Narragansett

LEA Summary

Narragansett totals 297,862 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 February-March 2016. This report provides LEA summary findings for the statewide assessment program.

School Type by Count

School Type	SqFt
Elementary School	88,309
Middle School	86,652
High School	122,901
Total:	**297,862**

Demographics

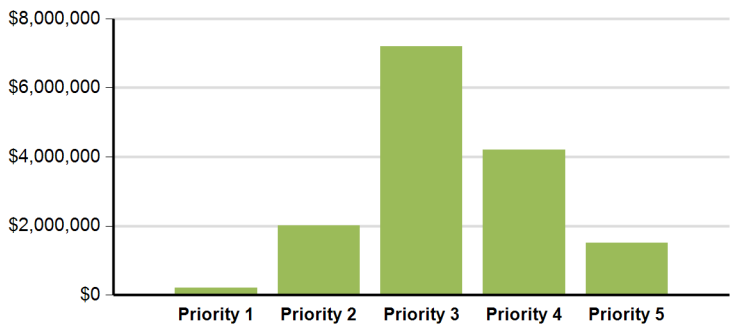
Enrollment is projected to decrease by 17.5% over the next 10 years in Narragansett. The total LEA enrollment at 3 school(s) is 1,316 students with a total capacity of 1,720 as reported by the LEA. Utilization is calculated by dividing enrollment by capacity, resulting in 76.5% utilization at Narragansett.

76.5 % Utilization

Educational Program Space Analysis

In Narragansett there are 140 instructional spaces; of these spaces 27.1% meet or exceed the space size standards. Of the total current deficiencies identified, $2,397,200 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.

Total Current Deficiencies



Five Year Need Summary

The current deficiencies total $15,130,272, with 47.5% categorized as Priority 3 and another 27.7% as Priority 4. The building systems with the highest current deficiency costs are Interior and Technology.

The projected life cycle need in Years 1 through 5 is $8,350,699. 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 100.0% of the combined 5-Year need at Narragansett.

School(s) with Greatest Need	Combined 5-Year Need
Narragansett High School	$12,890,082
Narragansett Pier Middle School	$7,771,464
Narragansett Elementary School	$2,819,426

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 $23,480,971 with a district replacement value of $103,747,670. The resulting 5-Year FCI is 22.6%.

5-Year FCI Ranges

LEA Summary Data

Gross SqFt	Avg Year Built	Current Deficiencies (Less New Construction)	Life Cycle Year 1-5 Total	Total 5-Year Need (Year 1-5 + Current Defs)	5-Year FCI
297,862	1975	$15,130,272	$8,350,699	$23,480,971	22.6%

Narragansett

Facility Condition Assessment

Narragansett - Narragansett Elementary School | *June 2017*

55 Mumford Road, Narragansett, RI 02882

Introduction

Narragansett Elementary School, located at 55 Mumford Road in Narragansett, Rhode Island, was built in 1959. It comprises 88,309 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.

Narragansett Elementary School serves grades PK - 4, has 40 instructional spaces, and has an enrollment of 489. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Narragansett Elementary School is 550 with a resulting utilization of 89%.

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 Narragansett Elementary School the 5-year need is $2,819,426. 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 Narragansett 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 Narragansett 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
	Steel Exterior Windows
	Storefront Entrance Doors
	Steel Exterior Entrance Doors

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

01 - Main Building:	Cast In Place Concrete Roofing
	EPDM Roofing

Interior

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

01 - Main Building:	Foldable Interior Partition
	Steel Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Door Hardware
	Painted Ceilings
	Metal Panel Ceilings
	Ceramic Tile Wall
	Wood Wall Paneling
	Interior Wall Painting
	Quarry Tile Flooring
	Ceramic Tile 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:	200 MBH Copper Tube Boiler
	Finned Wall Radiator
	Steam/Hot Water Heating Unit Vent
	20 MBH Steam Unit Heater
	DDC Heating System Controls
	1 Ton Ductless Split System
	1 Ton Heat Pump
	5 Ton Package DX Unit
	Window Units
	Make-up Air Unit
	5 HP Pump
	2-Pipe Steam Hydronic Distribution System
	Ductwork
	5 Ton DX Gas Roof Top Unit
	Kitchen Exhaust Hoods
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	4'x6' Ventilator/Relief Vent
	Wall 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
	40 Gallon Electric Water Heater
	100 Gallon Gas Water Heater
	75 Gallon Gas Water Heater
	8.4 GPM Instant Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
	Sump Pump

Electrical

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

01 - Main Building:	300 kW Emergency Generator
	Automatic Transfer Switch
	Electrical Service
	1600 Amp Distribution Panel
	600 Amp Distribution Panel
	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	-	-	$151,087	$80,171	$5,807	$237,065	10.38 %
Roofing	-	-	-	-	-	$0	0.00 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	$6,417	-	-	-	$6,417	0.28 %
Interior	-	-	$42,882	$214,091	$3,480	$260,453	11.40 %
Mechanical	-	-	-	$382,879	-	$382,879	16.76 %
Electrical	-	$1,833	-	-	$91,430	$93,263	4.08 %
Plumbing	-	-	-	$23,016	$16,966	$39,982	1.75 %
Fire and Life Safety	$133,362	-	-	-	-	$133,362	5.84 %
Technology	-	-	$1,117,639	-	-	$1,117,639	48.92 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$13,690	-	-	$13,690	0.60 %
Total	$133,362	$8,250	$1,325,299	$700,157	$117,683	$2,284,751	

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

The building systems with the most need include:

Technology	-	$1,117,639
Mechanical	-	$382,879
Interior	-	$260,453

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

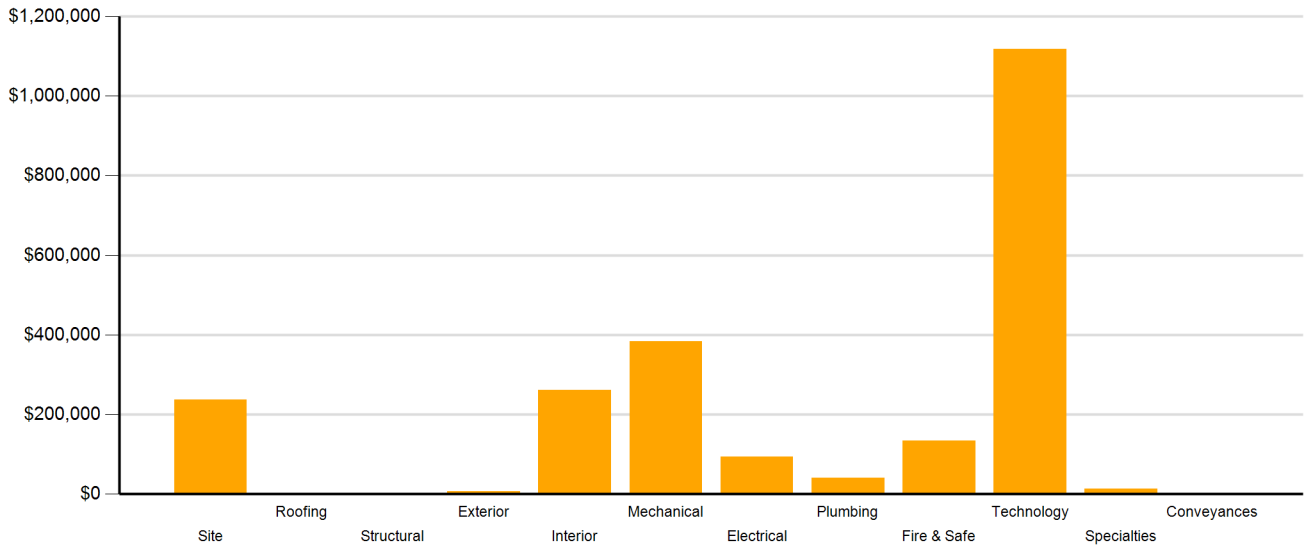


Figure 2: System Deficiencies

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	-	-	$31,373	-	-	$31,373
Capital Renewal	$133,362	$8,250	$11,509	$541,717	$29,893	$724,732
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	-	-	$42,211	$132,543	$87,790	$262,544
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$25,897	-	$25,897
Technology	-	-	$1,089,119	-	-	$1,089,119
Traffic	-	-	$151,087	-	-	$151,087
Total	$133,362	$8,250	$1,325,299	$700,157	$117,683	$2,284,751

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

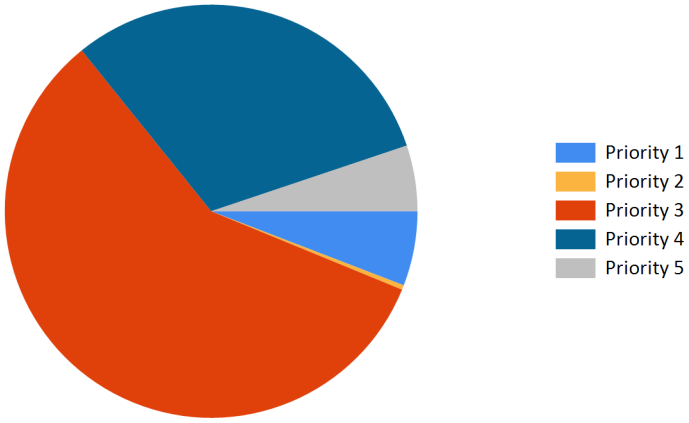


Figure 3: Current deficiencies by priority

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	$237,065	$0	$0	$0	$0	$0	$0	$237,065
Roofing	$0	$0	$0	$0	$0	$0	$0	$0
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$6,417	$0	$0	$0	$0	$0	$0	$6,417
Interior	$260,453	$0	$0	$0	$0	$472,457	$472,457	$732,910
Mechanical	$382,879	$0	$0	$0	$0	$0	$0	$382,879
Electrical	$93,263	$0	$0	$0	$0	$0	$0	$93,263
Plumbing	$39,982	$0	$0	$59,019	$0	$0	$59,019	$99,001
Fire and Life Safety	$133,362	$0	$0	$0	$0	$0	$0	$133,362
Technology	$1,117,639	$0	$0	$0	$0	$0	$0	$1,117,639
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$13,690	$0	$0	$0	$0	$0	$0	$13,690
Total	**$2,284,751**	**$0**	**$0**	**$59,019**	**$0**	**$472,457**	**$531,476**	**$2,816,227**

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

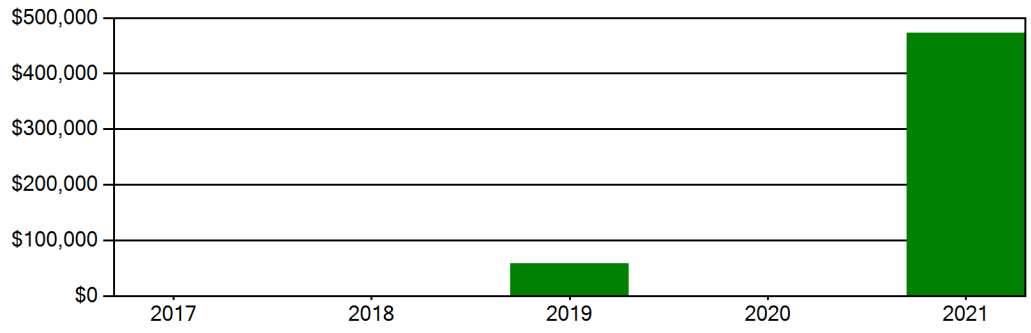
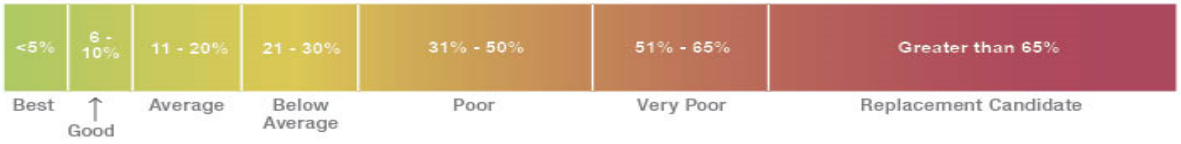


Figure 4: Life Cycle Capital Renewal Forecast

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 $30,908,150. For planning purposes, the total 5-year need at the Narragansett Elementary School is $2,819,426 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Narragansett Elementary School facility has a 5-year FCI of 9.11%.

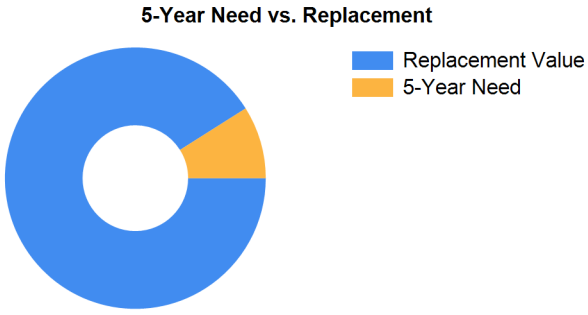


Figure 5: 5-Year FCI

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 609 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 Narragansett Elementary School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $1,087,128.

Summary of Findings

The Narragansett Elementary School comprises 88,309 square feet and was constructed in 1959. Current deficiencies at this school total $2,287,950. Five year capital renewal costs total $531,476. The total identified need for the Narragansett Elementary School (current deficiencies and 5-year capital renewal costs) is $2,819,426. The 5-year FCI is 9.11%.

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
Narragansett Elementary School Totals	88,309	1959	$2,287,950	$531,476	$2,819,426	9.11%

**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
Install New Bus Drop Or Parent Drop Area	Traffic	1	Ea.	3	$151,087	4450
Note: Add designated area for parent pick up/drop off on northwest side of campus off of Mumford Road or have parents use different exit (maybe driveway along baseball field on south side of campus)						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28500
Note: Backstops Require Replacement						
Concrete Sidewalks Require Repair	Capital Renewal	30	LF	4	$51,842	1026
Note: Concrete sidewalk damage poses a potential trip hazard.						
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	$5,807	28756
Note: Exterior Basketball Goals are Required						
	Sub Total for System	**4**	**items**		**$237,065**	
	Sub Total for School and Site Level	**4**	**items**		**$237,065**	

Building: 01 - Main Building

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement	Capital Renewal	1	Door	2	$6,417	960
Note: Rusted / inaccessible						
	Sub Total for System	**1**	**items**		**$6,417**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Existing Door Hardware Is Not ADA Compliant	Barrier to Accessibility	11	Door	3	$31,373	956
The Carpet Flooring Requires Replacement	Capital Renewal	529	SF	3	$11,509	1800
Epoxy Flooring Requires Repair Or Replacement	Capital Renewal	3,627	SF	4	$68,964	1799
Moveable Partitions Require Replacement	Capital Renewal	130	SF Wall	4	$15,016	1011
Note: Computer lab						
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	2,000	SF	4	$19,014	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - each)	Hazardous Material	3	Ea.	4	$856	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	20	LF	4	$456	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	3	Ea.	4	$856	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	165	LF	4	$3,765	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	100	SF	4	$951	Rollup
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	2,735	SF	4	$104,214	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,480	Rollup
	Sub Total for System	**12**	**items**		**$260,453**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	88,309	SF	4	$363,819	1038
Note: Current control system outdated, and in poor working condition. Replace with DDC.						
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	2	Ea.	4	$19,060	1010
Note: Unclear if pumps are in use						
	Sub Total for System	**2**	**items**		**$382,879**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Electrical Disconnect Requires Replacement	Capital Renewal	1	Ea.	2	$1,833	990
Note: Electrical room.						
Remove Abandoned Equipment	Capital Renewal	5	Ea.	5	$16,607	988
Note: Unused Electrical room, remove equipment						
Remove Abandoned Equipment	Capital Renewal	1	Ea.	5	$3,321	1008
Note: Exhaust fan						
Remove Abandoned Equipment	Capital Renewal	3	Ea.	5	$9,964	1009
Note: Pumps, compressor and sump in 300 wing mechanical room.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	124	Ea.	5	$61,537	Rollup
	Sub Total for System	**5**	**items**		**$93,263**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	1	Ea.	4	$10,220	1022
Note: Inoperable - outside room 101						
Non-Refrigerated Drinking Fountain Requires Replacement	Capital Renewal	1	Ea.	4	$10,220	1023
Note: Inoperable - outside PT/OT room						
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	1	Ea.	4	$2,576	1005
Note: Sink original to building - visually failing						
Room lacks a drinking fountain.	Educational Adequacy	8	Ea.	5	$8,822	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	8	Ea.	5	$8,143	Rollup
	Sub Total for System	**5**	**items**		**$39,982**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Emergency Lighting Is Inadequate Or Not Present And Should be Installed	Capital Renewal	88,309	SF	1	$133,362	952
Note: Throughout building.						
	Sub Total for System	**1**	**items**		**$133,362**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	5	Ea.	3	$28,521	Rollup
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	37	Ea.	3	$351,758	3545
Technology: Instructional spaces do not have local sound reinforcement.	Technology	37	Ea.	3	$175,879	3546
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,324	3537
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,324	3540
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,324	3544
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$45,253	3538
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	3535
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	3542
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,655	3534
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$50,197	3531
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	48	Ea.	3	$20,535	3532

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	48	Ea.	3	$20,535	3541
Technology: Network system inadequate and/or near end of useful life	Technology	10	Ea.	3	$76,056	3550
Technology: Network system inadequate and/or near end of useful life	Technology	26	Ea.	3	$123,591	3551
Technology: Special Space AV/Multimedia system is inadequate.	Technology	2	Ea.	3	$108,379	3549
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3533
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3536
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3539
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3543
	Sub Total for System	**20**	**items**		**$1,117,639**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	3	Ea.	3	$13,690	Rollup
	Sub Total for System	**1**	**items**		**$13,690**	
	Sub Total for Building 01 - Main Building	**47**	**items**		**$2,047,686**	
	Total for Campus	**51**	**items**		**$2,284,751**	

Narragansett Elementary School - Life Cycle Summary Yrs 1-5

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings	344	SF	$1,439	5
Wall Painting and Coating	Painting/Staining (Bldg SF)	71,287	SF	$471,018	5
	Sub Total for System	**2**	**items**	**$472,457**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Refrigerated Drinking Fountain	8	Ea.	$59,019	3
	Sub Total for System	**1**	**items**	**$59,019**	
	Sub Total for Building 01 - Main Building	**3**	**items**	**$531,476**	
	Total for: Narragansett Elementary School	**3**	**items**	**$531,476**	

Supporting Photos

Site Aerial

Computer Lab

Front Elevation

Side Elevation


Gym


Emergency Lighting


Library


Roof General Condition

Marquee


Asphalt Paving


Cafeteria


Typical Classroom


Abandoned Compressor


Music Room


Gym Roof


Main Entry


Ponding On Roof


Electrical Disconnect


Inoperable Drinking Fountain


Rooftop Units

Facility Condition Assessment

Narragansett - Narragansett High School | *June 2017*

245 South Pier Road, Narragansett, RI 02882

Introduction

Narragansett High School, located at 245 South Pier Road in Narragansett, Rhode Island, was built in 1975. It comprises 122,901 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.

Narragansett High School serves grades 9 - 12, has 53 instructional spaces, and has an enrollment of 418. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Narragansett High School is 650 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 Narragansett High School the 5-year need is $12,890,082. 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 Narragansett 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 Narragansett 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
	Painted Exterior Wall
	Stucco Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors
	Overhead Exterior Utility Doors
02 - Building 02:	Wood Siding Exterior Wall
	Wood Exterior Windows
	Wood Exterior Doors
03 - Greenhouse:	Brick Exterior Wall
	Clear Polycarbonate Exterior Wall
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors

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

01 - Main Building:	EPDM Roofing
02 - Building 02:	Metal Steep Slope Roofing
03 - Greenhouse:	Clear Polycarbonate Roofing
	Composition Shingle Roofing

Interior

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

01 - Main Building:	Steel Interior Doors
	Interior Door Hardware
	Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile

01 - Main Building:	Non-Painted Plaster/Gypsum Board Ceiling
	Ceramic Tile Wall
	Acoustical Wall Paneling
	Wood Wall Paneling
	Interior Wall Painting
	Concrete Flooring
	Quarry Tile Flooring
	Wood Flooring
	Rubber Tile Flooring
	Vinyl Composition Tile Flooring
	Carpet
02 - Building 02:	Wood Ceilings
	Interior Wall Painting
	Concrete Flooring
03 - Greenhouse:	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Interior Wall Painting
	Concrete Flooring

Mechanical

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

01 - Main Building:	1,275 MBH Cast Iron Water Boiler
	Finned Wall Radiator
	10 kW Electric Unit Heater
	DDC Heating System Controls
	Make-up Air Unit
	25 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	20,000 CFM Interior AHU
	20,000 CFM Outdoor AHU
	Ductwork
	5 Ton DX Gas Roof Top Unit
	Roof Exhaust Fan
	Fire Sprinkler System
03 - Greenhouse:	10 kW Electric Unit Heater

Plumbing

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

01 - Main Building:	Gas Piping System
	100 Gallon Gas Water Heater
	Domestic Water Piping System

03 - Greenhouse:	Domestic Water Piping System
01 - Main Building:	Classroom Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
03 - Greenhouse:	Lavatories

Electrical

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

01 - Main Building:	1200 kW Emergency Generator
	208/120v Switch
	1,200 Amp Switchgear
	2,000 Amp Switchgear
	3,000 Amp Switchgear
	800 Amp Switchgear
	30 KVA Transformer
	45 KVA Transformer
	75 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/240 400A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Light Fixtures
03 - 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	-	-	$59,820	$573,845	$161,597	$795,262	9.28 %
Roofing	-	$376,774	-	-	-	$376,774	4.39 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	-	-	$400,287	-	$400,287	4.67 %
Interior	-	-	$1,268,233	$1,242,869	$541,823	$3,052,925	35.61 %
Mechanical	-	$384,187	$31,585	$65,513	-	$481,285	5.61 %
Electrical	-	$797,333	$143,123	-	$74,924	$1,015,380	11.84 %
Plumbing	-	-	$117,055	$350,651	$46,361	$514,067	6.00 %
Fire and Life Safety	$67,989	-	-	-	-	$67,989	0.79 %
Technology	-	-	$1,809,553	-	-	$1,809,553	21.10 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$4,533	-	$56,091	$60,624	0.71 %
Total	$67,989	$1,558,294	$3,433,901	$2,633,164	$880,796	$8,574,144	

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

The building systems with the most need include:

Interior	-	$3,052,925
Technology	-	$1,809,553
Electrical	-	$1,015,380

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

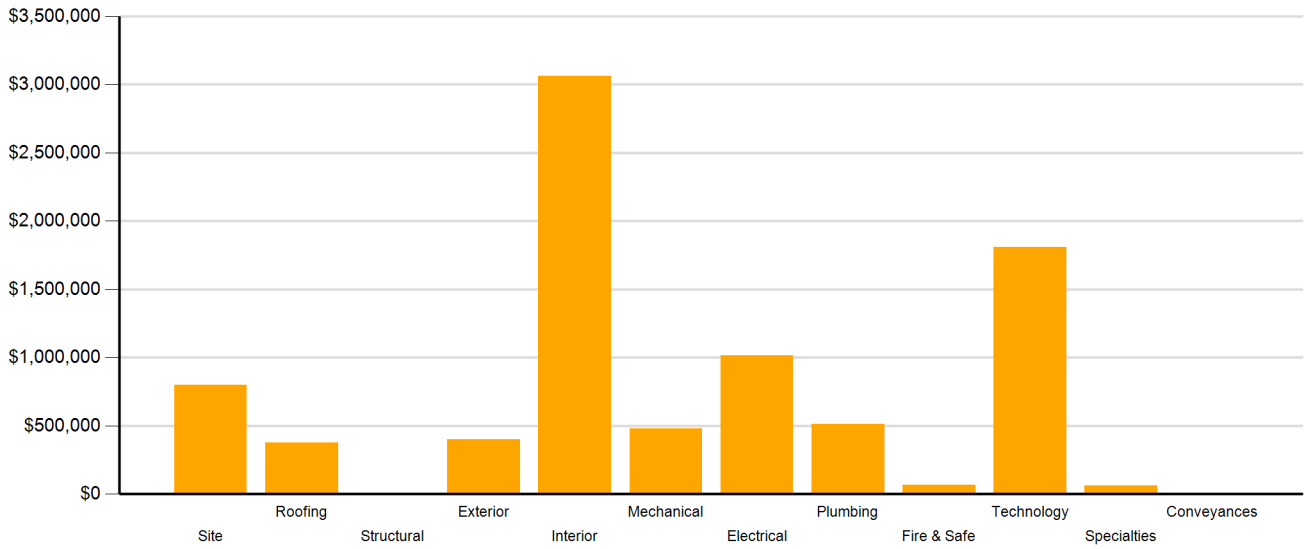


Figure 2: System Deficiencies

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	-	-	$496,038	-	-	$496,038
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	-	$1,558,294	$1,086,383	$1,458,595	$533,834	$4,637,106
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	$67,989	-	$27,196	$1,116,023	$346,962	$1,558,171
Functional Deficiency	-	-	$28,329	-	-	$28,329
Hazardous Material	-	-	-	$58,546	-	$58,546
Technology	-	-	$1,786,889	-	-	$1,786,889
Traffic	-	-	$9,065	-	-	$9,065
Total	$67,989	$1,558,294	$3,433,901	$2,633,164	$880,796	$8,574,144

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

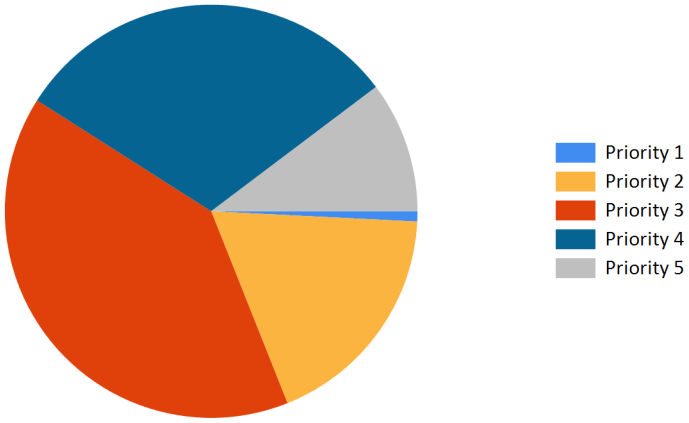


Figure 3: Current deficiencies by priority

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	$795,262	$0	$0	$0	$0	$0	$0	$795,262
Roofing	$376,774	$0	$0	$0	$0	$47,535	$47,535	$424,309
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$400,287	$0	$0	$0	$0	$122,048	$122,048	$522,335
Interior	$3,052,925	$0	$0	$0	$0	$505,073	$505,073	$3,557,998
Mechanical	$481,285	$0	$0	$140,711	$559,227	$1,626,951	$2,326,889	$2,808,174
Electrical	$1,015,380	$0	$20,797	$133,513	$60,940	$722,188	$937,438	$1,952,818
Plumbing	$514,067	$0	$10,644	$0	$0	$0	$10,644	$524,711
Fire and Life Safety	$67,989	$0	$0	$0	$347,326	$0	$347,326	$415,315
Technology	$1,809,553	$0	$0	$0	$0	$0	$0	$1,809,553
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$60,624	$0	$0	$0	$0	$0	$0	$60,624
Total	**$8,574,144**	**$0**	**$31,441**	**$274,224**	**$967,493**	**$3,023,795**	**$4,296,953**	**$12,871,097**

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

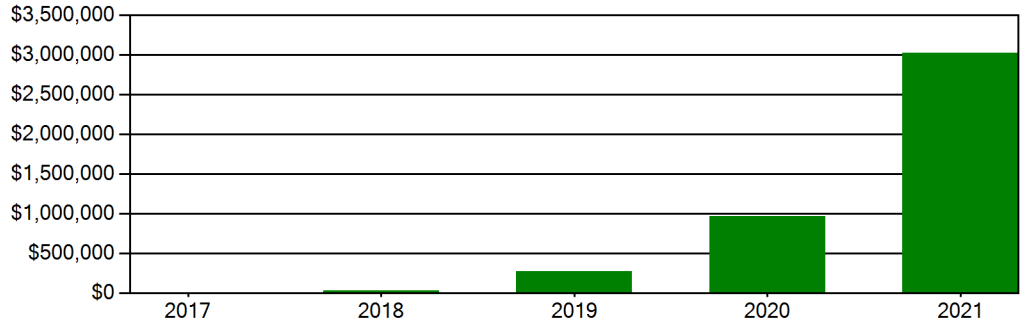
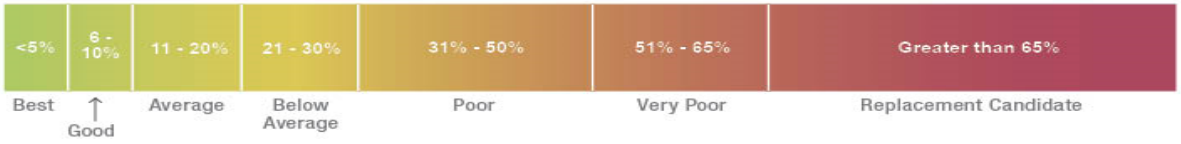


Figure 4: Life Cycle Capital Renewal Forecast

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 $44,244,360. For planning purposes, the total 5-year need at the Narragansett High School is $12,890,082 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Narragansett High School facility has a 5-year FCI of 29.09%.

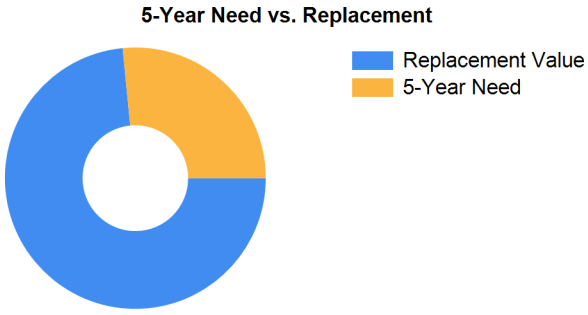


Figure 5: 5-Year FCI

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

Summary of Findings

The Narragansett High School comprises 122,901 square feet and was constructed in 1975. Current deficiencies at this school total $8,593,129. Five year capital renewal costs total $4,296,953. The total identified need for the Narragansett High School (current deficiencies and 5-year capital renewal costs) is $12,890,082. The 5-year FCI is 29.09%.

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
Narragansett High School Totals	122,901	1975	$8,593,129	$4,296,953	$12,890,082	29.09%

**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
Concrete Walks Require Replacement	Capital Renewal	2,500	SF	3	$50,755	2538
Traffic Signage Is Required	Traffic	4	Ea.	3	$9,065	4482
Note: Add signage on campus to indicate parent and bus flows						
Asphalt Paving Requires Replacement	Capital Renewal	166	CAR	4	$545,516	2531
Note: Parking lot pavement is cracking and worn.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28501
Note: Backstops Require Replacement						
School has insufficient # of tennis courts.	Educational Adequacy	1	Ea.	5	$161,597	29017
Note: School has insufficient # of tennis courts.						
	Sub Total for System	**5**	**items**		**$795,262**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Pole Lighting Requires Replacement	Capital Renewal	12	Ea.	3	$92,193	2891
	Sub Total for System	**1**	**items**		**$92,193**	
	Sub Total for School and Site Level	**6**	**items**		**$887,456**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
EPDM Roofing Requires Replacement (Bldg SF)	Capital Renewal	30,000	SF	2	$376,774	2726
Note: Ponding on roof.						
	Sub Total for System	**1**	**items**		**$376,774**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Exterior Requires Painting (Bldg SF)	Capital Renewal	30,000	SF	4	$396,604	2746
Note: Stucco should be washed and painted.						
	Sub Total for System	**1**	**items**		**$396,604**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation	Acoustics	60	Ea.	3	$496,038	4751
Note: All classrooms						
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	30,000	SF	3	$269,124	2732
Note: Replace ceiling tiles damaged by water infiltration.						
The Carpet Flooring Requires Replacement	Capital Renewal	11,850	SF	3	$256,075	2736
Note: Carpet is aged and showing signs of wear.						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	13,000	SF	3	$148,128	2739
Note: VCT is worn with pieces chipped and missing.						
The Wood Flooring Requires Replacement	Capital Renewal	3,000	SF	3	$98,868	2742
Acoustical Wall Panels Require Replacement	Capital Renewal	17,775	SF	4	$162,142	2735
Note: All tectum panels should be replaced.						
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	3,120	SF	4	$29,462	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	36	Ea.	4	$10,198	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	2,000	SF	4	$18,886	Rollup
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	27,008	SF	4	$1,022,181	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	2	Ea.	5	$4,533	Rollup
Interior Doors Require Repainting	Capital Renewal	50	Door	5	$3,352	2892
Note: Paint is peeling off of doors.						

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	79,831	SF	5	$523,919	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,456	Rollup
	Sub Total for System	**14**	**items**		**$3,046,362**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electric Unit Heater Requires Replacement	Capital Renewal	4	Ea.	2	$9,836	2637
The Air Handler HVAC Component Requires Replacement	Capital Renewal	2	Ea.	2	$369,433	2636
The Make Up Air Equipment Requires Replacement	Capital Renewal	2	Ea.	3	$31,585	2635
Location: Gym						
Lab lacks an appropriate fume hood.	Educational Adequacy	3	Ea.	4	$65,513	Rollup
	Sub Total for System	**4**	**items**		**$476,367**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Switchgear Is Needed Or Requires Replacement	Capital Renewal	2	Ea.	2	$46,648	2638
Switchgear Is Needed Or Requires Replacement	Capital Renewal	2	Ea.	2	$137,187	2639
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$71,851	2640
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$91,908	2641
The Lighting Fixtures Require Replacement	Capital Renewal	59,251	SF	2	$349,690	2625
Note: Light fixtures are in the process of being switched to LED. Older fixtures need to be replaced.						
The Panelboard Requires Replacement	Capital Renewal	4	Ea.	2	$23,041	2642
The Panelboard Requires Replacement	Capital Renewal	5	Ea.	2	$56,799	2643
Location: By computer lab						
The Panelboard Requires Replacement	Capital Renewal	3	Ea.	2	$14,448	2644
The Electrical Receptacles Are Inadequate And More are Needed	Functional Deficiency	50	Ea.	3	$28,329	2774
The Mounted Building Lighting Requires Replacement	Capital Renewal	13	Ea.	3	$19,273	2626
Note: Building mounted light fixtures are in the process of being switched to LED. Older fixtures need to be replaced.						
Transfer Switch Requires Replacement	Capital Renewal	100	Amps	3	$3,327	2627
Location: In auditorium, near the back of the stage.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	152	Ea.	5	$74,924	Rollup
	Sub Total for System	**12**	**items**		**$917,426**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	12	Ea.	3	$90,652	2628
Note: Original shower fixtures						
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	20	Ea.	3	$26,402	2629
Note: Original urinal fixtures						
The Classroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	50	Ea.	4	$135,034	2634
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	5	Ea.	4	$12,795	2630
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	10	Ea.	4	$73,277	2631
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	40	Ea.	4	$126,384	2633
Room lacks a drinking fountain.	Educational Adequacy	7	Ea.	5	$7,668	Rollup
Room lacks a private shower area.	Educational Adequacy	1	Ea.	5	$10,166	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	19	Ea.	5	$28,527	Rollup
	Sub Total for System	**9**	**items**		**$510,907**	

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	6	Ea.	1	$67,989	Rollup
	Sub Total for System	**1**	**items**		**$67,989**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	4	Ea.	3	$22,663	Rollup
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	$94,430	3583
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	57	Ea.	3	$538,248	3579
Technology: Instructional spaces do not have local sound reinforcement.	Technology	57	Ea.	3	$269,124	3580
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,288	3570
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,288	3573
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,394	3569
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,394	3572
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,610	3568
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$21,530	3567
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	174	Ea.	3	$73,938	3574
Technology: Network system inadequate and/or near end of useful life	Technology	10	Ea.	3	$75,544	3584
Technology: Network system inadequate and/or near end of useful life	Technology	36	Ea.	3	$169,973	3585
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	20,000	SF	3	$33,995	3578
Technology: Special Space AV/Multimedia system is inadequate.	Technology	2	Ea.	3	$107,650	3582
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	2	Room	3	$207,745	3581
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,721	3571
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,721	3575
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	57	Ea.	3	$86,120	3576
Technology: Telephone system is inadequate and/or non-existent.	Technology	1	Ea.	3	$7,177	3577
	Sub Total for System	**20**	**items**		**$1,809,553**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	1	Ea.	3	$4,533	Rollup
Room lacks an appropriate refrigerator.	Educational Adequacy	5	Ea.	5	$42,493	Rollup
The room lacks a washer and/or dryer.	Educational Adequacy	1	Ea.	5	$13,598	Rollup
	Sub Total for System	**3**	**items**		**$60,624**	
	Sub Total for Building 01 - Main Building	**65**	**items**		**$7,662,606**	

Building: 03 - Greenhouse

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Exterior Soffit Requires Replacement	Capital Renewal	30	SF	4	$3,683	2566
	Sub Total for System	**1**	**items**		**$3,683**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	1,000	SF	5	$6,563	Rollup
	Sub Total for System	**1**	**items**		**$6,563**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electric Unit Heater Requires Replacement	Capital Renewal	2	Ea.	2	$4,918	2621
	Sub Total for System	**1**	**items**		**$4,918**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$5,760	2623
	Sub Total for System	**1**	**items**		**$5,760**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	1	Ea.	4	$3,160	2622
	Sub Total for System	**1**	**items**		**$3,160**	
	Sub Total for Building 03 - Greenhouse	**5**	**items**		**$24,083**	
	Total for Campus	**76**	**items**		**$8,574,144**	

Narragansett High School - Life Cycle Summary Yrs 1-5

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles		52,951	SF	$478,233	5
		Sub Total for System	**1**	**items**	**$478,233**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Decentralized Heating Equipment	Finned Wall Radiator - (Ea.)		84	Ea.	$140,711	3
Exhaust Air	Roof Exhaust Fan		18	Ea.	$93,674	4
HVAC Air Distribution	Roof Top Unit - DX Gas (5 Ton)		24	Ea.	$465,553	4
Heating System Supplementary Components	Controls - DDC (Bldg.SF)		118,501	SF	$713,523	5
Facility Hydronic Distribution	2-Pipe Water System (Hot)		118,501	SF	$913,428	5
		Sub Total for System	**5**	**items**	**$2,326,889**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Electrical Service	Transformer (45 KVA)		7	Ea.	$56,274	3
Electrical Service	Transformer (75 KVA)		4	Ea.	$42,082	3
Electrical Service	Transformer (30 KVA)		5	Ea.	$35,157	3
Power Distribution	Panelboard - 120/208 100A		3	Ea.	$14,546	4
Power Distribution	Panelboard - 120/208 225A		8	Ea.	$46,394	4
Packaged Generator Assemblies	Emergency Generator (1200 KW)		1	Ea.	$713,023	5
Wiring Devices	Electrical Disconnect		5	Ea.	$9,165	5
	Note: 2 @ 200 amps; 3 @ 100 amps					
		Sub Total for System	**7**	**items**	**$916,639**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Gas - 100 Gallon		2	Ea.	$10,644	2
		Sub Total for System	**1**	**items**	**$10,644**	

Fire and Life Safety

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm		118,501	SF	$347,326	4
		Sub Total for System	**1**	**items**	**$347,326**	
		Sub Total for Building 01 - Main Building	**15**	**items**	**$4,079,732**	

Building: 02 - Building 02

Exterior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	Wood Siding - Bldg SF basis		900	SF	$26,978	5
		Sub Total for System	**1**	**items**	**$26,978**	

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		900	SF	$5,947	5
		Sub Total for System	**1**	**items**	**$5,947**	
		Sub Total for Building 02 - Building 02	**2**	**items**	**$32,925**	

Building: 03 - Greenhouse

Roofing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Steep Slope Roofing	Clear Polycarbonate (Greenhouse)		2,500	SF	$47,535	5
		Sub Total for System	**1**	**items**	**$47,535**	

Exterior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	Clear Polycarbonate (Greenhouse) walls		2,500	SF	$95,070	5
		Sub Total for System	**1**	**items**	**$95,070**	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	1,000	SF	$9,032	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System	1,000	SF	$11,861	5
	Sub Total for System	**2**	**items**	**$20,892**	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)	3,500	SF	$20,797	2
	Sub Total for System	**1**	**items**	**$20,797**	
	Sub Total for Building 03 - Greenhouse	**5**	**items**	**$184,293**	
	Total for: Narragansett High School	**22**	**items**	**$4,296,949**	

Supporting Photos

Site Aerial

Damaged Paint On CMU Wall

CMU Wall Needs Paint

Main Building - Art Room


Peeling Paint On Door


Main Building - Exterior Finishes


Main Building - Restroom Fixtures And Finishes


Site - Marquee


Main Building - Music Room


Main Building - Corridor Finishes

Site - Signage


Main Building - Theater


Main Building - Cafeteria

Main Building - Gymnasium


Main Building - Typical Classroom


Main Building - Computer Lab


Main Building - Weight Room


Main Building - Front Of Building


Main Building - Library

Main Building - Building Signage


Site - Damaged Concrete Walks


Main Building - Ponding On Roof


Site - Cracked Parking Lot Paving


Main Building - Aged Indoor AHU

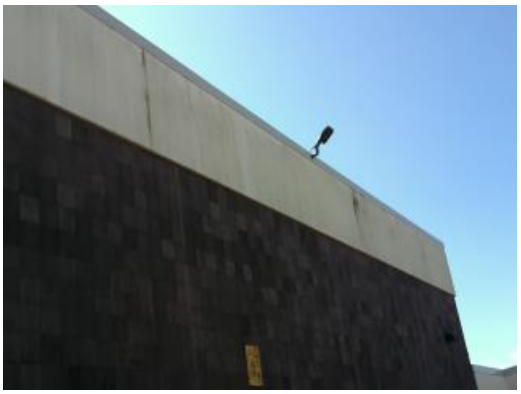

Main Building - Typical Service Sink


Main Building - Worn Carpet


Main Building - Aged Classroom Sink


Main Building - Damaged Tectum


Main Building - Aged Restroom Sink


Main Building - Stained Stucco


Main Building - Worn VCT Flooring

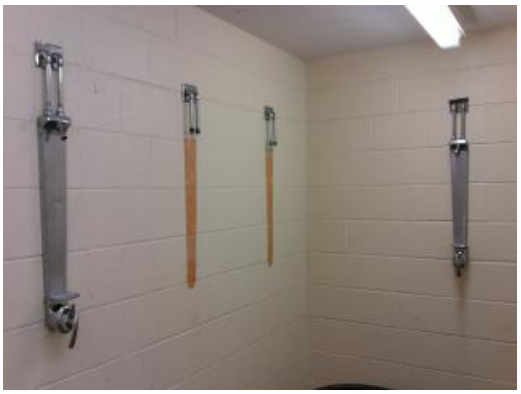

Main Building - Stained Ceiling Tiles


Main Building - Damaged Tectum

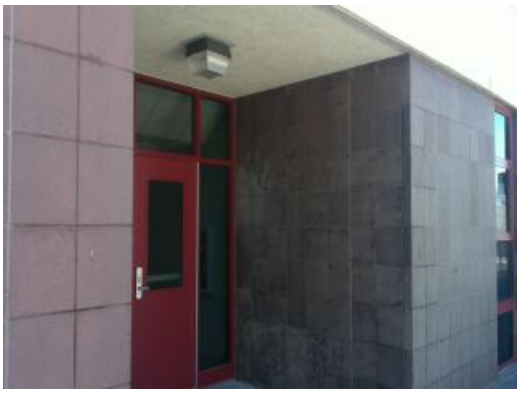

Main Building - Missing And Broken VCT Flooring


Main Building - 2000 Amp Switchgear


Main Building - Original Urinals


Main Building - Aged Shower Fixtures


Main Building - Transfer Switch


Main Building - Building Light


Main Building - Stained Stucco


Main Building - Aged 400 Amp Panel


Main Building - 1200 Amp Switchgear


Main Building - Refrigerated Water Fountain


Main Building - Worn And Splitting Wood Plank Flooring


Main Building - 3000 Amp Switchgear


Main Building - 800 Amp Switchgear

Main Building - Aged Gym Make-up Air Unit


Main Building - Original Unit Heater


Main Building - Stained Mop Sink


Main Building - Stained Ceiling Tiles


Main Building - Lighting Fixtures

Building 02 - Front Elevation

Building 02 - Side Elevation


Building 03 - Stained Utility Sink


Building 02 - Side Elevation


Building 03 - Exterior Finishes


Building 03 - Aged Unit Heater


Building 03 - Greenhouse Elevation

Building 03 - Damaged Soffit

Building 03 - Panelboard

Building 03 - Lab Interior

Main Building - Exterior Finishes

Elevation

Facility Condition Assessment

Narragansett - Narragansett Pier Middle School | *June 2017*

235 South Pier Road, Narragansett, RI 02882

Introduction

Narragansett Pier Middle School, located at 235 South Pier Road in Narragansett, Rhode Island, was built in 1990. It comprises 86,652 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.

Narragansett Pier Middle School serves grades 5 - 8, has 47 instructional spaces, and has an enrollment of 409. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Narragansett Pier Middle School is 520 with a resulting utilization of 79%.

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 Narragansett Pier Middle School the 5-year need is $7,771,464. 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.

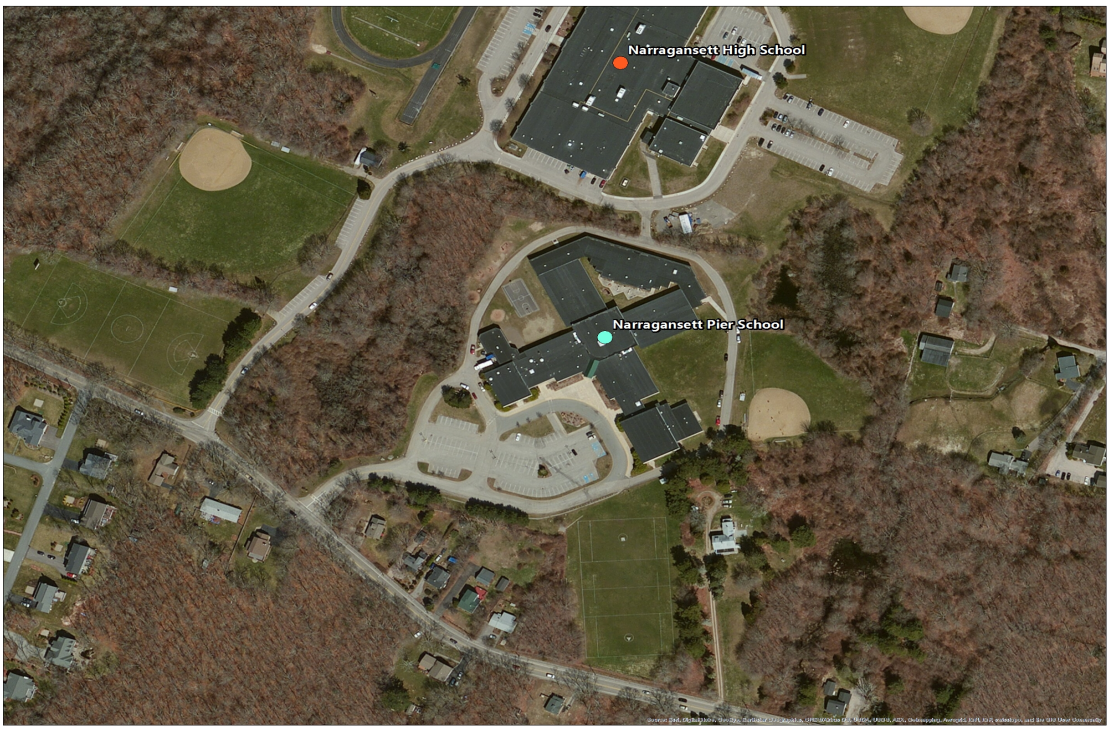


Figure 1: Aerial view of Narragansett Pier Middle School

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 Narragansett Pier 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
	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:	EPDM Roofing
	Aluminum Canopy Roofing

Interior

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

01 - Main Building:	Steel 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
	Acoustical Wall Paneling
	Vinyl/Fabric Wall Covering
	Interior Wall Painting
	Concrete Flooring
	Quarry Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring

Mechanical

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

01 - Main Building:	1,600 MBH Copper Tube Boiler
	Finned Wall Radiator
	10 kW Electric Unit Heater
	DDC Heating System Controls
	1 Ton Ductless Split System
	Make-up Air Unit
	25 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	5,000 CFM Interior AHU
	Ductwork
	Dehumidifier
	Roof Exhaust Fan
	Fire Sprinkler System

Plumbing

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

01 - Main Building:	Gas Piping System
	200 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals

Electrical

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

01 - Main Building:	1200 kW Emergency Generator
	208/120v Switch
	1,200 Amp Switchgear
	30 KVA Transformer
	45 KVA Transformer
	75 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Light Fixtures

Facility Deficiency Priority Levels

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

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

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

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

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

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

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

Table 1: System by Priority

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$103,776	$390,835	$324,837	$819,449	19.32 %
Roofing	-	$125,591	-	-	-	$125,591	2.96 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	-	-	-	-	$0	0.00 %
Interior	-	-	$952,362	$288,621	-	$1,240,984	29.25 %
Mechanical	-	-	$318,373	$56,658	-	$375,031	8.84 %
Electrical	-	$324,297	$95,531	-	$78,868	$498,695	11.75 %
Plumbing	-	-	-	$112,824	$43,075	$155,899	3.67 %
Fire and Life Safety	$11,332	-	-	-	-	$11,332	0.27 %
Technology	-	-	$958,743	-	-	$958,743	22.60 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$4,533	-	$52,267	$56,799	1.34 %
Total	$11,332	$449,888	$2,433,317	$848,939	$499,047	$4,242,522	

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

The building systems with the most need include:

Interior	-	$1,240,984
Technology	-	$958,743
Site	-	$819,449

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

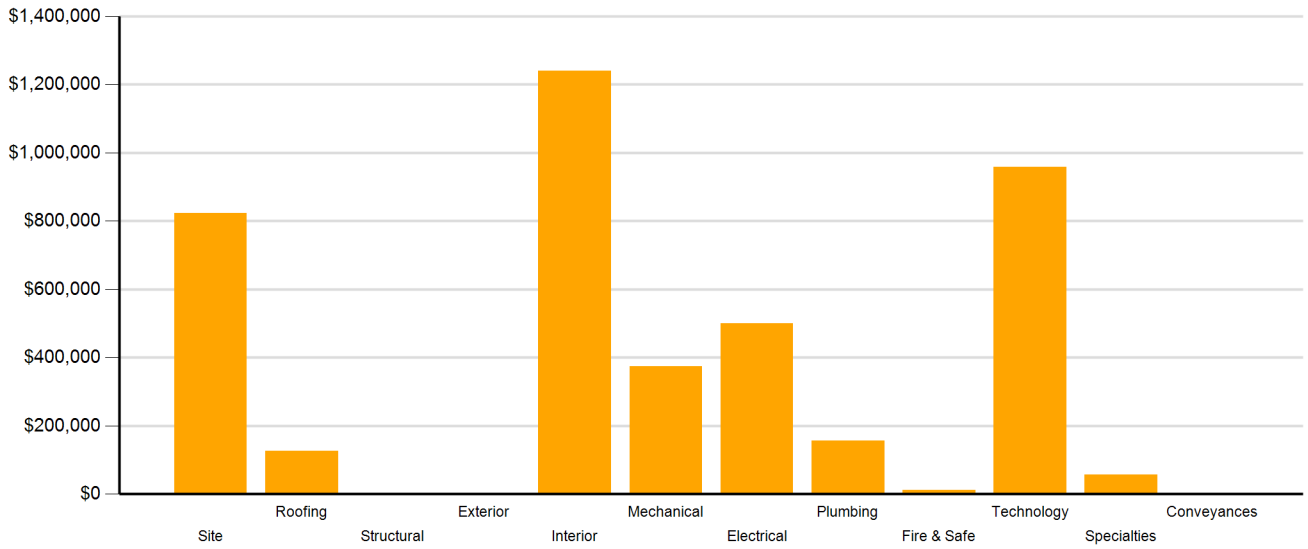


Figure 2: System Deficiencies

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	-	-	$626,490	-	-	$626,490
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	-	$449,888	$814,090	$820,610	$18,272	$2,102,860
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	$11,332	-	$27,196	$28,329	$480,775	$547,631
Functional Deficiency	-	-	$27,196	-	-	$27,196
Hazardous Material	-	-	-	-	-	$0
Technology	-	-	$936,080	-	-	$936,080
Traffic	-	-	$2,266	-	-	$2,266
Total	$11,332	$449,888	$2,433,317	$848,939	$499,047	$4,242,522

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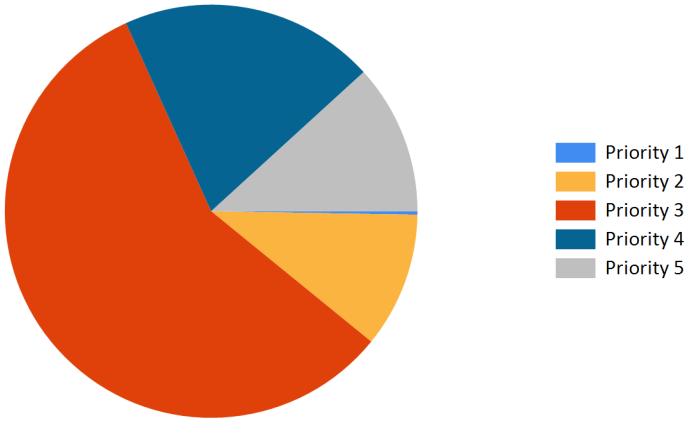

Figure 3: Current deficiencies by priority

Life Cycle Capital Renewal Forecast

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

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

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

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

Table 3: Capital Renewal Forecast

		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	$819,449	$0	$0	$66,170	$0	$0	$66,170	$885,619
Roofing	$125,591	$0	$0	$0	$0	$0	$0	$125,591
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$0	$0	$0	$0	$0	$0	$0	$0
Interior	$1,240,984	$0	$0	$286,270	$0	$0	$286,270	$1,527,254
Mechanical	$375,031	$0	$7,427	$654,066	$810,062	$0	$1,471,555	$1,846,586
Electrical	$498,695	$0	$0	$0	$3,666	$870,931	$874,597	$1,373,292
Plumbing	$155,899	$0	$0	$298,306	$134,611	$136,784	$569,701	$725,600
Fire and Life Safety	$11,332	$0	$0	$0	$253,977	$0	$253,977	$265,309
Technology	$958,743	$0	$0	$0	$0	$0	$0	$958,743
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$56,799	$0	$0	$0	$0	$0	$0	$56,799
Total	**$4,242,522**	**$0**	**$7,427**	**$1,304,812**	**$1,202,316**	**$1,007,715**	**$3,522,270**	**$7,764,792**

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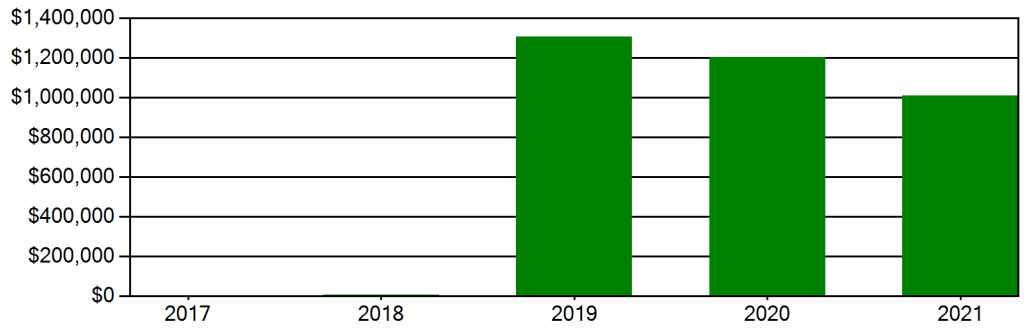
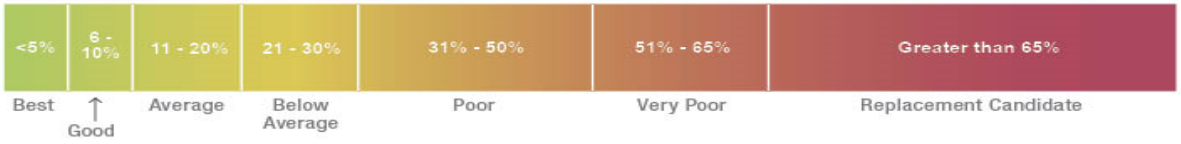


Figure 4: Life Cycle Capital Renewal Forecast

Facility Condition Index (FCI)

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



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

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

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today's estimated cost of construction in the Providence, Rhode Island area. The estimated replacement cost for this facility is $28,595,160. For planning purposes, the total 5-year need at the Narragansett Pier Middle School is $7,771,464 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Narragansett Pier Middle School facility has a 5-year FCI of 27.15%.

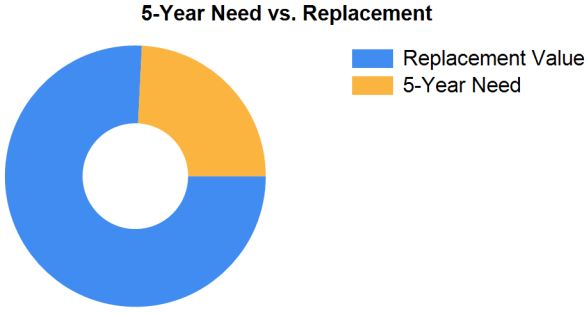


Figure 5: 5-Year FCI

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 471 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 Narragansett Pier Middle School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $790,139.

Summary of Findings

The Narragansett Pier Middle School comprises 86,652 square feet and was constructed in 1990. Current deficiencies at this school total $4,249,194. Five year capital renewal costs total $3,522,270. The total identified need for the Narragansett Pier Middle School (current deficiencies and 5-year capital renewal costs) is $7,771,464. The 5-year FCI is 27.15%.

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
Narragansett Pier Middle School Totals	86,652	1990	$4,249,194	$3,522,270	$7,771,464	27.15%

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

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

Cost Estimating

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

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

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Walks Require Replacement	Capital Renewal	5,000	SF	3	$101,510	2748
Note: Pedestrian paving is cracked and worn.						
Crosswalk Requires Repainting	Traffic	3	Ea.	3	$2,266	4486
Note: Add cross hatching marks to crosswalks in front of school entrance						
Asphalt Paving Requires Replacement	Capital Renewal	109	CAR	4	$358,200	2747
Note: Paving is weathered, cracking, and deteriorated throughout.						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28502
Note: Backstops Require Replacement						
Exterior Concrete Stairs Require Repair And Repainting	Capital Renewal	60	SF	4	$4,306	2755
School lacks a competition track.	Educational Adequacy	1	Ea.	5	$324,837	28247
Note: School lacks a competition track.						
	Sub Total for System	**6**	**items**		**$819,449**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Pole Lighting Requires Replacement	Capital Renewal	6	Ea.	3	$46,097	2765
	Sub Total for System	**1**	**items**		**$46,097**	
	Sub Total for School and Site Level	**7**	**items**		**$865,545**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
EPDM Roofing Requires Replacement (Bldg SF)	Capital Renewal	10,000	SF	2	$125,591	2750
Note: Ponding and water infiltration to the building in various areas on roof.						
	Sub Total for System	**1**	**items**		**$125,591**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation	Acoustics	43	Ea.	3	$355,494	4710
Note: All classrooms						
Interior Doors Require Replacement	Capital Renewal	20	Door	3	$91,597	2754
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	56,324	SF	3	$505,271	2751
Note: Tiles are damaged due to water infiltration.						
Stair Treads Require Replacement	Capital Renewal	300	LF	4	$12,465	2756
Note: Tread is failing on stairs at stage.						
Vinyl/Fabric Wall Covering Requires Replacement	Capital Renewal	38,993	SF	4	$276,157	2752
Note: Wallpaper is old and peeling, and damaged in areas where chalkboards have been removed.						
	Sub Total for System	**5**	**items**		**$1,240,984**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Make Up Air Equipment Requires Replacement	Capital Renewal	3	Ea.	3	$47,377	2977
Unit Ventilators Are Excessively Noisy	Acoustics	43	Ea.	3	$270,996	4711
Note: All classrooms						
Dehumidifier Requires Replacement	Capital Renewal	2	Ea.	4	$56,658	2772
Note: Two units on the roof have failed.						
	Sub Total for System	**3**	**items**		**$375,031**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	$68,594	2771
The Lighting Fixtures Require Replacement	Capital Renewal	43,326	SF	2	$255,703	2769
Note: In the process of switching light fixtures to LED.						

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Electrical Receptacles Are Inadequate And More are Needed	Functional Deficiency	48	Ea.	3	$27,196	2773
Note: Classrooms need additional receptacles.						
The Mounted Building Lighting Requires Replacement	Capital Renewal	15	Ea.	3	$22,238	2770
Note: In the process of switching light fixtures to LED.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	160	Ea.	5	$78,868	Rollup
	Sub Total for System	**5**	**items**		**$452,598**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	4	Ea.	4	$10,236	2766
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	14	Ea.	4	$102,588	2767
Room lacks a drinking fountain.	Educational Adequacy	4	Ea.	5	$4,382	Rollup
Room lacks a private shower area.	Educational Adequacy	1	Ea.	5	$10,166	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	19	Ea.	5	$28,527	Rollup
	Sub Total for System	**5**	**items**		**$155,899**	

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	1	Ea.	1	$11,332	Rollup
	Sub Total for System	**1**	**items**		**$11,332**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	4	Ea.	3	$22,663	Rollup
Technology: Instructional spaces do not have local sound reinforcement.	Technology	37	Ea.	3	$174,695	3561
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,288	3556
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,288	3559
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,394	3555
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,394	3558
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,610	3554
Technology: Main Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$42,304	3552
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	96	Ea.	3	$40,794	3553
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	144	Ea.	3	$61,190	3557
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	138	Ea.	3	$58,641	3560
Technology: Network system inadequate and/or near end of useful life	Technology	8	Ea.	3	$60,435	3565
Technology: Network system inadequate and/or near end of useful life	Technology	28	Ea.	3	$132,201	3566
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	20,000	SF	3	$33,995	3564
Technology: Special Space AV/Multimedia system is inadequate.	Technology	2	Ea.	3	$107,650	3562
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	7	Room	3	$132,201	3563

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
	Sub Total for System	**16**	**items**		**$958,743**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	1	Ea.	3	$4,533	Rollup
Room lacks an appropriate refrigerator.	Educational Adequacy	4	Ea.	5	$33,995	Rollup
The Metal Student Lockers Require Repainting	Capital Renewal	129	Ea.	5	$18,272	2749
Note: Lockers in gym locker room need to be painted.						
	Sub Total for System	**3**	**items**		**$56,799**	
	Sub Total for Building 01 - Main Building	**39**	**items**		**$3,376,977**	
	Total for Campus	**46**	**items**		**$4,242,522**	

Narragansett Pier 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
Roadway Pavement	Asphalt		20	CAR	$66,170	3
		Sub Total for System	**1**	**items**	**$66,170**	
		Sub Total for Building -	**1**	**items**	**$66,170**	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		43,326	SF	$286,270	3
		Sub Total for System	**1**	**items**	**$286,270**	

Mechanical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Decentralized Heating Equipment	Unit Heater Electric (10 KW)		3	Ea.	$7,427	2
Heating System Supplementary Components	Controls - DDC (Bldg.SF)		86,652	SF	$521,752	3
Decentralized Cooling	Ductless Split System (1 Ton)		2	Ea.	$28,232	3
Exhaust Air	Roof Exhaust Fan		20	Ea.	$104,082	3
HVAC Air Distribution	AHU 5,000 CFM Interior		8	Ea.	$810,062	4
		Sub Total for System	**5**	**items**	**$1,471,556**	

Electrical

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wiring Devices	Electrical Disconnect		2	Ea.	$3,666	4
Note:	2 @ 100 amps					
Power Distribution	Panelboard - 120/208 225A		15	Ea.	$86,989	5
Electrical Service	Transformer (30 KVA)		1	Ea.	$7,031	5
Electrical Service	Transformer (45 KVA)		2	Ea.	$16,078	5
Electrical Service	Transformer (75 KVA)		1	Ea.	$10,520	5
Packaged Generator Assemblies	Emergency Generator (1200 KW)		1	Ea.	$713,023	5
Transfer Switches	208/120v Switch (Amps)		100	Amps	$3,350	5
Power Distribution	Panelboard - 120/208 100A		7	Ea.	$33,940	5
		Sub Total for System	**8**	**items**	**$874,597**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Urinals		12	Ea.	$15,949	3
Plumbing Fixtures	Toilets		35	Ea.	$99,823	3
Plumbing Fixtures	Showers		24	Ea.	$182,534	3
Domestic Water Equipment	Water Heater - Gas - 200 Gallon		2	Ea.	$25,851	4
Plumbing Fixtures	Classroom Lavatories		40	Ea.	$108,760	4
Plumbing Fixtures	Restroom Lavatories		43	Ea.	$136,784	5
		Sub Total for System	**6**	**items**	**$569,701**	

Fire and Life Safety

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm		86,652	SF	$253,977	4
		Sub Total for System	**1**	**items**	**$253,977**	
		Sub Total for Building 01 - Main Building	**21**	**items**	**$3,456,101**	
		Total for: Narragansett Pier Middle School	**22**	**items**	**$3,522,271**	

Supporting Photos

Site Aerial

Music Room

Paved Play Area

Side Elevation


Stage


Interior Finishes


Main Entrance


Typical Restroom Fixtures And Finishes


Cracked Asphalt Paving


Deteriorated Asphalt Paving

School Sign


Gymnasium Interior


Damaged Concrete Stairs


Exterior Finishes


Cracking Sidewalk Paving


Library

Typical Classroom

Marquee

Corridor Finishes

Computer Lab

Typical Pole Lights

Cafeteria


Failed Dehumidifier


Stained Ceiling Tiles


Light Fixtures


Peeling Wallpaper


Damaged Interior Wood Door


Aged Switchboard


Worn Paint On Lockers


Missing Stair Tread


Corroded Mop Sink


Stained And Aged Water Fountains


Building Mounted Light


Ponding On Roof


Stained Ceiling Tile


Worn Door Frame


Exterior Finishes