**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior CMU Walls Require Repair	Capital Renewal	40	SF	3	$1,574	8891
Note: Interior CMU wall has cracks at the northwest stairwell and the southwest stairs at the basement.						
Rubber Flooring Requires Replacement	Capital Renewal	1,500	SF	3	$30,357	8897
Note: Worn out at all stairs						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	51,836	SF	3	$644,203	8884
Note: Cracked and fading, throughout building						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	50	SF	3	$621	8890
Note: Replace elevator floor						
The Wood Flooring Requires Replacement	Capital Renewal	500	SF	3	$17,972	8885
Note: Worn out at stage						
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	7	Ea.	4	$2,163	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - linear feet)	Hazardous Material	200	LF	4	$4,944	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	150	SF	4	$1,545	Rollup
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	154	SF	4	$5,868	Rollup
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	77,840	SF	5	$557,175	Rollup
Room lacks appropriate sound control.	Educational Adequacy	200	SF	5	$6,959	Rollup
	Sub Total for System	**11**	**items**		**$1,273,381**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ductless Split System AC Requires Replacement	Capital Renewal	2	Ea.	2	$14,802	8894
Note: Condenser rusted and coils damaged						
Outdoor Air Handler HVAC Component Required Replacement	Capital Renewal	1	Ea.	2	$308,977	8893
Note: Rusted.						
Package Roof Top Unit Requires Replacement	Capital Renewal	3	Ea.	2	$63,044	8887
Note: Unit rusting & coils damaged						
Package Roof Top Unit Requires Replacement	Capital Renewal	2	Ea.	2	$64,584	8892
Note: Rusted with damaged coils						
The Make Up Air Equipment Requires Replacement	Capital Renewal	3	Ea.	3	$51,673	8889
Note: Heat exchangers and units rusted						
The Exhaust Hood Requires Replacement	Capital Renewal	15	Ea.	4	$84,567	8896
Note: Units rusted and bearings bad						
	Sub Total for System	**6**	**items**		**$587,647**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Mounted Building Lighting Requires Replacement	Capital Renewal	27	Ea.	3	$43,658	8886
Note: Fixtures broken or damaged						
Room Has Insufficient Electrical Outlets	Educational Adequacy	152	Ea.	5	$75,432	Rollup
	Sub Total for System	**2**	**items**		**$119,091**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	4	Ea.	4	$11,164	8888
Note: Stained and rusting						
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	10	Ea.	5	$11,167	Rollup
	Sub Total for System	**3**	**items**		**$24,537**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	1	Ea.	3	$5,704	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	192	Ea.	3	$98,872	13206
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	31	Ea.	3	$319,276	13209
Technology: Instructional spaces do not have local sound reinforcement.	Technology	33	Ea.	3	$169,937	13213
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$49,024	13198
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$49,024	13202
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$5,150	13200
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$5,150	13204
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$7,209	13196
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$7,209	13199
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$7,209	13203
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$54,380	13195
Technology: Network system inadequate and/or near end of useful life	Technology	1	Ea.	3	$8,239	13210
Technology: Network system inadequate and/or near end of useful life	Technology	21	Ea.	3	$108,142	13212

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Number of current, up to date, network switch ports are insufficient to support campus technology.	Technology	96	Ea.	3	$49,436	13207
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	81,298	SF	3	$150,715	13211
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$58,706	13208
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$8,239	13197
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$5,150	13201
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$5,150	13205
Sub Total for System		**20**	**items**		**$1,171,922**	
Sub Total for Building 01 - Main Building		**43**	**items**		**$4,103,507**	
Total for Campus		**52**	**items**		**$5,139,272**	

Peace Dale Elementary 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	ES Playgrounds		1	Ea.	$44,588	4
Parking Lot Lighting	Pole Mounted Fixtures (Ea.)		12	Ea.	$92,818	5
Pedestrian Pavement	Sidewalks - Concrete		2,400	SF	$49,055	5
		Sub Total for System	**3**	**items**	**$186,461**	
		Sub Total for Building -	**3**	**items**	**$186,461**	

Building: 01 - Main Building

Roofing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Low-Slope Roofing	Modified Bitumen		14,620	SF	$555,968	5
		Sub Total for System	**1**	**items**	**$555,968**	

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings		1,600	SF	$6,693	5
Note:	Restrooms					
Carpeting	Carpet		14,474	SF	$314,899	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles		76,240	SF	$688,571	5
		Sub Total for System	**3**	**items**	**$1,010,163**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Decentralized Heating Equipment	Heating Unit Vent - Steam/Hot water		39	Ea.	$659,677	4
Heating System Supplementary Components	Controls - Pneumatic (Bldg.SF)		85,500	SF	$577,527	5
Exhaust Air	Wall Exhaust Fan		1	Ea.	$2,678	5
Note:	Gym Exhaust					
		Sub Total for System	**3**	**items**	**$1,239,882**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Electrical Service	Switchgear - Main Dist Panel (800 Amps)		1	Ea.	$23,482	5
Electrical Service	Switchgear - Main Dist Panel (800 Amps)		1	Ea.	$23,482	5
Packaged Generator Assemblies	Emergency Generator (150 KW)		1	Ea.	$123,591	5
Lighting Fixtures	Light Fixtures (Bldg SF)		85,500	SF	$508,029	5
		Sub Total for System	**4**	**items**	**$678,584**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Refrigerated Drinking Fountain		2	Ea.	$14,755	4
Compressed-Air Systems	Air Compressor (10 hp)		1	Ea.	$20,278	4
Building Support Plumbing System Supplementary Components	Sump Pump		2	Ea.	$2,898	5
Note:	64 gpm					
		Sub Total for System	**3**	**items**	**$37,931**	

Fire and Life Safety

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm		85,500	SF	$250,600	3
		Sub Total for System	**1**	**items**	**$250,600**	

Specialties

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Casework	Fixed Cabinetry		45	Room	$503,451	5
		Sub Total for System	**1**	**items**	**$503,451**	
		Sub Total for Building 01 - Main Building	**16**	**items**	**$4,276,579**	
		Total for: Peace Dale Elementary School	**19**	**items**	**$4,463,040**	

Supporting Photos


Roadway Alligator Cracking


Falling Fence


Basketball Goals


Parking Alligator Cracking

Site Aerial

Library

Cafeteria

West Elevation

Front Elevation

Music


Front Elevation


Typical Classroom


Gym

Marquee


Playground


Computer Room


Slate With Mold


Mold


Typical VCT Damage


Stage Flooring


Building Mounted Fixtures

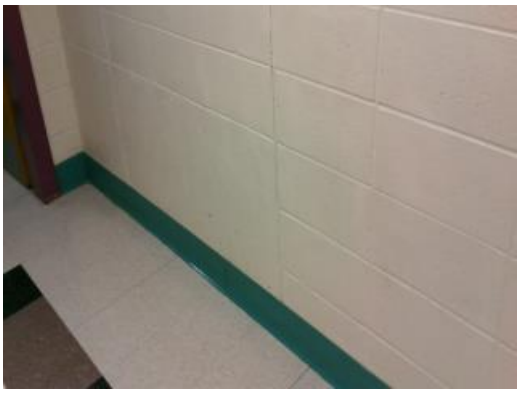

DX Unit


Mop Sink


Make Up Air Unit


VCT At Elevator


First Floor Northwest CMU Crack


Southwest Basement Stairway Crack


DX Unit


Outdoor AHU


Ductless System


Typical Paint


Exhaust


Worn Rubber Flooring

Facility Condition Assessment

South Kingstown - South Kingstown High School | *June 2017*

215 Columbia Street, Wakefield, RI 02879

Introduction

South Kingstown High School, located at 215 Columbia Street in Wakefield, Rhode Island, was built in 1954. It comprises 234,900 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.

South Kingstown High School serves grades 9 - 12, has 90 instructional spaces, and has an enrollment of 1,004. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for South Kingstown High School is 1,703 with a resulting utilization of 59%.

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 South Kingstown High School the 5-year need is $24,701,149. 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.

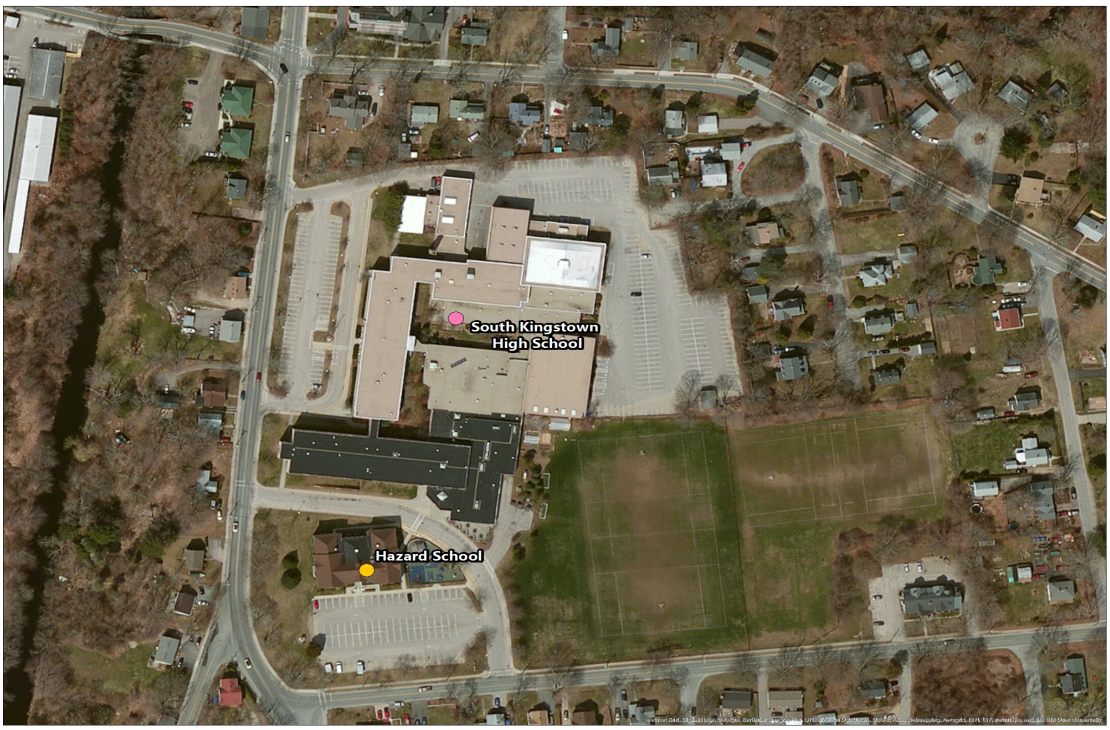


Figure 1: Aerial view of South Kingstown High School

Approach and Methodology

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

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

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

Discipline Specialists

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

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

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

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

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

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

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

System Summaries

The following tables summarize major building systems at the South Kingstown High School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	Metal Panel Exterior Wall
	Aluminum Exterior Windows
	Storefront / Curtain Wall
	Storefront Entrance Doors
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors
02 - Small Shed:	Wood Siding Exterior Wall
	Aluminum Exterior Windows
	Wood Exterior Doors
03 - Building 03:	Wood Siding Exterior Wall
	Wood Exterior Doors

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

01 - Main Building:	Built-Up Roofing With Ballast
	Metal Low-Slope Roofing
	Single Ply Roofing
02 - Small Shed:	Composition Shingle Roofing
03 - Building 03:	Composition Shingle Roofing

Interior

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

01 - Main Building:	Steel Interior Doors
	Aluminum/Glass Storefront Interior Doors
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System

01 - Main Building:	Suspended Acoustical Ceiling Tile
	Non-Painted Plaster/Gypsum Board Ceiling
	Metal Panel Ceilings
	Ceramic Tile Wall
	CMU Wall
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Terrazzo Flooring
	Epoxy Coated Flooring
	Carpet
	Athletic/Sport Flooring
02 - Small Shed:	Wood Ceilings
	Interior Wall Painting
	Wood Flooring
03 - Building 03:	Wood Ceilings
	Interior Wall Painting
	Wood Flooring

Mechanical

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

01 - Main Building:	4,200 MBH Cast Iron Steam Boiler
	1,275 MBH Cast Iron Water Boiler
	Steam to Water Heat Exchanger
	Steam Condensate Receiver, Tank and Pump
	Gas Heating Unit Vent
	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	Pneumatic Heating System Controls
	3 Ton Ductless Split System
	10 Ton Outside Air Cooled Condenser
	Window Units
	Make-up Air Unit
	10 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	5,000 CFM Interior AHU
	10,000 CFM Interior AHU
	Ductwork
	10 Ton DX Gas Roof Top Unit
	25 Ton DX Gas Roof Top Unit

01 - Main Building:	Supply Fan
	4'x8' Ventilator/Relief Vent
	Wall Exhaust Fan
	Roof Exhaust Fan
	Laboratory Fume Hood
	Fire Sprinkler System

Plumbing

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

01 - Main Building:	1,000 Gallon Water Storage Tank
	2" Backflow Preventers
	Gas Piping System
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Sump Pump
	Air Compressor (5 hp)

Electrical

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

01 - Main Building:	150 kW Emergency Generator
	Automatic Transfer Switch
	1,200 Amp Switchgear
	1,600 Amp Switchgear
	3,000 Amp Switchgear
	1600 Amp Distribution Panel
	600 Amp Distribution Panel
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy 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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$1,511	$1,381,060	$939,696	$2,322,267	11.97 %
Roofing	-	$3,056,871	-	-	-	$3,056,871	15.76 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	$2,323,895	$1,053	-	-	$2,324,949	11.99 %
Interior	-	-	$1,405,913	$1,413,750	$909,723	$3,729,387	19.23 %
Mechanical	-	$3,802,939	$302,997	$310,479	$3,130	$4,419,545	22.78 %
Electrical	$12,710	$295,096	$7,016	-	$112,500	$427,323	2.20 %
Plumbing	-	-	-	$125,473	$165,051	$290,524	1.50 %
Fire and Life Safety	$881,701	-	-	-	-	$881,701	4.55 %
Technology	-	-	$1,391,060	-	-	$1,391,060	7.17 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$18,253	$406,810	$128,344	$553,407	2.85 %
Total	$894,411	$9,478,802	$3,127,804	$3,637,572	$2,258,443	$19,397,032	

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

The building systems with the most need include:

Mechanical	-	$4,419,545
Interior	-	$3,729,387
Roofing	-	$3,056,871

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

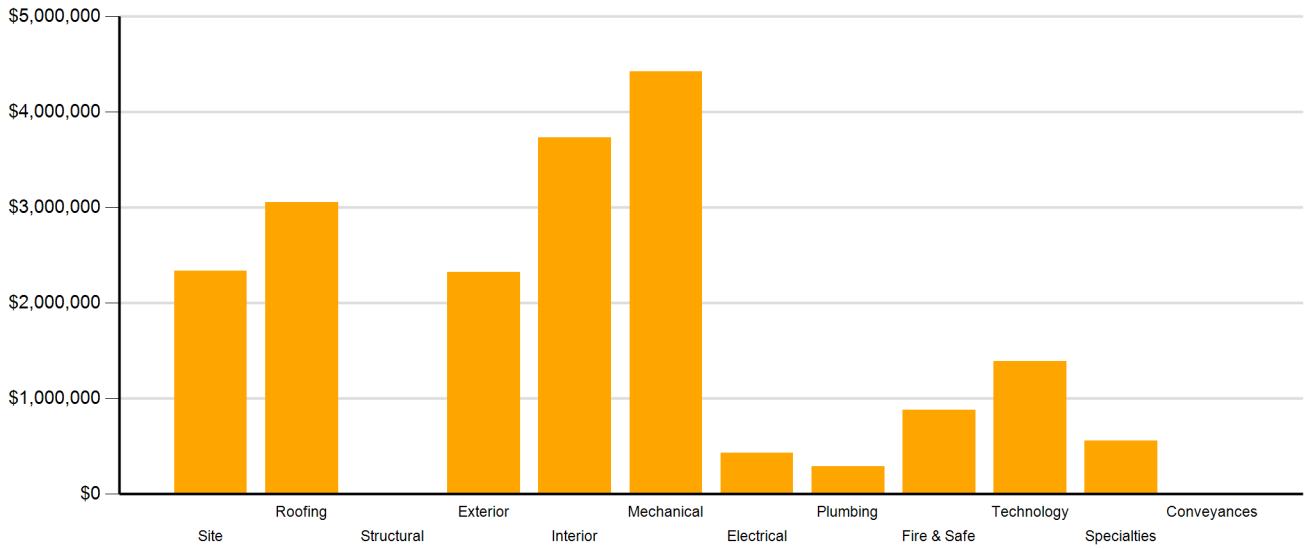


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	$114,209	$169,794	-	$284,004
Barrier to Accessibility	-	-	$5,704	-	-	$5,704
Capital Renewal	-	$9,478,802	$1,597,066	$2,950,713	$904,766	$14,931,347
Code Compliance	$687,759	-	-	-	-	$687,759
Educational Adequacy	$206,652	-	$46,774	$456,111	$1,353,678	$2,063,215
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$60,953	-	$60,953
Technology	-	-	$1,362,539	-	-	$1,362,539
Traffic	-	-	$1,511	-	-	$1,511
Total	$894,411	$9,478,802	$3,127,804	$3,637,572	$2,258,443	$19,397,032

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

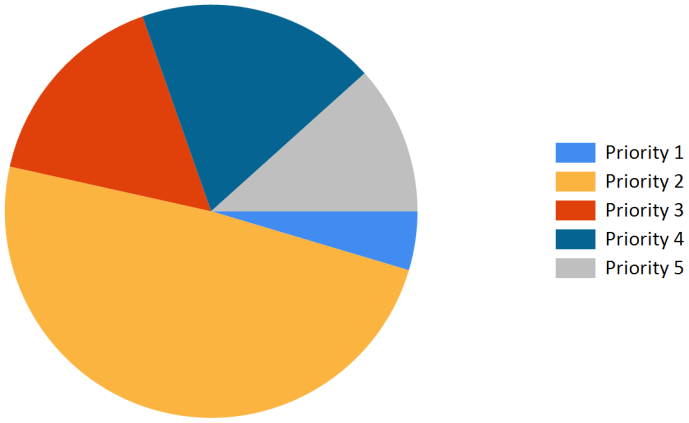


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$2,322,267	$0	$0	$0	$124,372	$541,392	$665,764	$2,988,031
Roofing	$3,056,871	$0	$0	$0	$0	$0	$0	$3,056,871
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$2,324,949	$0	$0	$0	$16,647	$5,995	$22,642	$2,347,591
Interior	$3,729,387	$0	$0	$0	$6,636	$1,321	$7,957	$3,737,344
Mechanical	$4,419,545	$0	$0	$0	$109,553	$2,103,277	$2,212,830	$6,632,375
Electrical	$427,323	$0	$0	$0	$70,047	$1,702,911	$1,772,958	$2,200,281
Plumbing	$290,524	$0	$0	$0	$23,570	$1,449	$25,019	$315,543
Fire and Life Safety	$881,701	$0	$0	$0	$0	$0	$0	$881,701
Technology	$1,391,060	$0	$0	$0	$0	$0	$0	$1,391,060
Conveyances	$0	$0	$0	$0	$0	$570,418	$570,418	$570,418
Specialties	$553,407	$0	$0	$0	$0	$0	$0	$553,407
Total	**$19,397,032**	**$0**	**$0**	**$0**	**$350,825**	**$4,926,763**	**$5,277,588**	**$24,674,620**

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

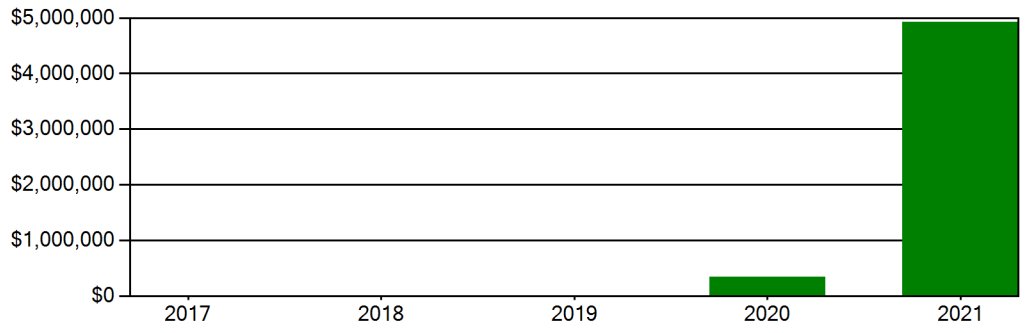
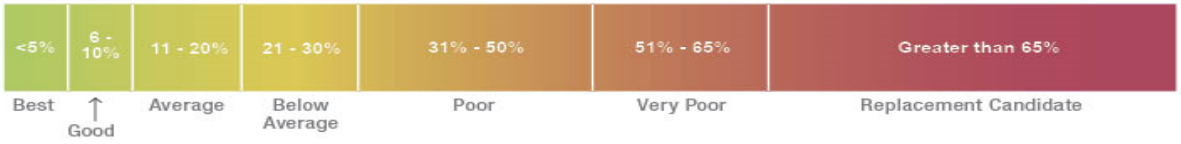


Figure 4: Life Cycle Capital Renewal Forecast

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 $84,564,000. For planning purposes, the total 5-year need at the South Kingstown High School is $24,701,149 (Life Cycle Years 1-5 plus the FCI deficiency cost). The South Kingstown High School facility has a 5-year FCI of 29.18%.

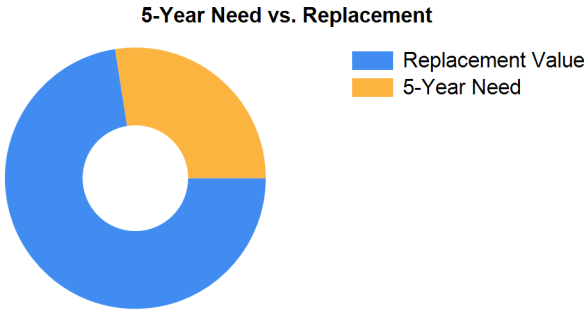


Figure 5: 5-Year FCI

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 1,270 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 South Kingstown High School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $0.

Summary of Findings

The South Kingstown High School comprises 234,900 square feet and was constructed in 1954. Current deficiencies at this school total $19,423,561. Five year capital renewal costs total $5,277,588. The total identified need for the South Kingstown High School (current deficiencies and 5-year capital renewal costs) is $24,701,149. The 5-year FCI is 29.18%.

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
South Kingstown High School Totals	234,900	1954	$19,423,561	$5,277,588	$24,701,149	29.18%

**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.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Crosswalk Requires Repainting	Traffic	2	Ea.	3	$1,511	9305
Note: Repaint crosswalks at end of school driveways						
Asphalt Paving Requires Replacement	Capital Renewal	114	CAR	4	$374,631	54851
Note: Per LEA review - all asphalt should be replaced.						
Asphalt Paving Requires Replacement	Capital Renewal	270	CAR	4	$887,285	54852
Note: Per LEA review - all asphalt should be replaced.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28591
Note: Backstops Require Replacement						
Fencing Requires Replacement (8' Chain Link Fence)	Capital Renewal	1,360	LF	4	$90,814	8460
Note: Fence is rusted and falling.						
School has insufficient # of tennis courts.	Educational Adequacy	1	Ea.	5	$161,597	29044
Note: School has insufficient # of tennis courts.						
School has insufficient baseball fields.	Educational Adequacy	1	Ea.	5	$207,745	28329
Note: School has insufficient baseball fields.						
School has insufficient football/soccer fields.	Educational Adequacy	1	Ea.	5	$94,430	28199
Note: School has insufficient football/soccer fields.						
School has insufficient softball fields.	Educational Adequacy	1	Ea.	5	$151,087	28373
Note: School has insufficient softball fields.						
School lacks a competition track.	Educational Adequacy	1	Ea.	5	$324,837	28274
Note: School lacks a competition track.						
	Sub Total for System	**10**	**items**		**$2,322,267**	
	Sub Total for School and Site Level	**10**	**items**		**$2,322,267**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Built-up Roofing With Aggregate Ballast Requires Replacement	Capital Renewal	60,000	SF	2	$2,281,673	54853
Note: Per LEA review feedback - school needs new roof						
The Metal Roof Structural Roof Covering Requires Replacement	Capital Renewal	2,160	SF	2	$82,140	54854
Note: Per LEA review - school needs new roof						
The Single-Ply Membrane Roof Covering Requires Replacement	Capital Renewal	54,000	SF	2	$693,058	8495
Note: Roof is leaking at the new addition and science wing.						
	Sub Total for System	**3**	**items**		**$3,056,871**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement	Capital Renewal	13,704	SF	2	$2,319,047	54855
Note: Per LEA review - replace windows						
The Concrete Pre-Cast Panel Requires Replacement (Bldg SF)	Capital Renewal	30	SF	2	$4,849	8496
Note: Foundation concrete wall corner is damaged.						
Location: Northwest corner by secondary entrance						
The Metal Panel Exterior Requires Repair	Capital Renewal	100	SF Wall	3	$1,053	8462
Location: Wood shop						
	Sub Total for System	**3**	**items**		**$2,324,949**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Entry Door Does Not Have Required Power Assist Device	Barrier to Accessibility	2	Ea.	3	$5,704	8474
Note: Power assist mechanism is not functioning properly and should be replaced.						

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Doors Require Replacement	Capital Renewal	37	Door	3	$170,603	8463
Note: Doors are scratched and/or broken throughout main building.						
The Athletic Sport Flooring Requires Replacement	Capital Renewal	4,430	SF	3	$151,617	8473
Note: Athletic floor is aged and worn.						
Location: Small gym						
The Carpet Flooring Requires Replacement	Capital Renewal	16,500	SF	3	$358,977	8464
Note: Carpet is worn and stained throughout the building.						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	54,000	SF	3	$619,474	8465
Note: VCT worn, chipped, and peeling.						
The Wood Flooring Requires Replacement	Capital Renewal	3,000	SF	3	$99,538	8466
Note: Wood floor is scratched and worn at stage.						
Location: Auditorium stage						
Ceiling Grid Requires Replacement	Capital Renewal	98,458	SF	4	$1,167,761	8492
Note: Ceiling tiles are stained and sagging at the main building classrooms, library, cafeteria, offices, and kitchen.						
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - each)	Hazardous Material	1	Ea.	4	$285	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - square feet)	Hazardous Material	600	SF	4	$5,704	Rollup
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	84	Ea.	4	$23,958	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - linear feet)	Hazardous Material	271	LF	4	$6,183	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	2,611	SF	4	$24,823	Rollup
Room Is Excessively Reverberant	Acoustics	7,600	SF	4	$169,794	19725
Note: Main gym & small gym						
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	400	SF	4	$15,242	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	5	Ea.	5	$11,408	Rollup
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	135,957	SF	5	$898,315	Rollup
	Sub Total for System	**16**	**items**		**$3,729,387**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ductless Split System AC Requires Replacement	Capital Renewal	6	Ea.	2	$46,694	8489
Note: Units are aged. Condensers are rusting and evaporative units are molded.						
Package Roof Top Unit Requires Replacement	Capital Renewal	1	Ea.	2	$29,808	8482
Note: RTU is aged and heat exchanger is rusted.						
Package Roof Top Unit Requires Replacement	Capital Renewal	1	Ea.	2	$72,674	8485
Note: Unit is aged and rusted.						
Replace Unit Vent	Capital Renewal	9	Ea.	2	$152,233	8493
Note: Units are aged and have not been maintained.						
Location: Gym						
Replace Unit Vent	Capital Renewal	17	Ea.	2	$287,552	8494
Note: Units are aged. Many are not operational with failed motors.						
Replace Unit Vent	Capital Renewal	119	Ea.	2	$2,012,861	54857
Note: Updated per LEA review						
The Air Handler HVAC Component Requires Replacement	Capital Renewal	1	Ea.	2	$119,484	8480
Note: Air handler is aged and rusted with corroded connections.						
Location: Auditorium						
The Exterior Condenser Requires Replacement	Capital Renewal	1	Ea.	2	$16,342	8481
Note: Condenser is old and the heat exchanger is rusted.						
The Steam Condensate Receiver Requires Replacement	Capital Renewal	3	Ea.	2	$1,055,274	8486
Note: Pumps and seals are rusted and leaking.						
The Window AC Unit Component Requires Replacement	Capital Renewal	3	Ea.	2	$10,017	8479
Note: Units are aged and beginning to fail. Plastic casing is cracked and coils are clogged.						

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Large Diameter Exhausts/Hoods Require Replacement	Capital Renewal	1	Ea.	3	$13,893	8469
Note: Boiler room supply fan is not functioning.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	11	Ea.	3	$174,894	8475
Note: Units are aged, connections are corroded, cases are rusted.						
Location: Library, gyms, locker rooms, boiler room						
Unit Ventilators Are Excessively Noisy	Acoustics	18	Ea.	3	$114,209	27972
Location: All learning spaces						
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	1	Ea.	4	$2,678	8470
Lab lacks an appropriate fume hood.	Educational Adequacy	14	Ea.	4	$307,801	Rollup
Remove Abandoned Equipment	Capital Renewal	1	Ea.	5	$3,130	8488
Note: Fuel storage tank has been abandoned in place and needs to be removed.						
	Sub Total for System	**16**	**items**		**$4,419,545**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	9	Ea.	1	$12,710	Rollup
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$82,102	8478
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$69,059	8487
Note: Switchgear is old with broken breakers and is being used improperly as a disconnect.						
The Distribution Panel Requires Replacement	Capital Renewal	1	Ea.	2	$51,908	8461
Note: Panel is old and breakers are cracking.						
The Panelboard Requires Replacement	Capital Renewal	13	Ea.	2	$63,031	8483
Note: Panelboards are old, cases are damaged, and breakers are cracked.						
The Panelboard Requires Replacement	Capital Renewal	5	Ea.	2	$28,996	8484
Note: Panels are aged, cases are damaged, and masonite panels are falling apart.						
The Mounted Building Lighting Requires Repair	Capital Renewal	15	Ea.	3	$7,016	8467
Remove Abandoned Equipment	Capital Renewal	1	Ea.	5	$3,321	8468
Note: Abandoned emergency generator should be removed.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	220	Ea.	5	$109,178	Rollup
	Sub Total for System	**9**	**items**		**$427,323**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	9	Ea.	4	$91,980	8471
Note: Units are aged, corroded, and non-functional.						
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	13	Ea.	4	$33,493	8472
Note: Service sinks are stained and rusting.						
Room lacks a drinking fountain.	Educational Adequacy	3	Ea.	5	$3,308	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	107	Ea.	5	$161,742	Rollup
	Sub Total for System	**4**	**items**		**$290,524**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fire Alarm Is Missing Or Inadequate (NFPA 72 and NFPA 101, Section 9.6)	Code Compliance	234,650	SF	1	$687,759	54856
Note: Updated per LEA review						
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	17	Ea.	1	$193,942	Rollup
	Sub Total for System	**2**	**items**		**$881,701**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	5	Ea.	3	$28,521	Rollup
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	$95,070	13163

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	482	Ea.	3	$229,118	13176
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	28	Ea.	3	$266,195	13159
Technology: Instructional spaces do not have local sound reinforcement.	Technology	30	Ea.	3	$142,605	13177
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	10	Ea.	3	$53,239	13166
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	13169
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	13170
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	13171
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	13172
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	13173
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	13174
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$16,732	13168
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	10	Ea.	3	$47,535	13167
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	13165
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$21,676	13164
Technology: Network cabling infrastructure is partially outdated and/or needs expansion.	Technology	96	Ea.	3	$41,070	13160
Technology: Network system inadequate and/or near end of useful life	Technology	30	Ea.	3	$142,605	13162
Technology: Number of current, up to date, network switch ports are insufficient to support campus technology.	Technology	96	Ea.	3	$45,633	13161
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	6	Ea.	3	$28,521	13175
	Sub Total for System	**20**	**items**		**$1,391,060**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	4	Ea.	3	$18,253	Rollup
Replace Cabinetry In Classes/Labs	Capital Renewal	27	Room	4	$302,071	8490
Note: Laminate chipped or faded on main building cabinetry.						
Walk In Cooler/Freezer Is Required	Educational Adequacy	1	Ea.	4	$90,316	Rollup
Welding Bays Are Required	Educational Adequacy	2	Ea.	4	$10,838	Rollup
Work Tables Are Required	Educational Adequacy	1	Ea.	4	$3,585	Rollup
Room lacks an appropriate refrigerator.	Educational Adequacy	15	Ea.	5	$128,344	Rollup
	Sub Total for System	**6**	**items**		**$553,407**	
	Sub Total for Building 01 - Main Building	**79**	**items**		**$17,074,765**	
	Total for Campus	**89**	**items**		**$19,397,032**	

Buildings with no reported deficiencies

02 - Small Shed

03 - Building 03

South Kingstown 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
Fences and Gates	Fencing - Chain Link (8 Ft)	1,850	LF	$124,372	4
Parking Lot Lighting	Pole Mounted Fixtures (Ea.)	8	Ea.	$61,879	5
Pedestrian Pavement	Sidewalks - Concrete	23,460	SF	$479,513	5
	Sub Total for System	**3**	**items**	**$665,764**	
	Sub Total for Building -	**3**	**items**	**$665,764**	

Building: 01 - Main Building

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Air Distribution	Make-up Air Unit	6	Ea.	$95,397	4
Note:	Shop classrooms, kitchen, and cafeteria				
Decentralized Heating Equipment	Heating Unit Vent - Gas	1	Ea.	$14,156	4
Exhaust Air	Laboratory Fume Hood	5	Ea.	$142,605	5
Exhaust Air	Roof Exhaust Fan	62	Ea.	$322,655	5
Exhaust Air	Ventilator/Relief Vent (4'x8')	4	Ea.	$53,026	5
Heating System Supplementary Components	Controls - Pneumatic (Bldg.SF)	234,650	SF	$1,584,991	5
	Sub Total for System	**6**	**items**	**$2,212,829**	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Building Mounted Fixtures (Ea.)	34	Ea.	$50,748	4
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	14	Ea.	$19,299	4
Packaged Generator Assemblies	Emergency Generator (150 KW)	1	Ea.	$123,591	5
Lighting Fixtures	Light Fixtures (Bldg SF)	234,650	SF	$1,394,257	5
Electrical Service	Switchgear - Main Dist Panel (3000 Amps)	2	Ea.	$185,063	5
	Sub Total for System	**5**	**items**	**$1,772,957**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Compressed-Air Systems	Air Compressor (5 hp)	2	Ea.	$23,570	4
Building Support Plumbing System Supplementary Components	Sump Pump	1	Ea.	$1,449	5
	Sub Total for System	**2**	**items**	**$25,019**	

Conveyances

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Elevators	Hydraulic (Passenger Elev)	2	Ea.	$570,418	5
	Sub Total for System	**1**	**items**	**$570,418**	
	Sub Total for Building 01 - Main Building	**14**	**items**	**$4,581,223**	

Building: 03 - Building 03

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Wood	2	Door	$16,647	4
Exterior Wall Veneer	Wood Siding - Bldg SF basis	200	SF	$5,995	5
	Sub Total for System	**2**	**items**	**$22,642**	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wood Flooring	Wood Flooring - All Types	200	SF	$6,636	4
Wall Painting and Coating	Painting/Staining (Bldg SF)	200	SF	$1,321	5
	Sub Total for System	**2**	**items**	**$7,957**	
	Sub Total for Building 03 - Building 03	**4**	**items**	**$30,599**	
	Total for: South Kingstown High School	**21**	**items**	**$5,277,586**	

Supporting Photos


Abandoned Generator


Science Room


Auditorium AHU


Failing Window Unit


Music Room


Typical Classroom


Main Building Exterior


Drop Off Exterior


Damaged Metal Panel Wall


Worn Wood Door


Non-Functional Drinking Fountain


Corroded Make-Up Air Unit


Damaged Door And Frame

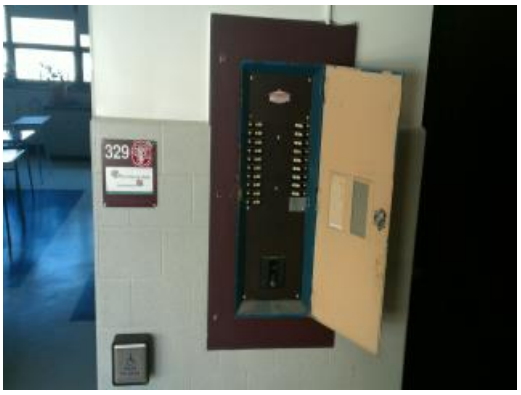

Gym Heater


Heating Unit


Wall Exhaust Fan

Cafeteria

Condenser



Aged Panelboard

Corroded Utility Sink

25 Ton RTU

Aged 225 Amp Panelboard


Chipped And Curling VCT


Rusted Condensate Receiver


Worn Wood Floor


Rusted And Falling Fence


Chipped Art Classroom Cabinetry


Worn And Stained Carpet


Peeling Paint


Chipped VCT


Storage


Concrete Wall Corner


1,200 Amp Switchgear


Rusted And Molding Split System


Stained And Sagging Ceiling Tiles


Worn Gym Paint


Worn Athletic Flooring


Peeling Paint In Storage


Site Aerial


Building Mounted Light

Small Gym Interior

Marquee

Library

Main Gym

Facility Condition Assessment

South Kingstown - South Kingstown Inclusionary Preschool | *June 2017*

1157 South Road, Wakefield, RI 02879

Introduction

South Kingstown Inclusionary Preschool, located at 1157 South Road in Wakefield, Rhode Island, was built in 1964. It comprises 37,350 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.

South Kingstown Inclusionary Preschool serves grades PK, has 21 instructional spaces, and has an enrollment of 110. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for South Kingstown Inclusionary Preschool is 165 with a resulting utilization of 67%.

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 South Kingstown Inclusionary Preschool the 5-year need is $6,908,139. 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.

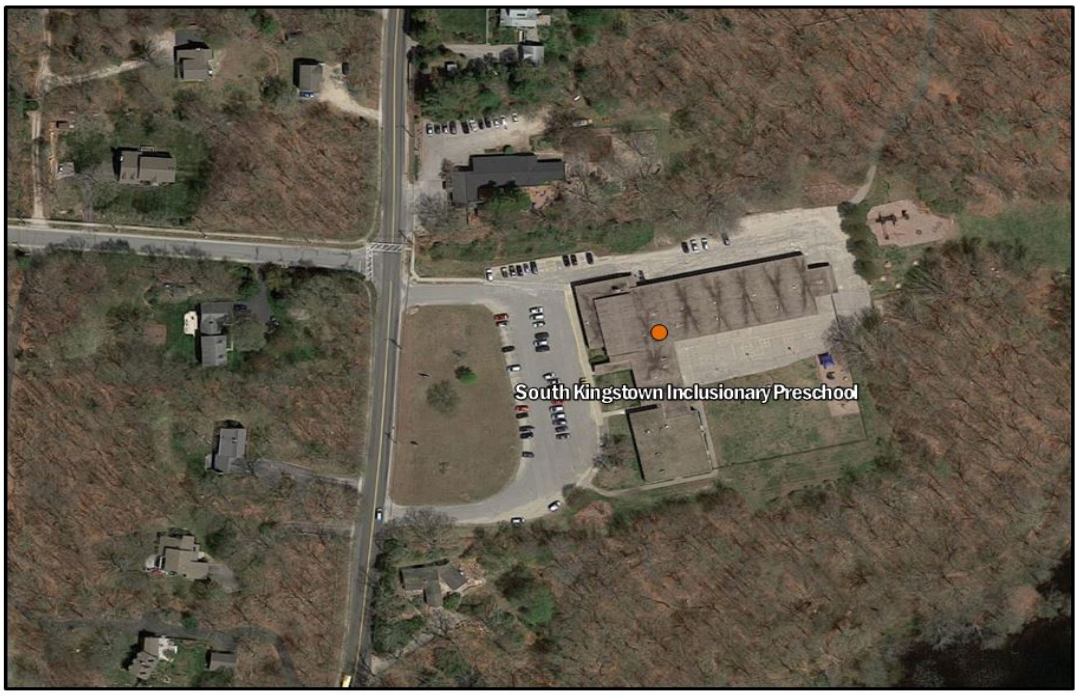


Figure 1: Aerial view of South Kingstown Inclusionary Preschool

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 South Kingstown Inclusionary Preschool 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:

01 - Main Building:	Brick Exterior Wall
	Aluminum Exterior Windows
	Storefront / Curtain Wall
	Storefront Entrance Doors
	Steel Exterior Entrance Doors

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

01 - Main Building:	Built-Up Roofing With Ballast
	Canopy Roofing

Interior

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

01 - Main Building:	Steel Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Interior Wall Painting
	Concrete Flooring
	Quarry Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Carpet

Mechanical

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

01 - Main Building:	1,275 MBH Cast Iron Water Boiler
	3,264 MBH Cast Iron Water Boiler
	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	Pneumatic Heating System Controls
	1 Ton Ductless Split System
	3 Ton Ductless Split System
	Window Units
	Make-up Air Unit
	1 HP or Smaller Pump
	2-Pipe Hot Water Hydronic Distribution System
	5,000 CFM Interior AHU
	Ductwork
	Kitchen Exhaust Hoods
	Roof Exhaust Fan

Plumbing

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

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

Electrical

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

01 - Main Building:	50 kW Emergency Generator
	Automatic Transfer Switch
	400 Amp Distribution Panel
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A

01 - Main Building:	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy 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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$45,478	$410,780	-	$456,258	9.08 %
Roofing	-	-	-	-	-	$0	0.00 %
Structural	-	-	-	$3,423	-	$3,423	0.07 %
Exterior	-	$515,795	-	$893	-	$516,688	10.28 %
Interior	-	-	$141,576	$658,014	$47,915	$847,506	16.87 %
Mechanical	-	$1,050,204	$15,899	$325,307	$12,519	$1,403,930	27.94 %
Electrical	-	$162,120	$24,468	$12,407	$39,701	$238,696	4.75 %
Plumbing	-	-	$9,304	$279,851	$46,651	$335,805	6.68 %
Fire and Life Safety	$15,964	-	-	-	-	$15,964	0.32 %
Technology	-	-	$825,043	-	-	$825,043	16.42 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$86,704	$294,455	-	$381,158	7.59 %
Total	$15,964	$1,728,120	$1,148,472	$1,985,129	$146,786	$5,024,471	

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

The building systems with the most need include:

Mechanical	-	$1,403,930
Interior	-	$847,506
Technology	-	$825,043

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

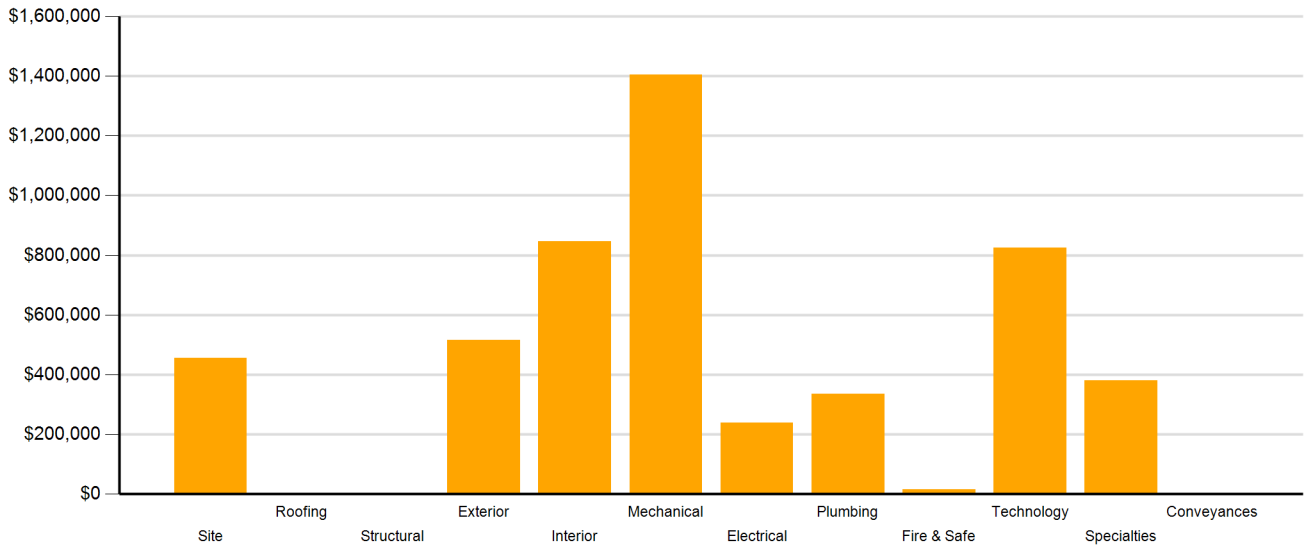


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	-	-	$0
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	$15,964	$1,728,120	$232,192	$1,327,115	$12,519	$3,315,910
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	-	-	$189,379	$652,911	$134,267	$976,557
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$5,103	-	$5,103
Technology	-	-	$722,368	-	-	$722,368
Traffic	-	-	$4,533	-	-	$4,533
Total	$15,964	$1,728,120	$1,148,472	$1,985,129	$146,786	$5,024,471

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

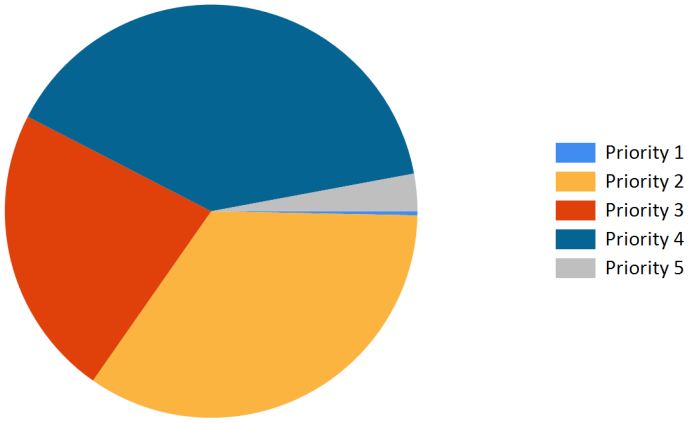


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$456,258	$0	$0	$0	$27,798	$66,429	$94,227	$550,485
Roofing	$0	$0	$0	$0	$0	$0	$0	$0
Structural	$3,423	$0	$0	$0	$0	$0	$0	$3,423
Exterior	$516,688	$0	$0	$0	$0	$0	$0	$516,688
Interior	$847,506	$0	$0	$0	$590,936	$221,053	$811,989	$1,659,495
Mechanical	$1,403,930	$0	$0	$0	$100,261	$544,341	$644,602	$2,048,532
Electrical	$238,696	$0	$0	$221,928	$0	$0	$221,928	$460,624
Plumbing	$335,805	$0	$0	$0	$0	$1,449	$1,449	$337,254
Fire and Life Safety	$15,964	$0	$0	$109,473	$0	$0	$109,473	$125,437
Technology	$825,043	$0	$0	$0	$0	$0	$0	$825,043
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$381,158	$0	$0	$0	$0	$0	$0	$381,158
Total	**$5,024,471**	**$0**	**$0**	**$331,401**	**$718,995**	**$833,272**	**$1,883,668**	**$6,908,139**

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

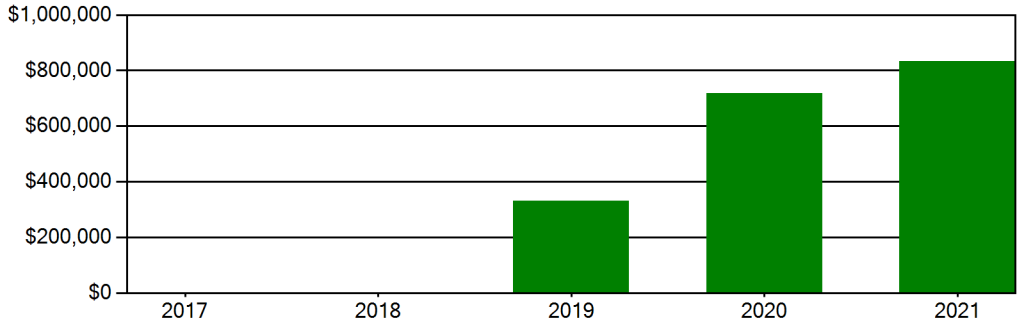
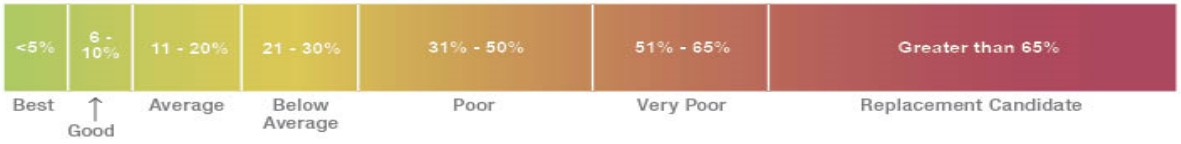


Figure 4: Life Cycle Capital Renewal Forecast

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 $13,072,500. For planning purposes, the total 5-year need at the South Kingstown Inclusionary Preschool is $6,908,139 (Life Cycle Years 1-5 plus the FCI deficiency cost). The South Kingstown Inclusionary Preschool facility has a 5-year FCI of 52.84%.

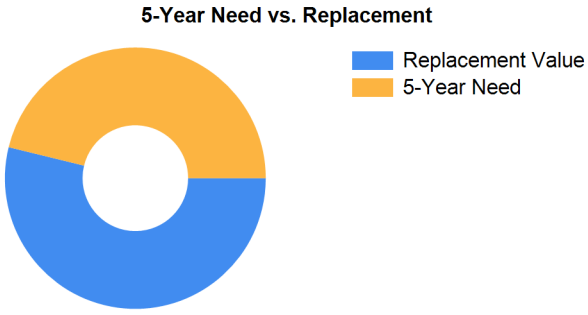


Figure 5: 5-Year FCI

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 South Kingstown Inclusionary Preschool cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $0.

Summary of Findings

The South Kingstown Inclusionary Preschool comprises 37,350 square feet and was constructed in 1964. Current deficiencies at this school total $5,024,471. Five year capital renewal costs total $1,883,668. The total identified need for the South Kingstown Inclusionary Preschool (current deficiencies and 5-year capital renewal costs) is $6,908,139. The 5-year FCI is 52.84%.

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
South Kingstown Inclusionary Preschool Totals	37,350	1964	$5,024,471	$1,883,668	$6,908,139	52.84%

**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.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Asphalt Walks Require Replacement	Capital Renewal	4,824	SF	3	$40,945	8656
Note: Play area asphalt is cracked and splitting.						
Traffic Signage Is Required	Traffic	2	Ea.	3	$4,533	9315
Note: Add flashing beacons to school zone speed limit signs						
Asphalt Paving Requires Replacement	Capital Renewal	105	CAR	4	$345,055	8655
Note: Paving cracked and splitting.						
Asphalt Paving Requires Replacement	Capital Renewal	20	CAR	4	$65,725	9228
Note: Asphalt has pot holes and cracks.						
	Sub Total for System	**4**	**items**		**$456,258**	
	Sub Total for School and Site Level	**4**	**items**		**$456,258**	

Building: 01 - Main Building

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Steel Beam Requires Repainting	Capital Renewal	300	SF	4	$3,423	8676
Note: Paint is peeling on the steel beams at canopies.						
	Sub Total for System	**1**	**items**		**$3,423**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement	Capital Renewal	3,048	SF	2	$515,795	8658
Note: Windows in original building are single pane with damaged caulk.						
Exterior Door Requires Repair	Capital Renewal	8	Ea.	4	$893	10975
Note: Hardware should be repaired.						
	Sub Total for System	**2**	**items**		**$516,688**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Doors Require Replacement	Capital Renewal	11	Door	3	$50,720	8659
The Carpet Flooring Requires Replacement	Capital Renewal	3,536	SF	3	$76,930	8660
Location: Former library space						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	1,214	SF	3	$13,927	8661
Location: Conference room and offices next to former library						
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	13	Ea.	4	$3,708	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - linear feet)	Hazardous Material	32	LF	4	$730	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	70	SF	4	$665	Rollup
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	17,135	SF	4	$652,911	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	21	Ea.	5	$47,915	Rollup
	Sub Total for System	**8**	**items**		**$847,506**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ductwork Requires Replacement (SF Basis)	Capital Renewal	4,482	SF	2	$65,891	9227
Replace Unit Vent	Capital Renewal	11	Ea.	2	$186,063	8688
The Radiant Heat HVAC Component Requires Replacement	Capital Renewal	104	Ea.	2	$791,573	8690
Note: Corrosion at connections and coils clogged.						
The Window AC Unit Component Requires Replacement	Capital Renewal	2	Ea.	2	$6,678	8677
Note: Window AC units are non-functional.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	1	Ea.	3	$15,899	8673
Note: Gym make up air unit has corroded connections, clogged coils, and no filters.						
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	29,880	SF	4	$201,831	8683
Note: Original pneumatic controls are leaking.						

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	8	Ea.	4	$61,027	8691
Note: Pumps are leaking and rusting.						
The Exhaust Hood Requires Replacement	Capital Renewal	12	Ea.	4	$62,449	8687
Remove Abandoned Equipment	Capital Renewal	4	Ea.	5	$12,519	8692
Note: Fuel oil system abandoned in place. Underground fuel oil tank, piping, pumps, and all equipment should be removed.						
	Sub Total for System	**9**	**items**		**$1,403,930**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Generator Requires Replacement	Capital Renewal	1	Ea.	2	$76,056	8664
The Distribution Panel Requires Replacement	Capital Renewal	2	Ea.	2	$51,338	8682
Note: Kelex panels with replacement parts no longer available.						
The Electrical Disconnect Requires Replacement	Capital Renewal	1	Ea.	2	$1,833	8665
Note: Case is rusting on disconnect.						
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$4,849	8678
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$4,849	8679
Note: Kelex panel with replacement parts no longer available.						
The Panelboard Requires Replacement	Capital Renewal	4	Ea.	2	$23,197	8680
Note: Kelek panelboards with replacement parts no longer available.						
The Mounted Building Lighting Requires Replacement	Capital Renewal	14	Ea.	3	$20,896	8663
Transfer Switch Requires Replacement	Capital Renewal	100	Amps	3	$3,572	8686
Note: Contacts are burned and the unit is non-functional.						
The Canopy Lighting Requires Replacement	Capital Renewal	9	Ea.	4	$12,407	8662
Room Has Insufficient Electrical Outlets	Educational Adequacy	80	Ea.	5	$39,701	Rollup
	Sub Total for System	**10**	**items**		**$238,696**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	7	Ea.	3	$9,304	8674
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	15	Ea.	4	$153,300	8669
Location: Classrooms						
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	1	Ea.	4	$10,220	8670
Location: Corridor						
The Classroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	15	Ea.	4	$40,785	8657
Note: Classroom lavatories are rusted and stained.						
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	3	Ea.	4	$7,729	8671
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	1	Ea.	4	$7,377	8675
Note: Compressor in drinking fountain is non-functional.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	13	Ea.	4	$41,353	8666
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	6	Ea.	4	$19,086	8667
Note: Kitchen lavatories are non-functional.						
Room lacks a drinking fountain.	Educational Adequacy	19	Ea.	5	$20,953	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	17	Ea.	5	$25,697	Rollup
	Sub Total for System	**10**	**items**		**$335,805**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Kitchen Exhaust Hood	Capital Renewal	1	Ea.	1	$15,964	8681
Note: Kitchen hood is rusting and is missing filters.						
	Sub Total for System	**1**	**items**		**$15,964**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	18	Ea.	3	$102,675	Rollup

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	48	Ea.	3	$22,817	13151
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	17	Ea.	3	$339,399	13154
Technology: Instructional spaces do not have local sound reinforcement.	Technology	19	Ea.	3	$90,316	13158
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	13149
Technology: Main Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	13148
Technology: Network system inadequate and/or near end of useful life	Technology	2	Ea.	3	$15,211	13156
Technology: Network system inadequate and/or near end of useful life	Technology	13	Ea.	3	$61,795	13157
Technology: Number of current, up to date, network switch ports are insufficient to support campus technology.	Technology	48	Ea.	3	$22,817	13152
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	37,350	SF	3	$63,915	13155
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$54,190	13153
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$7,606	13150
	Sub Total for System	**12**	**items**		**$825,043**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	19	Ea.	3	$86,704	Rollup
Replace Cabinetry In Classes/Labs	Capital Renewal	25	Room	4	$279,695	8685
Note: Laminate is peeling and chipped and doors are missing on casework.						
The Metal Student Lockers Require Replacement	Capital Renewal	30	Ea.	4	$14,760	8684
Note: Lockers rusting at bottom.						
	Sub Total for System	**3**	**items**		**$381,158**	
	Sub Total for Building 01 - Main Building	**56**	**items**		**$4,568,213**	
	Total for Campus	**60**	**items**		**$5,024,471**	

South Kingstown Inclusionary Preschool - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fences and Gates	Fencing - Chain Link (4 Ft)		430	LF	$27,798	4
Pedestrian Pavement	Sidewalks - Concrete		3,250	SF	$66,429	5
		Sub Total for System	**2**	**items**	**$94,227**	
		Sub Total for Building -	**2**	**items**	**$94,227**	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Resilient Flooring	Vinyl Composition Tile Flooring		30,000	SF	$344,152	4
Wall Painting and Coating	Painting/Staining (Bldg SF)		37,350	SF	$246,784	4
Interior Door Supplementary Components	Door Hardware		65	Door	$203,925	5
Interior Swinging Doors	Steel		4	Door	$17,128	5
		Sub Total for System	**4**	**items**	**$811,989**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Ductless Split System (3 Ton)		2	Ea.	$15,565	4
Decentralized Cooling	Ductless Split System (1 Ton)		6	Ea.	$84,696	4
Facility Hydronic Distribution	2-Pipe Water System (Hot)		29,880	SF	$230,321	5
Heating System Supplementary Components	Controls - Pneumatic (Bldg.SF)		7,470	SF	$50,458	5
HVAC Air Distribution	Ductwork (Bldg.SF)		17,928	SF	$263,562	5
		Sub Total for System	**5**	**items**	**$644,601**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)		37,350	SF	$221,928	3
		Sub Total for System	**1**	**items**	**$221,928**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Building Support Plumbing System Supplementary Components	Sump Pump		1	Ea.	$1,449	5
		Sub Total for System	**1**	**items**	**$1,449**	

Fire and Life Safety

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm		37,350	SF	$109,473	3
		Sub Total for System	**1**	**items**	**$109,473**	
		Sub Total for Building 01 - Main Building	**12**	**items**	**$1,789,440**	
		Total for: South Kingstown Inclusionary Preschool	**14**	**items**	**$1,883,667**	

Supporting Photos

Renovation Plaque

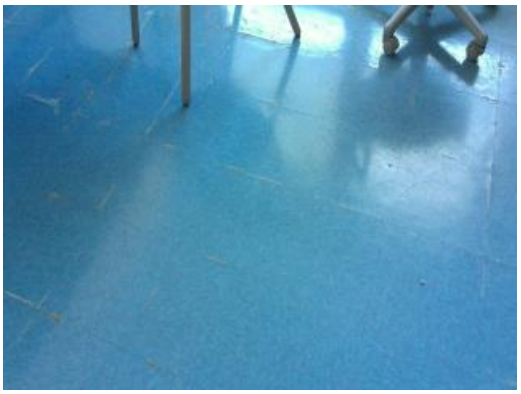
Gymnasium


Classroom Lavatory


Original Single Pane Windows


Scratched Doors

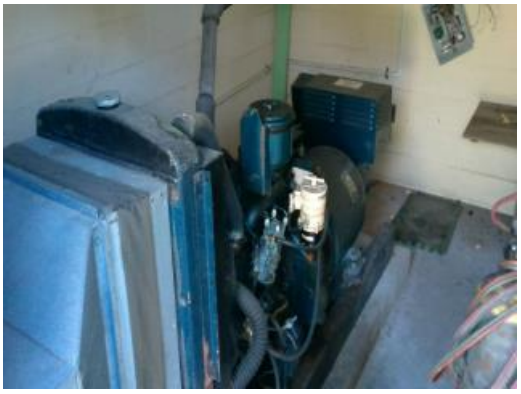

Worn Carpet


Separating And Worn VCT


Broken Canopy Light


Non-Functional Canopy Light

Aged Building Mounted Light


Generator


Restroom Lavatory


Kitchen Lavatory


Classroom Drinking Fountain

Non-Functional Drinking Fountain


Stained Service Sink


Make Up Air Unit


Typical Urinal


Refrigerated Drinking Fountain


Paint Peeling At Canopies


Non-Functional Window Unit


100 Amp Panel


Rusting Kitchen Hood


Aged Distribution Panel


Pneumatic System


Rusting Lockers


Damaged Casework


Non-Functional Transfer Switch

Unit Vent Heater Coils Clogged

Radiant Fin Tube Heater

Pumps

Abandoned Equipment

Site Aerial

Cracked Asphalt


Cracked Asphalt Play Area


Elevation


Play Area

Marquee


Site Signage


Typical Classroom


Former Library


Entrance

Facility Condition Assessment

South Kingstown - Wakefield Elementary School | *June 2017*

101 High Street, Wakefield, RI 02879

Introduction

Wakefield Elementary School, located at 101 High Street in Wakefield, Rhode Island, was built in 1964. It comprises 34,004 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.

Wakefield Elementary School serves grades KG - 4, has 22 instructional spaces, and has an enrollment of 253. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Wakefield Elementary School is 326 with a resulting utilization of 78%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Wakefield Elementary School the 5-year need is $6,680,887. 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.

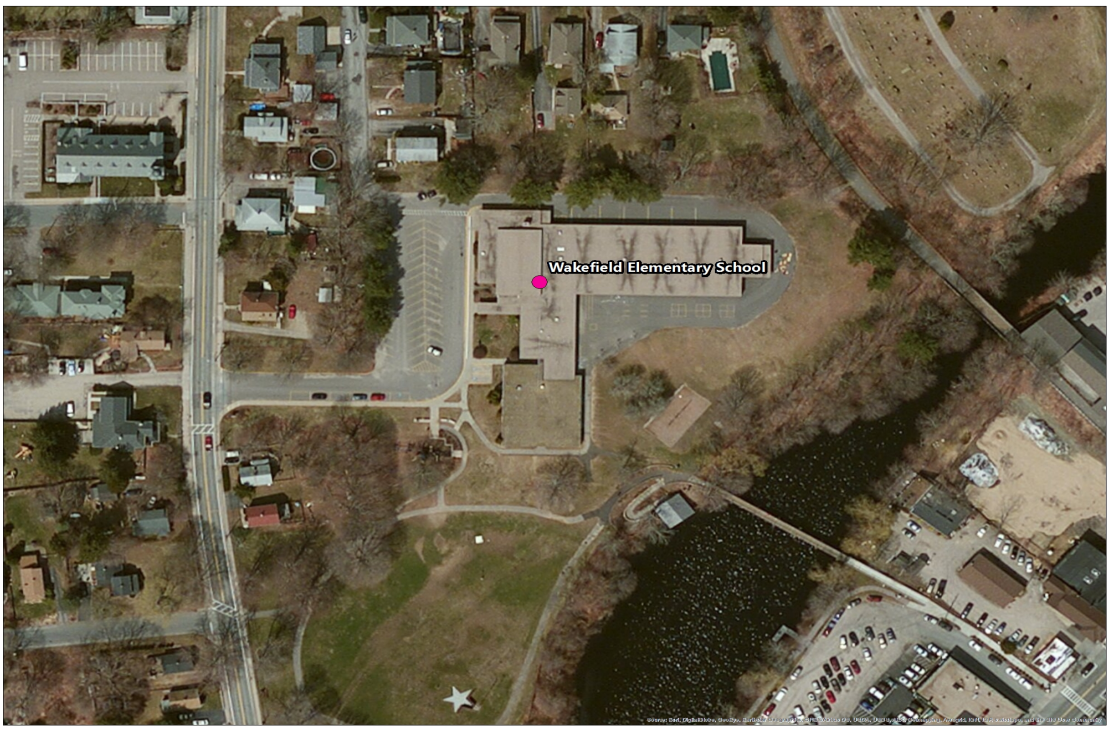


Figure 1: Aerial view of Wakefield Elementary School

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 Wakefield Elementary School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	Aluminum Exterior Windows
	Storefront / Curtain Wall
	Steel Exterior Entrance Doors

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

01 - Main Building:	Built-Up Roofing With Ballast

Interior

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

01 - Main Building:	Steel Interior Doors
	Aluminum/Glass Storefront Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Ceramic Tile Wall
	CMU Wall
	Interior Wall Painting
	Concrete Flooring
	Quarry Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Carpet

Mechanical

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

01 - Main Building:	1,275 MBH Cast Iron Water Boiler
	3,264 MBH Cast Iron Water Boiler

01 - Main Building:	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	Infrared Electric Radiant Heater
	Pneumatic Heating System Controls
	2 Ton Ductless Split System
	Window Units
	Make-up Air Unit
	1 HP or Smaller Pump
	2-Pipe Hot Water Hydronic Distribution System
	2,000 CFM Interior AHU
	Ductwork
	Kitchen Exhaust Hoods
	Roof Exhaust Fan

Plumbing

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

01 - Main Building:	Gas Piping System
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
	Sump Pump
	Air Compressor (2 hp)
	550 Gallon Above Ground Fuel Oil Storage Tank

Electrical

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

01 - Main Building:	50 kW Emergency Generator
	Automatic Transfer Switch
	800 Amp Switchgear
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy 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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$106,472	$288,167	-	$394,639	9.22 %
Roofing	-	-	$25,811	-	-	$25,811	0.60 %
Structural	-	-	-	$3,423	-	$3,423	0.08 %
Exterior	-	$722,587	-	-	-	$722,587	16.89 %
Interior	-	-	$471,331	$210,008	$5,761	$687,100	16.06 %
Mechanical	-	$1,079,977	$15,899	$139,089	$9,389	$1,244,354	29.08 %
Electrical	-	$129,010	$3,572	-	$41,686	$174,268	4.07 %
Plumbing	-	-	$8,094	$261,155	$27,005	$296,253	6.92 %
Fire and Life Safety	-	-	-	-	-	$0	0.00 %
Technology	-	-	$532,064	-	-	$532,064	12.43 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$9,127	$189,829	-	$198,955	4.65 %
Total	$0	$1,931,573	$1,172,371	$1,091,670	$83,841	$4,279,455	

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

The building systems with the most need include:

Mechanical	-	$1,244,354
Exterior	-	$722,587
Interior	-	$687,100

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

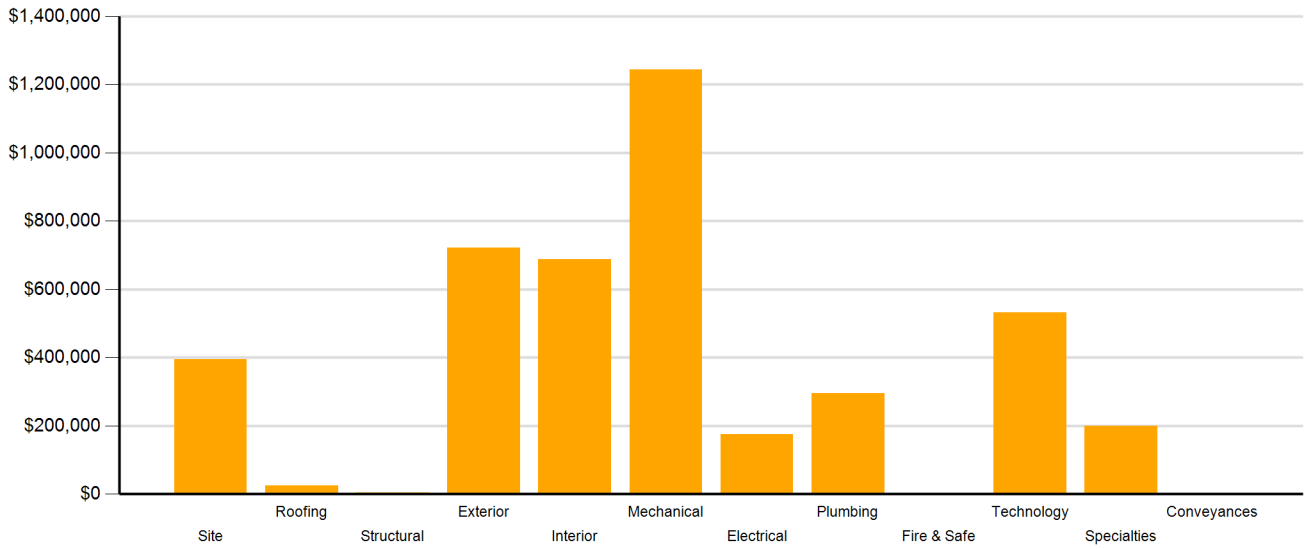


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	$34,225	-	$34,225
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	-	$1,931,573	$629,669	$853,333	$25,551	$3,440,125
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	-	-	$20,535	$113,796	$58,290	$192,621
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$90,316	-	$90,316
Technology	-	-	$520,656	-	-	$520,656
Traffic	-	-	$1,511	-	-	$1,511
Total	$0	$1,931,573	$1,172,371	$1,091,670	$83,841	$4,279,455

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

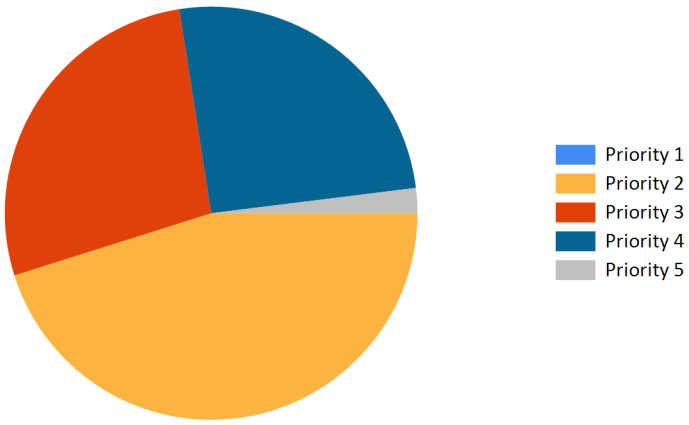


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$394,639	$0	$0	$0	$201,820	$23,205	$225,025	$619,664
Roofing	$25,811	$0	$0	$0	$0	$0	$0	$25,811
Structural	$3,423	$0	$0	$0	$0	$0	$0	$3,423
Exterior	$722,587	$0	$0	$0	$0	$0	$0	$722,587
Interior	$687,100	$0	$0	$208,158	$501,494	$216,474	$926,126	$1,613,226
Mechanical	$1,244,354	$0	$0	$229,687	$273,162	$140,924	$643,773	$1,888,127
Electrical	$174,268	$0	$202,047	$0	$0	$11,598	$213,645	$387,913
Plumbing	$296,253	$0	$0	$273,592	$17,259	$0	$290,851	$587,104
Fire and Life Safety	$0	$0	$0	$99,666	$0	$0	$99,666	$99,666
Technology	$532,064	$0	$0	$0	$0	$0	$0	$532,064
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$198,955	$0	$0	$0	$0	$0	$0	$198,955
Total	**$4,279,455**	**$0**	**$202,047**	**$811,103**	**$993,735**	**$392,201**	**$2,399,086**	**$6,678,541**

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

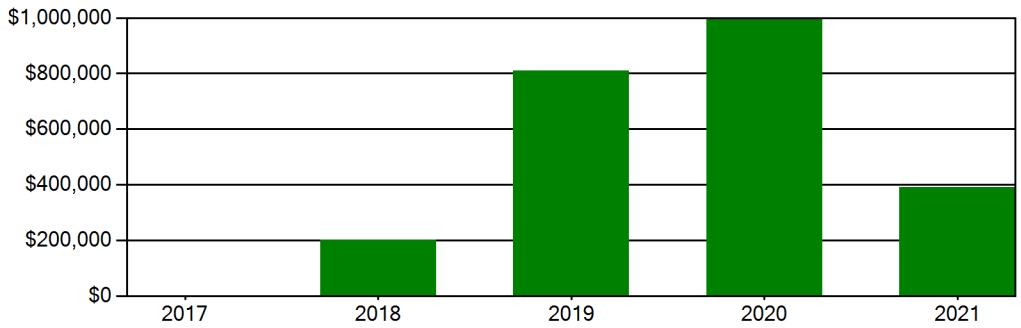
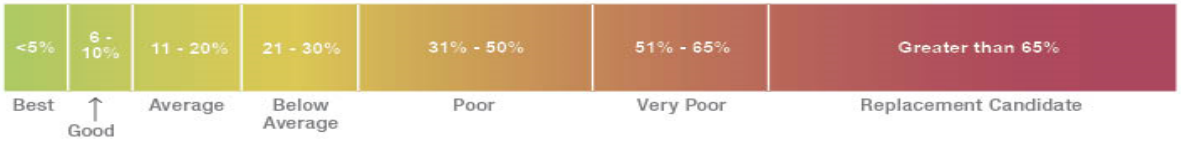


Figure 4: Life Cycle Capital Renewal Forecast

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 $11,901,400. For planning purposes, the total 5-year need at the Wakefield Elementary School is $6,680,887 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Wakefield Elementary School facility has a 5-year FCI of 56.12%.

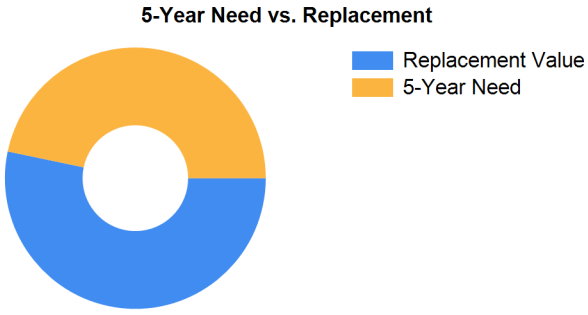


Figure 5: 5-Year FCI

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 189 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 Wakefield Elementary School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $0.

Summary of Findings

The Wakefield Elementary School comprises 34,004 square feet and was constructed in 1964. Current deficiencies at this school total $4,281,801. Five year capital renewal costs total $2,399,086. The total identified need for the Wakefield Elementary School (current deficiencies and 5-year capital renewal costs) is $6,680,887. The 5-year FCI is 56.12%.

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
Wakefield Elementary School Totals	34,004	1964	$4,281,801	$2,399,086	$6,680,887	56.12%

**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.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Walks Require Replacement	Capital Renewal	5,170	SF	3	$104,961	4561
Note: Concrete walkways are cracked and spalling and aggregate is exposed.						
Crosswalk Requires Repainting	Traffic	1	Ea.	3	$755	9297
Note: Repaint crosswalk leading across parking lot at north side of building						
Crosswalk: Needs to be added	Traffic	1	Ea.	3	$755	9298
Note: Install crosswalk across West entrance to school						
Asphalt Paving Requires Replacement	Capital Renewal	62	CAR	4	$203,747	4560
Note: Asphalt is old, cracked, and alligatored.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28590
Note: Backstops Require Replacement						
Fencing Requires Replacement (8' Chain Link Fence)	Capital Renewal	840	LF	4	$56,091	4559
Note: Fence is rusting and falling.						
	Sub Total for System	**6**	**items**		**$394,639**	
	Sub Total for School and Site Level	**6**	**items**		**$394,639**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Gutters Require Replacement	Capital Renewal	275	LF	3	$13,072	4573
Note: Gutters are leaking.						
The Metal Downspouts Require Installation or Replacement	Capital Renewal	200	LF	3	$12,739	4564
Note: Downspouts are damaged and leaking.						
	Sub Total for System	**2**	**items**		**$25,811**	

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Steel Beam Requires Repainting	Capital Renewal	300	SF	4	$3,423	4578
Note: Painted beams are peeling.						
	Sub Total for System	**1**	**items**		**$3,423**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement	Capital Renewal	4,270	SF	2	$722,587	4563
Note: Caulking has failed and air leaks in through the single pane windows on the north side of the building.						
	Sub Total for System	**1**	**items**		**$722,587**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Carpet Flooring Requires Replacement	Capital Renewal	10,800	SF	3	$234,967	8714
The Vinyl Composition Tile Requires Replacement	Capital Renewal	20,604	SF	3	$236,364	4565
Note: Vinyl flooring throughout the building is peeling, faded, and chipped.						
Caulking - significant areas of broken pieces &/or deteriorating caulk	Hazardous Material	400	LF	4	$7,606	Rollup
Paint (probable pre-1978 in base (layers(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	220	Ea.	4	$62,746	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	750	LF	4	$17,113	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	300	SF	4	$2,852	Rollup
Room Is Excessively Reverberant (Install Fiberglass Wall Panel)	Acoustics	600	SF	4	$34,225	19730
Note: Gym						
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	2,243	SF	4	$85,467	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	1	Ea.	5	$2,282	Rollup

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,480	Rollup
	Sub Total for System	**10**	**items**		**$687,100**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Unit Vent	Capital Renewal	6	Ea.	2	$101,489	4591
Note: Units are aged and the coils and blowers are clogged.						
Replace Unit Vent	Capital Renewal	3	Ea.	2	$50,744	4592
Note: Coils are clogged and the intakes are blocked.						
The Air Handler HVAC Component Requires Replacement	Capital Renewal	1	Ea.	2	$43,137	4581
Note: Unit is aged, corroded, and rusted.						
The Infrared Electric Radiant Heater Requires Replacement	Capital Renewal	1	Ea.	2	$1,698	4585
Note: Oil filled electric radiant heater is damaged.						
The Radiant Heat HVAC Component Requires Replacement	Capital Renewal	116	Ea.	2	$882,909	4593
Note: Units are aged and the coils are packed and not circulating.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	1	Ea.	3	$15,899	4575
Note: Make up air unit has clogged coils and no filters.						
Location: Gym/cafetorium						
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	8	Ea.	4	$61,027	4594
Note: Pumps are rusted and leaking.						
The Exhaust Hood Requires Replacement	Capital Renewal	15	Ea.	4	$78,062	4590
Note: Exhaust fans are aged and the blowers are packed full of dirt.						
Remove Abandoned Equipment	Capital Renewal	3	Ea.	5	$9,389	4579
Note: Remove oil tank, pumps, and piping.						
	Sub Total for System	**9**	**items**		**$1,244,354**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Generator Requires Replacement	Capital Renewal	1	Ea.	2	$76,056	4566
Note: Generator is old and seals are leaking.						
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$23,482	4595
Note: Aged and rusted switchgear.						
The Panelboard Requires Replacement	Capital Renewal	4	Ea.	2	$23,197	4583
Note: Panelboards are old and breakers are cracked.						
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$6,275	4584
Note: Panelboard is aged and has previously been repaired improperly. It should be replaced.						
Transfer Switch Requires Replacement	Capital Renewal	100	Amps	3	$3,572	4589
Note: Transfer switch is old and contacts are burned.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	84	Ea.	5	$41,686	Rollup
	Sub Total for System	**6**	**items**		**$174,268**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Sump Pump Requires Replacement	Capital Renewal	1	Ea.	3	$1,449	4580
Note: Sump pump and motor are corroded and non-functional.						
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	5	Ea.	3	$6,645	4576
Note: Urinals are aged and stained.						
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	15	Ea.	4	$153,300	4570
Note: Drinking fountains are aged and clogged with calcium deposits. Valves are not functioning.						
Location: Classrooms and hallway						
The Classroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	14	Ea.	4	$38,066	4562
Note: Classroom lavatories are aged and stained.						
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	2	Ea.	4	$5,153	4572
Note: Custodial sinks are aged, stained, and rusted.						

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	1	Ea.	4	$7,377	4577
Note: Non-functional compressor on refrigerated drinking fountain.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	12	Ea.	4	$38,172	4567
Note: Restroom lavatories are aged, stained, and corroded.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	6	Ea.	4	$19,086	4568
Note: Kitchen lavatories are old and leaking.						
Above Ground Fuel/Oil Storage Tank Requires Replacement	Capital Renewal	1	Ea.	5	$16,162	4586
Note: Rusting fuel storage tank.						
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	8	Ea.	5	$8,637	Rollup
	Sub Total for System	**11**	**items**		**$296,253**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	2	Ea.	3	$11,408	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	96	Ea.	3	$45,633	13140
Technology: Instructional spaces do not have local sound reinforcement.	Technology	21	Ea.	3	$99,823	13147
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	13138
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$21,676	13137
Technology: Network cabling infrastructure is partially outdated and/or needs expansion.	Technology	57	Ea.	3	$24,385	13141
Technology: Network system inadequate and/or near end of useful life	Technology	2	Ea.	3	$15,211	13145
Technology: Network system inadequate and/or near end of useful life	Technology	25	Ea.	3	$118,837	13146
Technology: Number of current, up to date, network switch ports are insufficient to support campus technology.	Technology	144	Ea.	3	$68,450	13142
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	34,004	SF	3	$58,190	13144
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$54,190	13143
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$7,606	13139
	Sub Total for System	**12**	**items**		**$532,064**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	2	Ea.	3	$9,127	Rollup
Replace Cabinetry In Classes/Labs	Capital Renewal	16	Room	4	$179,005	4588
Note: Cabinets are old and laminate is fading and peeling.						
The Metal Student Lockers Require Replacement	Capital Renewal	22	Ea.	4	$10,824	4587
	Sub Total for System	**3**	**items**		**$198,955**	
	Sub Total for Building 01 - Main Building	**55**	**items**		**$3,884,816**	
	Total for Campus	**61**	**items**		**$4,279,455**	

Wakefield Elementary School - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Pavement	Asphalt	61	CAR	$201,820	4
Note:	Paved play area				
Parking Lot Lighting	Pole Mounted Fixtures (Ea.)	3	Ea.	$23,205	5
Note:	Mounted on utility poles facing parking lot				
	Sub Total for System	**2**	**items**	**$225,024**	
	Sub Total for Building -	**2**	**items**	**$225,024**	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	31,504	SF	$208,158	3
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System	24,004	SF	$284,699	4
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	24,004	SF	$216,795	4
Interior Door Supplementary Components	Door Hardware	69	Door	$216,474	5
	Sub Total for System	**4**	**items**	**$926,126**	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heating System Supplementary Components	Controls - Pneumatic (Bldg.SF)	34,004	SF	$229,687	3
Decentralized Cooling	Window Units	3	Ea.	$10,017	4
Decentralized Cooling	Ductless Split System (2 Ton)	1	Ea.	$6,832	4
Heat Generation	Boiler - Cast Iron - Water (3264 MBH)	1	Ea.	$181,009	4
Note:	2,400 MBH - updated per LEA review				
Heat Generation	Boiler - Cast Iron - Water (1275 MBH)	1	Ea.	$75,304	4
Note:	Updated per LEA review				
HVAC Air Distribution	Ductwork (Bldg.SF)	8,500	SF	$124,960	5
Exhaust Air	Kitchen Exhaust Hoods	1	Ea.	$15,964	5
	Sub Total for System	**7**	**items**	**$643,772**	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)	34,004	SF	$202,047	2
Power Distribution	Panelboard - 120/208 225A	1	Ea.	$5,799	5
Power Distribution	Panelboard - 120/208 225A	1	Ea.	$5,799	5
Note:	200 amp				
	Sub Total for System	**3**	**items**	**$213,645**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Piping	Domestic Water Piping System (Bldg.SF)	34,004	SF	$273,592	3
Plumbing Fixtures	Classroom Lavatories	4	Ea.	$10,876	4
Compressed-Air Systems	Air Compressor (2 hp)	1	Ea.	$6,383	4
	Sub Total for System	**3**	**items**	**$290,851**	

Fire and Life Safety

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	34,004	SF	$99,666	3
	Sub Total for System	**1**	**items**	**$99,666**	
	Sub Total for Building 01 - Main Building	**18**	**items**	**$2,174,060**	
	Total for: Wakefield Elementary School	**20**	**items**	**$2,399,084**	

Supporting Photos

Cracked Parking Lot Asphalt

Hallway Drinking Fountain

Site Aerial

Falling Fence

Signage


Cracked Concrete Walkway


Failed Caulking At Windows


Classroom Lavatory


Chipped VCT


Leaking Downspout


Restroom Lavatory


Aged Generator


Classroom Drinking Fountain


Kitchen Lavatory


Leaking Gutter


Stained Custodial Sink


Typical Urinal Fixture


Gym Make Up Air Unit


Paint Peeling


Refrigerated Drinking Fountain


Aged AHU


Non-Functional Sump Pump


400 Amp Panel With Improper Repairs


Panelboard With Cracked Breakers


Rusting Fuel Tank


Damaged Radiant Heater


Faded Faculty Lounge Cabinetry


Lockers


Transfer Switch With Burned Contacts


Damaged Classroom Cabinets


Damaged Heating Unit


Aged Heating Unit


Pumps Rusted And Leaking - New Section


Radiant Heater

Switchgear

Pumps Rusted And Leaking - Old Section

Facility Condition Assessment

South Kingstown - West Kingston Elementary School | *June 2017*

3119 Ministerial Road, West Kingston, RI 02892

Introduction

West Kingston Elementary School, located at 3119 Ministerial Road in West Kingston, Rhode Island, was built in 1975. It comprises 43,552 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.

West Kingston Elementary School serves grades KG - 4, has 28 instructional spaces, and has an enrollment of 265. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for West Kingston Elementary School is 376 with a resulting utilization of 70%.

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 West Kingston Elementary School the 5-year need is $7,114,760. 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.

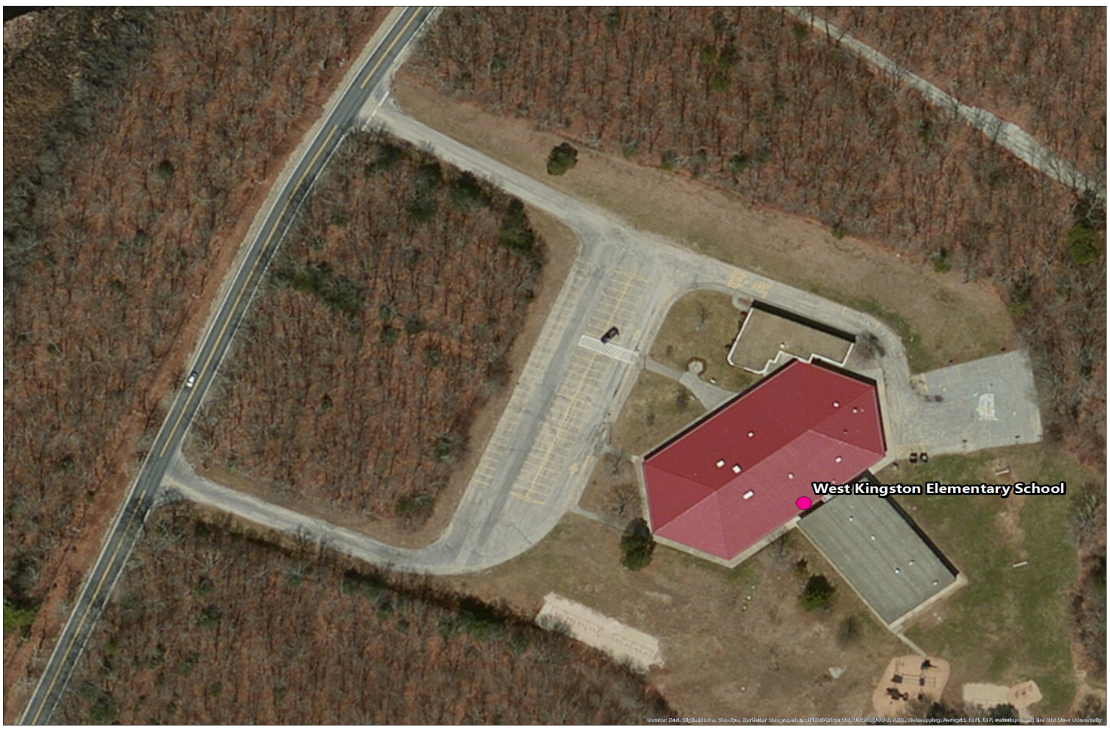


Figure 1: Aerial view of West Kingston Elementary School

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 West Kingston Elementary School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors

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

01 - Main Building:	Metal Steep Slope Roofing
	Built-Up Roofing With Ballast

Interior

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

01 - Main Building:	Interior Demountable Partitions
	Foldable Interior Partition
	Steel Interior Doors
	Aluminum/Glass Storefront Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	Wood Wall Paneling
	CMU Wall
	Interior Wall Painting
	Concrete Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Epoxy Coated Flooring
	Carpet

Mechanical

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

01 - Main Building:	Electric Heating Unit Vent
	Infrared Electric Radiant Heater
	Pneumatic Heating System Controls
	1 Ton Ductless Split System
	2 Ton Ductless Split System
	Make-up Air Unit
	Ductwork
	Roof Exhaust Fan
	Kitchen Exhaust Hoods

Plumbing

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

01 - Main Building:	2" Backflow Preventers
	Gas Piping System
	75 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Air Compressor (5 hp)
	550 Gallon Above Ground Fuel Oil Storage Tank

Electrical

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

01 - Main Building:	800 Amp Switchgear
	112.5 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Panelboard - 277/480 100A
	Panelboard - 277/480 225A
	Panelboard - 277/480 400A
	Electrical Disconnect

01 - Main Building:	Light Fixtures
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures

Facility Deficiency Priority Levels

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

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

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

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

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

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

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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$369,968	$718,439	-	$1,088,407	18.84 %
Roofing	-	$151,087	-	-	-	$151,087	2.61 %
Structural	$9,443	-	-	-	-	$9,443	0.16 %
Exterior	-	$235,838	-	-	-	$235,838	4.08 %
Interior	-	-	$888,801	$408,788	$3,541	$1,301,130	22.52 %
Mechanical	-	$1,177,531	$110,547	$67,198	-	$1,355,276	23.46 %
Electrical	-	$170,912	$46,769	$67,092	$51,264	$336,037	5.82 %
Plumbing	-	-	$199,483	$362,133	$28,043	$589,660	10.21 %
Fire and Life Safety	$142,648	-	-	-	-	$142,648	2.47 %
Technology	-	-	$563,876	-	-	$563,876	9.76 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$4,533	-	-	$4,533	0.08 %
Total	$152,091	$1,735,368	$2,183,976	$1,623,651	$82,849	$5,777,934	

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

The building systems with the most need include:

Mechanical	-	$1,355,276
Interior	-	$1,301,130
Site	-	$1,088,407

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

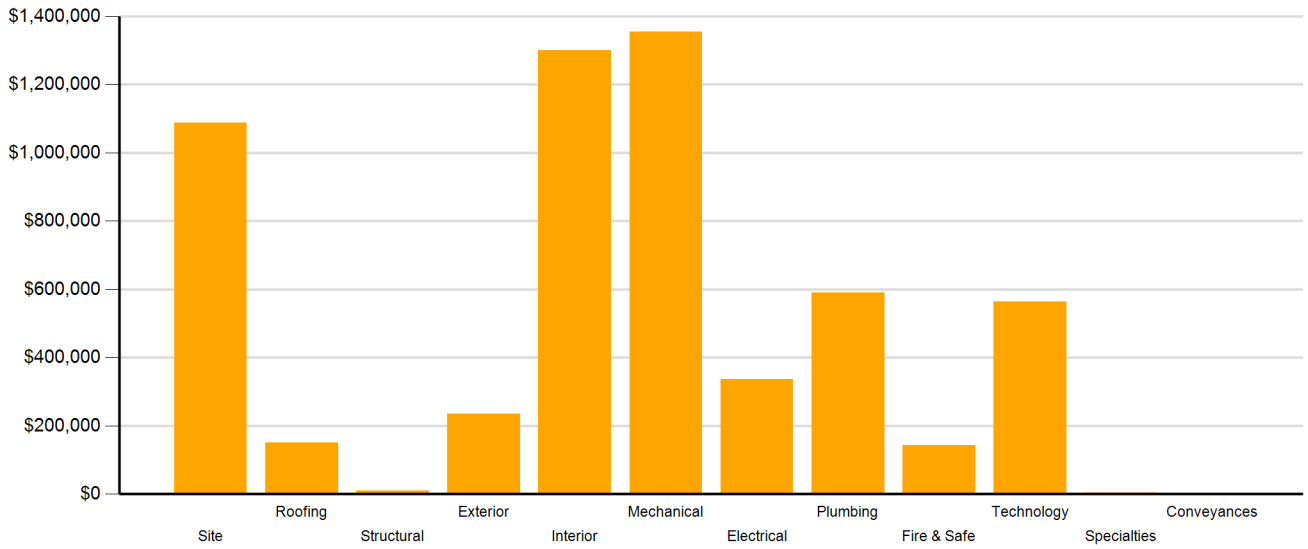


Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	$174,695	$28,329	-	$203,023
Barrier to Accessibility	-	-	$180,047	-	-	$180,047
Capital Renewal	$25,300	$1,735,368	$1,256,293	$1,450,678	$16,053	$4,483,692
Code Compliance	$126,791	-	-	-	-	$126,791
Educational Adequacy	-	-	$15,864	$38,926	$66,711	$121,501
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$105,718	$85	$105,803
Technology	-	-	$552,544	-	-	$552,544
Traffic	-	-	$4,533	-	-	$4,533
Total	$152,091	$1,735,368	$2,183,976	$1,623,651	$82,849	$5,777,934

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

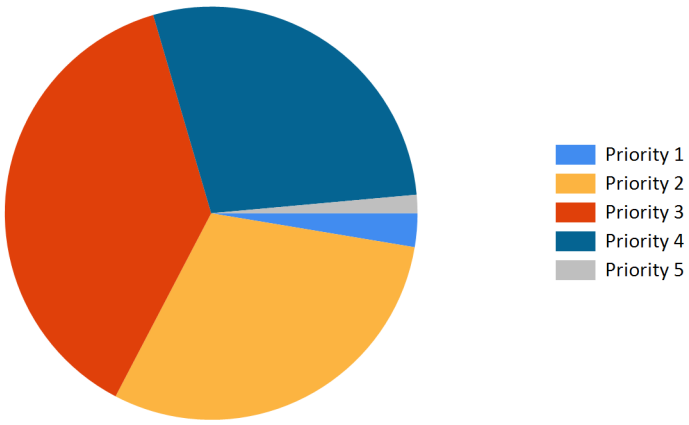


Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$1,088,407	$0	$0	$0	$44,588	$0	$44,588	$1,132,995
Roofing	$151,087	$0	$0	$0	$0	$0	$0	$151,087
Structural	$9,443	$0	$0	$0	$0	$0	$0	$9,443
Exterior	$235,838	$0	$0	$0	$0	$0	$0	$235,838
Interior	$1,301,130	$0	$0	$305,610	$0	$357,817	$663,427	$1,964,557
Mechanical	$1,355,276	$0	$294,181	$0	$48,275	$0	$342,456	$1,697,732
Electrical	$336,037	$0	$0	$0	$20,250	$258,780	$279,030	$615,067
Plumbing	$589,660	$0	$5,845	$0	$0	$0	$5,845	$595,505
Fire and Life Safety	$142,648	$0	$0	$0	$0	$0	$0	$142,648
Technology	$563,876	$0	$0	$0	$0	$0	$0	$563,876
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$4,533	$0	$0	$0	$0	$0	$0	$4,533
Total	**$5,777,934**	**$0**	**$300,026**	**$305,610**	**$113,113**	**$616,597**	**$1,335,346**	**$7,113,280**

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

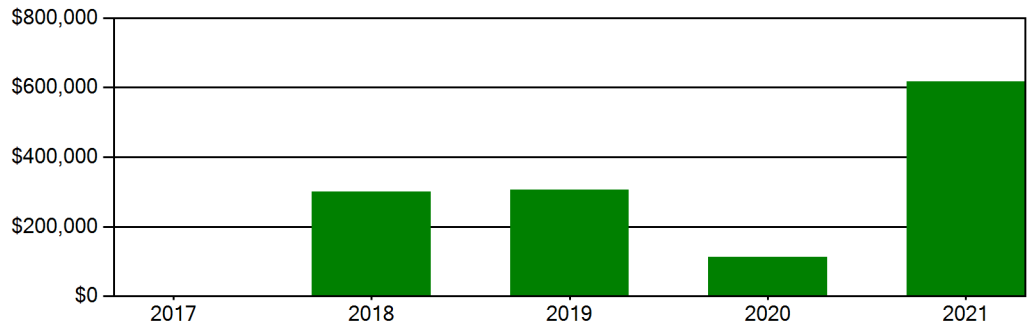
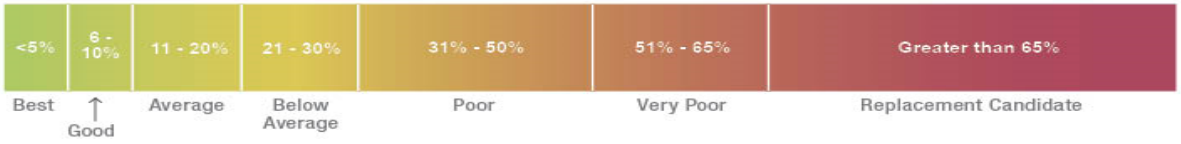


Figure 4: Life Cycle Capital Renewal Forecast

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 $15,243,200. For planning purposes, the total 5-year need at the West Kingston Elementary School is $7,114,760 (Life Cycle Years 1-5 plus the FCI deficiency cost). The West Kingston Elementary School facility has a 5-year FCI of 46.67%.

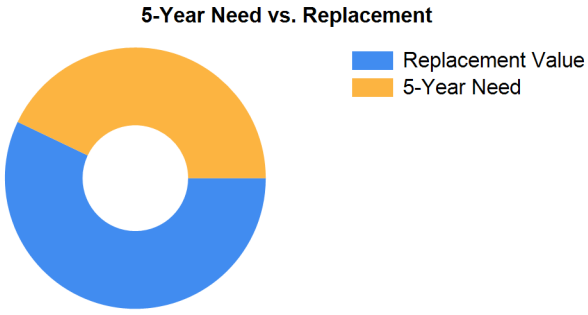


Figure 5: 5-Year FCI

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 242 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 West Kingston Elementary School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $0.

Summary of Findings

The West Kingston Elementary School comprises 43,552 square feet and was constructed in 1975. Current deficiencies at this school total $5,779,414. Five year capital renewal costs total $1,335,346. The total identified need for the West Kingston Elementary School (current deficiencies and 5-year capital renewal costs) is $7,114,760. The 5-year FCI is 46.67%.

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
West Kingston Elementary School Totals	43,552	1975	$5,779,414	$1,335,346	$7,114,760	46.67%

**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.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Walks Require Replacement	Capital Renewal	18,000	SF	3	$365,435	9443
Note: Cracked concrete sidewalks.						
Traffic Signage Is Required	Traffic	2	Ea.	3	$4,533	11614
Note: Add flashing beacon to school zone signs						
Asphalt Paving Requires Replacement	Capital Renewal	101	CAR	4	$331,910	9440
Note: Asphalt roadway is cracked and split.						
Asphalt Paving Requires Replacement	Capital Renewal	80	CAR	4	$262,899	9441
Note: Alligatored asphalt paving.						
Asphalt Paving Requires Replacement	Capital Renewal	29	CAR	4	$95,301	9442
Note: Play area pavement is cracked.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28593
Note: Backstops Require Replacement						
	Sub Total for System	**6**	**items**		**$1,088,407**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Pole Lighting Requires Replacement	Capital Renewal	3	Ea.	3	$23,048	9444
Note: Site lighting is aged, poles are corroded, and lenses are clouded.						
	Sub Total for System	**1**	**items**		**$23,048**	
	Sub Total for School and Site Level	**7**	**items**		**$1,111,456**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Built-up Roofing With Aggregate Ballast Requires Replacement	Capital Renewal	4,000	SF	2	$151,087	9464
Note: Per LEA review feedback roof was replaced in 2016 with the exception of 4,000 SF.						
	Sub Total for System	**1**	**items**		**$151,087**	

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Foundation Study Recommended	Capital Renewal	1	Job	1	$9,443	9470
Note: Floor slab is cracked from the entrance lobby to the gym.						
	Sub Total for System	**1**	**items**		**$9,443**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement	Capital Renewal	37	Door	2	$235,838	9447
Note: Doors are rusted, corroded, and should be replaced.						
	Sub Total for System	**1**	**items**		**$235,838**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation	Acoustics	20	Ea.	3	$174,695	19805
Note: All classrooms						
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	15,000	SF	3	$134,562	9448
Note: Ceiling tiles are aged and should be replaced.						
The Carpet Flooring Requires Replacement	Capital Renewal	15,000	SF	3	$324,145	9449
Note: Carpet is old, faded, and stained.						
Location: Classrooms, library, teacher's lounge, various offices						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	19,522	SF	3	$222,443	9450
Note: VCT throughout the building is cracked and curling.						
The Wood Flooring Requires Replacement	Capital Renewal	1,000	SF	3	$32,956	9451
Note: Stage flooring is faded and scratched.						

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ceiling Grid Requires Replacement	Capital Renewal	11,200	SF	4	$131,943	9484
Note: Grid is broken and not in alignment.						
Location: Primary wing addition						
Epoxy Flooring Requires Repair Or Replacement	Capital Renewal	7,000	SF	4	$132,201	9471
Note: Epoxy coating is worn and chipped.						
Location: Gym, kitchen, restrooms, mechanical rooms						
Paint (probable pre-1978 in base (layers(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	319	Ea.	4	$90,369	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	229	LF	4	$5,190	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	638	SF	4	$6,025	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - linear feet)	Hazardous Material	17	LF	4	$385	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - square feet)	Hazardous Material	309	SF	4	$2,918	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	8	SF	4	$76	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	80	SF	4	$755	Rollup
Partitions Provide Insufficient Sound Isolation	Acoustics	1,000	SF	4	$28,329	19806
Note: Classrooms adjacent to gym/library						
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	280	SF	4	$10,597	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,456	Rollup
Wall/ceiling materials - area < 9 sq. ft. AND NOT in children-accessible area	Hazardous Material	9	SF	5	$85	Rollup
	Sub Total for System	**18**	**items**		**$1,301,130**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ductwork Requires Replacement (SF Basis)	Capital Renewal	43,552	SF	2	$635,953	9482
Note: Ductwork is rusted and the insulation is damaged.						
Replace Unit Vent	Capital Renewal	31	Ea.	2	$435,877	9487
Note: Heating units are aged and coils and blowers are clogged.						
Replace Unit Vent	Capital Renewal	2	Ea.	2	$28,121	9488
Note: Heating units are aged and the coils and blowers are clogged. Air filters are missing or packed.						
The Infrared Electric Radiant Heater Requires Replacement	Capital Renewal	30	Ea.	2	$50,595	9480
Note: Radiant heaters are aged and have clogged coils.						
The Infrared Electric Radiant Heater Requires Replacement	Capital Renewal	16	Ea.	2	$26,984	9481
Note: Radiant heaters are aged with clogged coils.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	7	Ea.	3	$110,547	9466
The Exhaust Hood Requires Replacement	Capital Renewal	4	Ea.	4	$20,676	9485
The Exhaust Hood Requires Replacement	Capital Renewal	9	Ea.	4	$46,522	9486
Note: Exhaust fans are rusted and corroded.						
	Sub Total for System	**8**	**items**		**$1,355,276**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$23,324	9489
Note: Federal Pacific switchgear. Parts are no longer available.						
The Electrical Disconnect Requires Replacement	Capital Renewal	1	Ea.	2	$1,821	9454
Note: Federal Pacific disconnect. Parts are no longer available.						
The Electrical Transformer Requires Replacement	Capital Renewal	1	Ea.	2	$12,584	9472
Note: Federal Pacific transformer. Parts are no longer available.						
The Panelboard Requires Replacement	Capital Renewal	2	Ea.	2	$15,298	9473
Note: Federal Pacific panels. Parts are no longer available.						
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$4,816	9474
Note: Panelboard is aged and breaker panel is damaged.						

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Panelboard Requires Replacement	Capital Renewal	2	Ea.	2	$11,520	9475
Note: Federal Pacific panels. Parts are no longer available.						
The Panelboard Requires Replacement	Capital Renewal	3	Ea.	2	$18,697	9476
Note: Federal Pacific panels. Parts are no longer available.						
The Panelboard Requires Replacement	Capital Renewal	2	Ea.	2	$35,336	9477
Note: Federal Pacific panels. Parts are no longer available.						
The Panelboard Requires Replacement	Capital Renewal	4	Ea.	2	$47,517	9478
Note: Federal Pacific panels. Parts are no longer available.						
The Mounted Building Lighting Requires Replacement	Capital Renewal	16	Ea.	3	$23,721	9453
Note: Building mounted lights are aged. Fixtures are damaged and lenses clouded.						
The Canopy Lighting Requires Replacement	Capital Renewal	49	Ea.	4	$67,092	9452
Note: Canopy lights are aged. The housings are rusted and deteriorated.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	104	Ea.	5	$51,264	Rollup
	Sub Total for System	**12**	**items**		**$312,989**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Restroom Is Not ADA Compliant	Barrier to Accessibility	300	SF	3	$83,099	9460
Note: Restroom does not have adequate ADA turning radius.						
Location: Lobby girl's restroom						
The Restroom Is Not ADA Compliant	Barrier to Accessibility	350	SF	3	$96,949	9461
Note: Both faculty restrooms are missing an ADA stall.						
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	1	Ea.	3	$7,554	9458
Note: Shower is old and the plumbing is corroded and stained.						
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	9	Ea.	3	$11,881	9467
Note: Urinals are aged and stained.						
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	18	Ea.	4	$182,721	9459
Note: Drinking fountains are aged, stained, and corroded.						
The Classroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	20	Ea.	4	$54,014	9446
Note: Classroom lavatories are aged, stained, and corroded at connections.						
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	5	Ea.	4	$12,795	9462
Note: Service sinks are aged, rusted, corroded, and cracked.						
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	1	Ea.	4	$7,328	9468
Note: Drinking fountain is aged and the compressor is not functioning.						
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	1	Ea.	4	$7,328	9469
Note: Drinking fountain is aged and corroded.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	20	Ea.	4	$63,192	9455
Note: Lavatories are aged and stained and the support structures are degraded.						
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	11	Ea.	4	$34,756	9456
Note: Fixtures are aged, stained, and corroded at connections.						
Above Ground Fuel/Oil Storage Tank Requires Replacement	Capital Renewal	1	Ea.	5	$16,053	9483
Note: Tank is aged and has no leak monitoring device.						
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	7	Ea.	5	$7,609	Rollup
	Sub Total for System	**14**	**items**		**$589,660**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fire Alarm Is Missing Or Inadequate (NFPA 72 and NFPA 101, Section 9.6)	Code Compliance	43,552	SF	1	$126,791	9465
Replace Kitchen Exhaust Hood	Capital Renewal	1	Ea.	1	$15,857	9479
Note: Kitchen exhaust hood is aged. Filters are clogged and the bearings are very noisy.						
	Sub Total for System	**2**	**items**		**$142,648**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	2	Ea.	3	$11,332	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	120	Ea.	3	$56,658	13242
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	12	Ea.	3	$113,315	13245
Technology: Instructional spaces do not have local sound reinforcement.	Technology	12	Ea.	3	$56,658	24968
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,610	13241
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$21,530	13240
Technology: Network system inadequate and/or near end of useful life	Technology	1	Ea.	3	$7,554	13246
Technology: Network system inadequate and/or near end of useful life	Technology	23	Ea.	3	$108,594	13248
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	43,522	SF	3	$73,976	13247
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$53,825	13243
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$53,825	13244
	Sub Total for System	**11**	**items**		**$563,876**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	1	Ea.	3	$4,533	Rollup
	Sub Total for System	**1**	**items**		**$4,533**	
	Sub Total for Building 01 - Main Building	**69**	**items**		**$4,666,478**	
	Total for Campus	**76**	**items**		**$5,777,934**	

West Kingston Elementary 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	ES Playgrounds		1	Ea.	$44,588	4
		Sub Total for System	**1**	**items**	**$44,588**	
		Sub Total for Building -	**1**	**items**	**$44,588**	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		39,052	SF	$258,030	3
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System		3,800	SF	$45,070	3
Note:	Music addition					
Interior Demountable Partitions	Demountable Interior Partitions (Bldg SF)		100	SF	$2,510	3
Note:	School office and vestibule					
Wall Paneling	Wood Panel wall		1,000	SF	$9,127	5
Suspended Plaster and	Painted ceilings		1,000	SF	$4,183	5
Interior Operable Partitions	Foldable partition (Bldg SF)		22	SF Wall	$2,541	5
Interior Door Supplementary Components	Door Hardware		109	Door	$341,966	5
		Sub Total for System	**7**	**items**	**$663,426**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Heating System Supplementary Components	Controls - Pneumatic (Bldg.SF)		43,552	SF	$294,181	2
Decentralized Cooling	Ductless Split System (1 Ton)		1	Ea.	$14,116	4
Decentralized Cooling	Ductless Split System (2 Ton)		5	Ea.	$34,159	4
		Sub Total for System	**3**	**items**	**$342,455**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Power Distribution	Panelboard - 120/208 100A		1	Ea.	$4,849	4
Power Distribution	Panelboard - 277/480 100A		2	Ea.	$15,401	4
Lighting Fixtures	Light Fixtures (Bldg SF)		43,552	SF	$258,780	5
		Sub Total for System	**3**	**items**	**$279,030**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Gas - 75 Gallons		1	Ea.	$5,845	2
		Sub Total for System	**1**	**items**	**$5,845**	
		Sub Total for Building 01 - Main Building	**14**	**items**	**$1,290,756**	
		Total for: West Kingston Elementary School	**15**	**items**	**$1,335,344**	

Supporting Photos


Alligatored Parking Pavement


Splitting Asphalt Pavement


Parking Lot Lighting


Cracked Concrete Walkway

Site Aerial

Entrance

Exterior Finishes

Front Elevation

Gymnasium

Music Classroom

Typical Classroom

Library

Plaque

Classroom At Original Building

Cafeteria

Site Signage


Stained Classroom Lavatory


Weathered And Corroded Exterior Doors


Rusted Exterior Metal Doors


Worn Carpet


Curling VCT Flooring


Cracked VCT


Worn Wood Floor At Stage


Canopy Mounted Fixture


Aged Building Mounted Light

Federal Pacific Disconnect


Typical Restroom Lavatories


Stained Drinking Fountain


Faculty Restroom With No ADA


Aged Service Sink


Aged Make Up Air Unit


Typical Urinals


Drinking Fountain With Non-Functional Compressor


Cracked Gym Floor


Cracked VCT Floor At Lobby

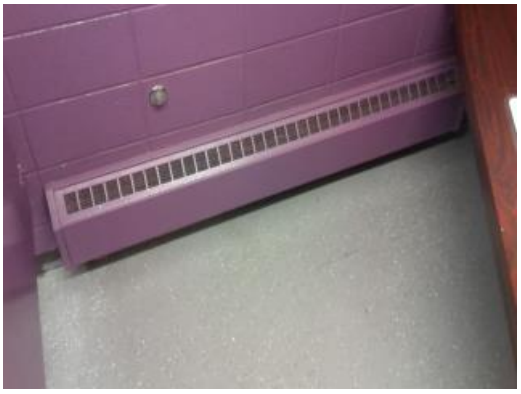

Worn Epoxy Floor


Worn Epoxy At Restroom


Federal Pacific Transformer


Federal Pacific Panelboard


Kitchen Exhaust


Aged Radiant Heater


Broken Ceiling Grid


Weathered Exhaust


Aged Heating Unit

Heating Unit Vent


Federal Pacific Switchgear