



Facility Condition Assessment

Cranston - Cranston High School West

June 2017

80 Metropolitan Avenue, Cranston, RI 02920





Introduction

Cranston High School West, located at 80 Metropolitan Avenue in Cranston, Rhode Island, was built in 1958. It comprises 205,632 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.

Cranston High School West serves grades 9 - 12, has 92 instructional spaces, and has an enrollment of 1,476. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Cranston High School West is 1,494 with a resulting utilization of 99%.

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 Cranston High School West the 5-year need is \$25,183,153. 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 Cranston High School West



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 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 Cranston High School West campus, identified by discipline and building.

Site

The site level systems for this campus include:

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

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	E.I.F.S. Exterior Wall
	Aluminum Exterior Windows
	Vinyl on Wood Frame Exterior Windows
	Storefront / Curtain Wall
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors
03 - Auditorium and Music:	Brick Exterior Wall
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors
04 - Gymnasium:	Wood Siding Exterior Wall
	Brick Exterior Wall
	Painted Exterior Wall
	Steel Exterior Entrance Doors
	Storefront Entrance Doors
	Overhead Exterior Utility Doors
05 - E Building:	Brick Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
06 - Building 6:	Metal Panel Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors

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

01 - Main Building:	Built-Up Roofing With Ballast
	EPDM Roofing
03 - Auditorium and Music:	Composition Shingle Roofing
	EPDM Roofing
04 - Gymnasium:	EPDM Roofing



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05 - E Building:	EPDM Roofing
06 - Building 6:	Metal Steep Slope 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
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	Ceramic Tile Wall
	Interior Wall Painting
	Quarry Tile Flooring
	Ceramic Tile Flooring
	Vinyl Composition Tile Flooring
	Terrazzo Flooring
	Carpet
03 - Auditorium and Music:	Steel Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	Ceramic Tile Wall
	Acoustical Wall Paneling
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Vinyl Composition Tile Flooring
	Terrazzo Flooring
	Carpet
04 - Gymnasium:	Wood Interior Doors
	Steel Interior Doors
	Interior Door Hardware
	Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings



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04 - Gymnasium:	Ceramic Tile Wall
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Wood Flooring
	Rubber Tile Flooring
	Vinyl Composition Tile Flooring
	Terrazzo Flooring
05 - E Building:	Steel Interior Doors
	Interior Door Hardware
	Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Interior Wall Painting
	Vinyl Composition Tile Flooring
	Carpet
06 - Building 6:	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Interior Wall Painting
	Vinyl Composition Tile Flooring

Mechanical

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

01 - Main Building:	1,275 MBH Cast Iron Water Boiler
	Steam/Hot Water Heating Unit Vent
	36 MBH Steam Unit Heater
	DDC Heating System Controls
	1 Ton Ductless Split System
	Window Units
	Make-up Air Unit
	50 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	15 Ton DX Gas Roof Top Unit
	Ductwork
	Roof Exhaust Fan
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	Laboratory Fume Hood
	4'x6' Ventilator/Relief Vent
	Fire Sprinkler System



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03 - Auditorium and Music:	200 MBH Gas Furnace
	DDC Heating System Controls
	2-Pipe Hot Water Hydronic Distribution System
	20,000 CFM Interior AHU
	Ductwork
	Large Roof Exhaust Fan
	Fire Sprinkler System
04 - Gymnasium:	75 MBH Gas Furnace
	DDC Heating System Controls
	2-Pipe Hot Water Hydronic Distribution System
	20,000 CFM Interior AHU
	Ductwork
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	Fire Sprinkler System
05 - E Building:	400 MBH Cast Iron Water Boiler
	Finned Wall Radiator
	Steam/Hot Water Heating Unit Vent
	36 MBH Steam Unit Heater
	DDC Heating System Controls
	1 Ton Ductless Split System
	Window Units
	1 HP or Smaller Pump
	5 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	Roof Exhaust Fan
	Fire Sprinkler System
06 - Building 6:	Electronic Heating System Controls
	2,000 CFM Interior AHU
	Roof Exhaust Fan

Plumbing

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

04 - Gymnasium:	500 Gallon Water Storage Tank
01 - Main Building:	4" Backflow Preventers
	Gas Piping System
	200 Gallon Electric Water Heater
05 - E Building:	Gas Piping System
	6.4 GPM Instant Water Heater
04 - Gymnasium:	Gas Piping System
	75 Gallon Gas Water Heater
03 - Auditorium and Music:	Gas Piping System



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03 - Auditorium and Music:	40 Gallon Gas Water Heater
01 - Main Building:	Domestic Water Piping System
05 - E Building:	Domestic Water Piping System
04 - Gymnasium:	Domestic Water Piping System
03 - Auditorium and Music:	Domestic Water Piping System
01 - Main Building:	Classroom Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
05 - E Building:	Classroom Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
04 - Gymnasium:	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Showers
	Toilets
	Urinals
03 - Auditorium and Music:	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
05 - E Building:	Air Compressor (1/2 hp)

Electrical

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

01 - Main Building:	600 Amp Switchgear
	30 KVA Transformer
	45 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 277/480 225A
	Panelboard - 400+ Amps
	Electrical Disconnect
	Light Fixtures



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01 - Main Building:	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
03 - Auditorium and Music:	600 Amp Switchgear
	600 Amp Distribution Panel
	Panelboard - 120/208 225A
	Panelboard - 120/240 100A
	Light Fixtures
	Building Mounted Lighting Fixtures
04 - Gymnasium:	100 kW Emergency Generator
	Automatic Transfer Switch
	600 Amp Switchgear
	Panelboard - 277/480 100A
	Panelboard - 277/480 225A
	Electrical Disconnect
	Light Fixtures
	Building Mounted Lighting Fixtures
05 - E Building:	600 Amp Switchgear
	Panelboard - 120/208 125A
	Panelboard - 120/240 100A
	Building Mounted Lighting Fixtures
	Light Fixtures
06 - Building 6:	Panelboard - 120/208 100A
	Electrical Disconnect
	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.



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

Table 1: System by Priority

System	Priority					Total	% of Total
	1	2	3	4	5		
Site	-	-	\$334,594	\$1,949,868	\$192,456	\$2,476,918	14.91 %
Roofing	-	\$1,281,363	-	-	-	\$1,281,363	7.71 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	\$160,380	-	\$45,207	-	\$205,587	1.24 %
Interior	-	-	\$1,392,339	\$3,139,026	\$954,531	\$5,485,896	33.03 %
Mechanical	-	\$267,415	-	\$176,287	-	\$443,701	2.67 %
Electrical	\$2,859	\$696,989	\$3,766	-	\$114,010	\$817,625	4.92 %
Plumbing	-	-	\$2,003,601	\$198,382	\$46,767	\$2,248,749	13.54 %
Fire and Life Safety	\$92,379	-	-	-	-	\$92,379	0.56 %
Technology	-	-	\$3,000,351	-	-	\$3,000,351	18.06 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	-	\$460,410	\$96,998	\$557,408	3.36 %
Total	\$95,238	\$2,406,147	\$6,734,651	\$5,969,180	\$1,404,761	\$16,609,978	

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

Interior	-	\$5,485,896
Technology	-	\$3,000,351
Site	-	\$2,476,918

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

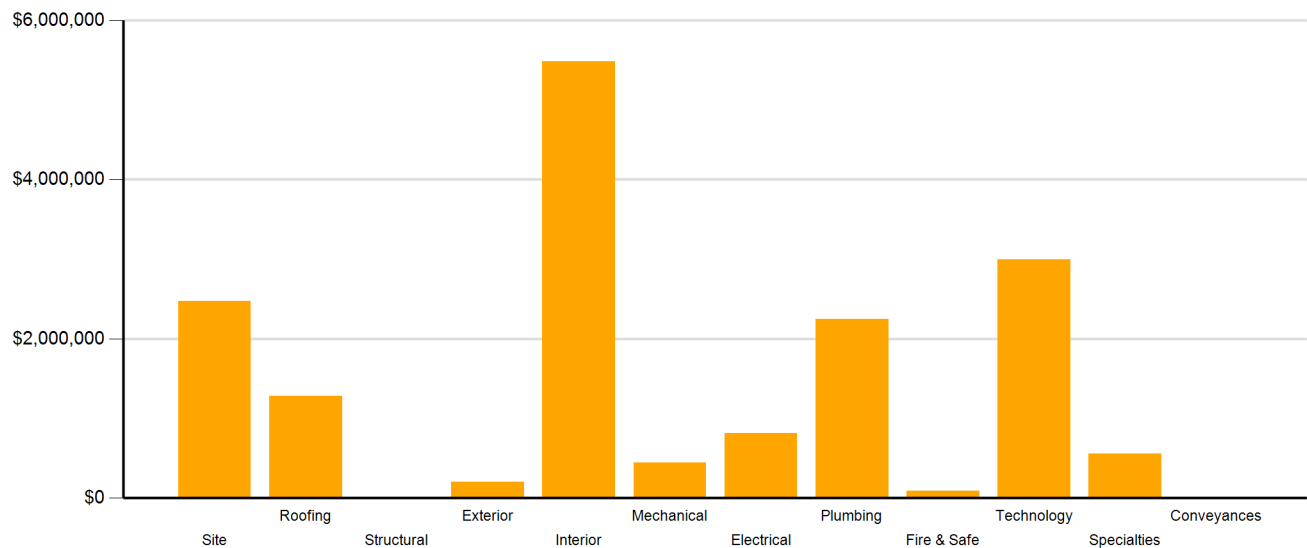


Figure 2: System Deficiencies



Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

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



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

Table 2: Deficiency Category by Priority

Category	Priority					Total
	1	2	3	4	5	
Acoustics	-	-	-	\$527,650	-	\$527,650
Barrier to Accessibility	-	-	-	-	-	\$0
Capital Renewal	-	\$2,406,147	\$3,566,286	\$2,721,822	\$950,989	\$9,645,244
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	\$95,238	-	\$161,663	\$208,995	\$453,773	\$919,668
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	\$2,510,713	-	\$2,510,713
Technology	-	-	\$2,838,688	-	-	\$2,838,688
Traffic	-	-	\$168,014	-	-	\$168,014
Total	\$95,238	\$2,406,147	\$6,734,651	\$5,969,180	\$1,404,761	\$16,609,978

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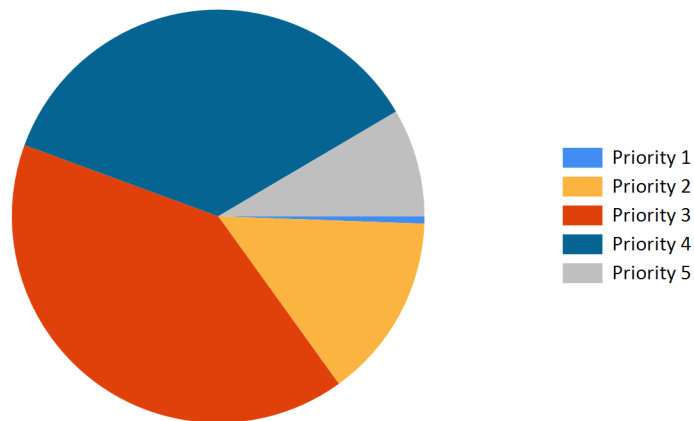


Figure 3: Current deficiencies by priority



Life Cycle Capital Renewal Forecast

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

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

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

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

Table 3: Capital Renewal Forecast

System	Current Deficiencies	Life Cycle Capital Renewal Projections					LC Yr. 1-5 Total	Total 5-Year Need
		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021		
Site	\$2,476,918	\$0	\$0	\$0	\$27,586	\$495,783	\$523,369	\$3,000,287
Roofing	\$1,281,363	\$0	\$0	\$0	\$0	\$241,760	\$241,760	\$1,523,123
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$205,587	\$0	\$0	\$0	\$0	\$620,907	\$620,907	\$826,494
Interior	\$5,485,896	\$0	\$0	\$5,208,110	\$104,845	\$979,417	\$6,292,372	\$11,778,270
Mechanical	\$443,701	\$0	\$0	\$230,947	\$63,933	\$380,176	\$675,056	\$1,118,757
Electrical	\$817,625	\$0	\$0	\$0	\$0	\$0	\$0	\$817,625
Plumbing	\$2,248,749	\$0	\$0	\$0	\$0	\$219,711	\$219,711	\$2,468,461
Fire and Life Safety	\$92,379	\$0	\$0	\$0	\$0	\$0	\$0	\$92,379
Technology	\$3,000,351	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,351
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$557,408	\$0	\$0	\$0	\$0	\$0	\$0	\$557,408
Total	\$16,609,978	\$0	\$0	\$5,439,057	\$196,364	\$2,937,754	\$8,573,175	\$25,183,153

*Displayed totals may not sum exactly due to mathematical rounding

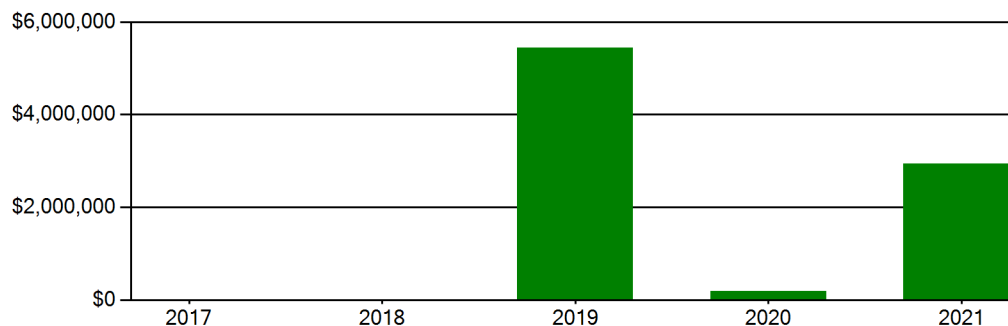
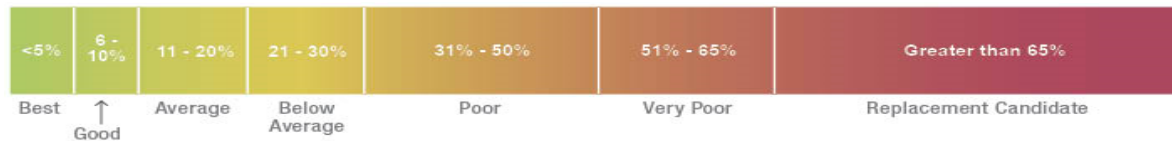


Figure 4: Life Cycle Capital Renewal Forecast



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 \$74,387,520. For planning purposes, the total 5-year need at the Cranston High School West is \$25,183,153 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Cranston High School West facility has a 5-year FCI of 33.85%.

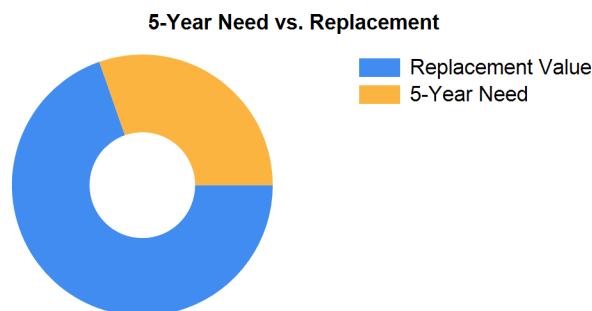


Figure 5: 5-Year FCI

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



Rhode Island Aspirational Capacity

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

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

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

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

Applying the Rhode Island Aspirational Capacity, a facility of this size could ideally support an enrollment of approximately 1,117 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 Cranston High School West cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$0.



Summary of Findings

The Cranston High School West comprises 205,632 square feet and was constructed in 1958. Current deficiencies at this school total \$16,609,978. Five year capital renewal costs total \$8,573,175. The total identified need for the Cranston High School West (current deficiencies and 5-year capital renewal costs) is \$25,183,153. The 5-year FCI is 33.85%.

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
Cranston High School West Totals	205,632	1958	\$16,609,978	\$8,573,175	\$25,183,153	33.85%

**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.



Facility Condition Assessment

Cranston - Cranston High School West

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Asphalt Walks Require Replacement Note: Asphalt walkways are cracked and uneven.	Capital Renewal	6,507	SF	3	\$70,352	12117
Crosswalk Requires Repainting Note: Repaint crosswalk on Curtis St and crosswalks at intersection of Curtis St and Cranston St	Traffic	3	Ea.	3	\$2,887	16915
Parking Or Roadway Curbs Require Replacement Note: Concrete curbs at the front of the school are cracked and broken and pose a tripping hazard.	Capital Renewal	1,000	LF	3	\$96,228	12120
Sidewalk Requires Replacement Note: Replace sidewalk along Metropolitan Ave and Curtis St from school campus to Cranston St. (920' long x 6' wide)	Traffic	5,520	SF	3	\$159,354	16914
Traffic Signage Is Required Note: Add school zone signage on Curtis St.	Traffic	2	Ea.	3	\$5,774	16913
Asphalt Paving Requires Replacement Note: Asphalt is alligatored and heaving.	Capital Renewal	448	CAR	4	\$1,875,345	12116
Asphalt Paving Requires Resurfacing Note: Roadway surface is weathered.	Capital Renewal	1,850	SF	4	\$2,448	12118
Backstops Require Replacement Note: Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$36,086	28447
Fencing Requires Replacement (4' Chain Link Fence) Note: Chain link fence is bent, overgrown, and failing in places.	Capital Renewal	440	LF	4	\$35,989	12115
School has insufficient softball fields. Note: School has insufficient softball fields.	Educational Adequacy	1	Ea.	5	\$192,456	28360
Sub Total for System		10	items		\$2,476,918	
Sub Total for School and Site Level		10	items		\$2,476,918	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Built-up Roofing With Aggregate Ballast Requires Replacement Note: Original roof has some membrane patching and is showing signs of wear and age. Staff reported that it is scheduled to be replaced in the summer of 2016.	Capital Renewal	18,890	SF	2	\$757,395	12127
Sub Total for System		1	items		\$757,395	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Doors Require Replacement Note: Original wood doors are aged and worn.	Capital Renewal	170	Door	3	\$826,458	12122
The Tectum Decking Requires Repair Note: Tar from roof is leaking into tectum decking in the B wing classrooms.	Capital Renewal	18,890	SF	3	\$146,082	12129
Asbestos 9x9 Tile is Present. Limited Areas of Lifting or Broken Tiles Exist	Hazardous Material	68,003	SF	4	\$2,044,935	Rollup
Caulking - significant areas of broken pieces &/or deteriorating caulk	Hazardous Material	4,134	LF	4	\$82,876	Rollup
Paint (probable pre-1978 in base (layers(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	752	Ea.	4	\$226,136	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - linear feet)	Hazardous Material	1,731	LF	4	\$41,643	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - square feet)	Hazardous Material	11,463	SF	4	\$114,902	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - square feet)	Hazardous Material	2	SF	4	\$20	Rollup
Room Is Excessively Reverberant Note: Gym	Acoustics	22,400	SF	4	\$527,650	19833
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	2,610	SF	4	\$100,663	Rollup
Wall/ceiling materials - area < 9 sq. ft. AND in children-accessible area	Hazardous Material	20	SF	4	\$200	Rollup
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	136,006	SF	5	\$947,487	Rollup
Sub Total for System		12	items		\$5,059,053	



Facility Condition Assessment

Cranston - Cranston High School West

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Lab lacks an appropriate fume hood.	Educational Adequacy	3	Ea.	4	\$66,761	Rollup
The Chemistry Lab Fume Hood(s) Require Replacement Note: Fume hood stack is rusted and deteriorating.	Capital Renewal	2	Ea.	4	\$60,143	12121
The Exhaust Hood Requires Replacement Note: Exhaust fans are outdated and deteriorating.	Capital Renewal	9	Ea.	4	\$49,383	12136
Sub Total for System		3	items		\$176,287	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	2	Ea.	1	\$2,859	Rollup
Switchgear Is Needed Or Requires Replacement Note: Electrical service and distribution switchgear is obsolete.	Capital Renewal	2	Ea.	2	\$40,656	12137
The Electrical Disconnect Requires Replacement Note: Electrical disconnects in the remote vault are heavily corroded and should be replaced.	Capital Renewal	6	Ea.	2	\$121,969	12119
The Panelboard Requires Replacement Note: The panelboards are obsolete.	Capital Renewal	8	Ea.	2	\$40,897	12131
The Panelboard Requires Replacement Note: The panelboards are obsolete.	Capital Renewal	7	Ea.	2	\$42,801	12132
The Panelboard Requires Replacement Note: Panelboards are obsolete.	Capital Renewal	3	Ea.	2	\$56,263	12133
Room Has Insufficient Electrical Outlets	Educational Adequacy	204	Ea.	5	\$102,471	Rollup
Sub Total for System		7	items		\$407,917	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Plumbing / Domestic Water Piping System Is Beyond Its Useful Life Note: Water piping is aged with signs of scaling. Staff reports that water runs brown after periods of low use.	Capital Renewal	151,118	SF	3	\$1,281,971	12130
The Urinal Plumbing Fixtures Require Replacement Note: Urinals are aged and stained and should be replaced.	Capital Renewal	39	Ea.	3	\$54,651	12128
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	8	Ea.	4	\$21,731	12126
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	35	Ea.	4	\$117,388	12124
Room lacks a drinking fountain.	Educational Adequacy	4	Ea.	5	\$4,465	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	23	Ea.	5	\$35,191	Rollup
Sub Total for System		6	items		\$1,515,397	

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	8	Ea.	1	\$92,379	Rollup
Sub Total for System		1	items		\$92,379	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	21	Ea.	3	\$121,247	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	624	Ea.	3	\$312,741	23438
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	75	Ea.	3	\$751,781	23449
Technology: Gymnasium sound system is nonexistent, inadequate, or near end of useful life.	Technology	1	Ea.	3	\$9,623	23440
Technology: Instructional spaces do not have local sound reinforcement.	Technology	75	Ea.	3	\$375,891	23446
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,613	23417



Facility Condition Assessment

Cranston - Cranston High School West

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,613	23420
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,613	23424
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,613	23428
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,613	23432
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,613	23436
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$47,713	23431
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$39,694	23423
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	\$17,642	23419
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	\$17,642	23427
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	\$17,642	23435
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$5,012	23418
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$5,012	23421
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$5,012	23425
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$5,012	23429
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$5,012	23433
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$5,012	23437
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$7,017	23414
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$52,925	23416
Technology: Main Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$44,906	23413
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	624	Ea.	3	\$188,547	23439
Technology: Network system inadequate and/or near end of useful life	Technology	12	Ea.	3	\$96,228	23444
Technology: Network system inadequate and/or near end of useful life	Technology	38	Ea.	3	\$190,451	23445
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	237,479	SF	3	\$428,477	23443
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	1	Room	3	\$20,048	23442
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$8,019	23415
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$5,012	23422
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$5,012	23426



Facility Condition Assessment

Cranston - Cranston High School West

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$5,012	23430
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$5,012	23434
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	75	Ea.	3	\$120,285	23447
Technology: Telephone system is inadequate and/or non-existent.	Technology	1	Ea.	3	\$7,618	23448
Sub Total for System		37	items		\$2,959,935	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Student Lockers Require Replacement Note: Student lockers are damaged. Most are unable to close or lock. Room lacks an appropriate refrigerator.	Capital Renewal	720	Ea.	4	\$373,485	12134
The room lacks a washer and/or dryer.	Educational Adequacy	8	Ea.	5	\$69,284	Rollup
	Educational Adequacy	2	Ea.	5	\$27,714	Rollup
Sub Total for System		3	items		\$470,483	
Sub Total for Building 01 - Main Building		70	items		\$11,438,846	

Building: 03 - Auditorium and Music

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Carpet Flooring Requires Replacement Note: Carpet is worn and according to staff, slated to be replaced during auditorium restoration 2016.	Capital Renewal	4,480	SF	3	\$102,766	12138
The Vinyl Composition Tile Requires Replacement Note: Vinyl composition tile is cracked and worn.	Capital Renewal	4,480	SF	3	\$54,187	12139
Room lacks appropriate sound control.	Educational Adequacy	200	SF	5	\$7,044	Rollup
Sub Total for System		3	items		\$163,997	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Air Handler HVAC Component Requires Replacement Note: Air handling unit is old and should be replaced.	Capital Renewal	1	Ea.	2	\$196,078	12142
Sub Total for System		1	items		\$196,078	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	\$20,328	18004
The Distribution Panel Requires Replacement Note: The electrical service and distribution panel is obsolete.	Capital Renewal	1	Ea.	2	\$30,713	12145
The Panelboard Requires Replacement Note: Panelboard is obsolete.	Capital Renewal	1	Ea.	2	\$6,114	12143
The Panelboard Requires Replacement Note: Panelboards are obsolete.	Capital Renewal	4	Ea.	2	\$24,458	12144
Remove Abandoned Equipment Note: Abandoned air compressor should be removed.	Capital Renewal	1	Ea.	5	\$3,502	12141
Sub Total for System		5	items		\$85,115	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Custodial Mop Or Service Sink Requires Replacement Room lacks a drinking fountain.	Capital Renewal	2	Ea.	4	\$5,433	12140
	Educational Adequacy	1	Ea.	5	\$1,116	Rollup
Sub Total for System		2	items		\$6,549	



Facility Condition Assessment

Cranston - Cranston High School West

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	2	Ea.	3	\$11,547	Rollup
Sub Total for System		1	items		\$11,547	
Sub Total for Building 03 - Auditorium and Music		12	items		\$463,286	

Building: 04 - Gymnasium

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
EPDM Roofing Requires Replacement (Bldg SF)	Capital Renewal	15,950	SF	2	\$212,639	12156
Note: Roof is buckled and stained with evidence of ponding. The insulation moves when underfoot. Site staff noted that the roof is scheduled for replacment in 2016.						
Sub Total for System		1	items		\$212,639	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Handrail Requires Repainting	Capital Renewal	40	LF	4	\$441	12151
Note: Handrails show chipped paint and require repainting.						
The Exterior Requires Painting (Bldg SF)	Capital Renewal	3,190	SF	4	\$44,766	12155
Note: Wood louvers need to be cleaned, prepped, and painted.						
Sub Total for System		2	items		\$45,207	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Vinyl Composition Tile Requires Replacement	Capital Renewal	160	SF	3	\$1,935	18005
Sub Total for System		1	items		\$1,935	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Generator Requires Replacement	Capital Renewal	1	Ea.	2	\$110,261	12154
Note: The generator is obsolete and should be replaced.						
Switchgear Is Needed Or Requires Replacement	Capital Renewal	3	Ea.	2	\$60,985	12159
The Electrical Disconnect Requires Replacement	Capital Renewal	3	Ea.	2	\$5,798	12146
The Panelboard Requires Replacement	Capital Renewal	6	Ea.	2	\$48,715	12152
Note: Power distribution panelboards are obsolete.						
The Panelboard Requires Replacement	Capital Renewal	2	Ea.	2	\$25,220	12153
Transfer Switch Requires Replacement	Capital Renewal	100	Amps	3	\$3,766	12158
Room Has Insufficient Electrical Outlets	Educational Adequacy	8	Ea.	5	\$4,018	Rollup
Sub Total for System		7	items		\$258,763	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	83	Ea.	3	\$665,577	12149
Note: Shower plumbing fixtures are original to the building and should be replaced.						
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	2	Ea.	4	\$5,433	12150
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	12	Ea.	4	\$40,247	12147
Note: The sinks are original to the building and are rusted.						
Room lacks a drinking fountain.	Educational Adequacy	4	Ea.	5	\$4,465	Rollup
Sub Total for System		4	items		\$715,722	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Student Lockers Require Replacement	Capital Renewal	157	Ea.	4	\$81,440	12157
Note: Student lockers are rusting and damaged.						
Sub Total for System		1	items		\$81,440	
Sub Total for Building 04 - Gymnasium		16	items		\$1,315,707	



Building: 05 - E Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
EPDM Roofing Requires Replacement (Bldg SF)	Capital Renewal	20,646	SF	2	\$275,244	12165
Note: Warranty for EPDM roofing has expired. The roof is scheduled for replacement in 2016.						
Sub Total for System		1	items		\$275,244	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Carpet Flooring Requires Replacement	Capital Renewal	1,032	SF	3	\$23,673	12160
Note: Carpet is stained and worn.						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	19,614	SF	3	\$237,238	12161
Note: Vinyl composition tile is old, worn, and stained.						
Sub Total for System		2	items		\$260,911	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Unit Vent	Capital Renewal	4	Ea.	2	\$71,337	12166
Note: The heating equipment unit ventilators are original to the building and should be replaced.						
Sub Total for System		1	items		\$71,337	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Switchgear Is Needed Or Requires Replacement	Capital Renewal	1	Ea.	2	\$20,328	12167
Note: The electrical service and distribution switchgear is obsolete.						
The Panelboard Requires Replacement	Capital Renewal	5	Ea.	2	\$30,572	12164
Note: The power distribution panelboards are obsolete.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	8	Ea.	5	\$4,018	Rollup
Sub Total for System		3	items		\$54,919	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	1	Ea.	3	\$1,401	12163
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	3	Ea.	4	\$8,149	12162
Note: Original mop sinks should be replaced.						
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	1	Ea.	5	\$1,530	Rollup
Sub Total for System		3	items		\$11,081	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	5	Ea.	3	\$28,868	Rollup
Sub Total for System		1	items		\$28,868	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Welding Bays Are Required	Educational Adequacy	1	Ea.	4	\$5,485	Rollup
Sub Total for System		1	items		\$5,485	
Sub Total for Building 05 - E Building		12	items		\$707,845	

Building: 06 - Building 6

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Roof Architectural Roof Covering Requires Replacement	Capital Renewal	1,000	SF	2	\$36,086	12168
Note: The corrugated roof is rusted. Interior finishes show evidence of leaks.						
Sub Total for System		1	items		\$36,086	



Facility Condition Assessment

Cranston - Cranston High School West

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Panel Exterior Requires Replacement (Bldg SF)	Capital Renewal	1,000	SF	2	\$160,380	12171
Note: The building metal panel walls are rusting and walls have been damaged by snow plows.						
Sub Total for System		1	items		\$160,380	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Electrical Disconnect Requires Replacement	Capital Renewal	3	Ea.	2	\$5,798	12169
Note: The electrical disconnects are obsolete.						
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	\$5,112	12170
Note: The power distribution panelboard is obsolete.						
Sub Total for System		2	items		\$10,910	
Sub Total for Building 06 - Building 6		4	items		\$207,375	
Total for Campus		124	items		\$16,609,978	



Cranston High School West - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fences and Gates	Fencing - Chain Link (8 Ft)	290	LF	\$19,734	4
Fences and Gates	Fencing - Chain Link (4 Ft)	120	LF	\$7,852	4
Roadway Pavement	Asphalt	53	CAR	\$177,488	5
Pedestrian Pavement	Sidewalks - Concrete	15,385	SF	\$318,295	5
Sub Total for System		4	items	\$523,368	
Sub Total for Building -		4	items	\$523,368	

Building: 01 - Main Building

Roofing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Low-Slope Roofing	EPDM - Rubber Roofing Material	18,890	SF	\$241,760	5
Note: 'A' wing					
Sub Total for System		1	items	\$241,760	

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Operating Windows	Aluminum - Windows per SF	2,132	SF	\$365,181	5
Note: 2x4					
Sub Total for System		1	items	\$365,181	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Acoustical Suspended Ceilings	Exposed Tectum Ceilings	68,003	SF	\$5,106,776	3
Carpeting	Carpet	4,534	SF	\$99,844	4
Interior Operable Partitions	Foldable partition (Bldg SF)	2,280	SF Wall	\$266,571	5
Note: East cafeteria					
Suspended Plaster and	Painted ceilings	7,556	SF	\$31,992	5
Tile Flooring	Ceramic Tile	3,022	SF	\$82,141	5
Sub Total for System		5	items	\$5,587,324	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exhaust Air	Ventilator/Relief Vent (4'x6')	12	Ea.	\$230,947	3
Air Distribution	Make-up Air Unit	1	Ea.	\$16,093	4
Sub Total for System		2	items	\$247,040	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Electric - 200 Gallon	1	Ea.	\$45,175	5
Sub Total for System		1	items	\$45,175	
Sub Total for Building 01 - Main Building		10	items	\$6,486,481	

Building: 03 - Auditorium and Music

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Steel - Insulated and Painted	16	Door	\$103,926	5
Sub Total for System		1	items	\$103,926	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Paneling	Acoustical Panel Wall	538	SF	\$5,001	4
Suspended Plaster and	Painted ceilings	5,375	SF	\$22,758	5
Wall Painting and Coating	Painting/Staining (Bldg SF)	17,201	SF	\$115,038	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	12,543	SF	\$114,664	5
Sub Total for System		4	items	\$257,460	



Facility Condition Assessment

Cranston - Cranston High School West

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heat Generation	Furnace - Gas (200 MBH)	1	Ea.	\$7,698	4
Facility Hydronic Distribution	2-Pipe Water System (Hot)	17,918	SF	\$139,798	5
Exhaust Air	Roof Exhaust Fan - Large	3	Ea.	\$42,188	5
Sub Total for System		3	items	\$189,685	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Gas - 40 gallon	2	Ea.	\$6,397	5
Sub Total for System		1	items	\$6,397	
Sub Total for Building 03 - Auditorium and Music		9	items	\$557,469	

Building: 04 - Gymnasium

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Utility Doors	Overhead	1	Door	\$37,240	5
Sub Total for System		1	items	\$37,240	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	15,152	SF	\$101,334	3
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System	300	SF	\$3,602	5
Tile Flooring	Ceramic Tile	478	SF	\$12,992	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	300	SF	\$2,743	5
Sub Total for System		4	items	\$120,671	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heat Generation	Furnace - Gas (75 MBH)	1	Ea.	\$2,521	4
Facility Hydronic Distribution	2-Pipe Water System (Hot)	15,950	SF	\$124,444	5
Sub Total for System		2	items	\$126,965	
Sub Total for Building 04 - Gymnasium		7	items	\$284,876	

Building: 05 - E Building

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Steel - Insulated and Painted	13	Door	\$84,440	5
Sub Total for System		1	items	\$84,440	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	20,646	SF	\$138,077	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	15,484	SF	\$141,549	5
Sub Total for System		2	items	\$279,627	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Decentralized Heating Equipment	Unit Heater Steam/HW (36 MBH)	14	Ea.	\$23,333	4
Note: Cabinet unit heaters					
Decentralized Cooling	Ductless Split System (1 Ton)	1	Ea.	\$14,288	4
Exhaust Air	Roof Exhaust Fan	13	Ea.	\$68,478	5
Sub Total for System		3	items	\$106,099	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Piping	Domestic Water Piping System (Bldg.SF)	20,646	SF	\$168,139	5
Sub Total for System		1	items	\$168,139	
Sub Total for Building 05 - E Building		7	items	\$638,305	

Building: 06 - Building 6

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Operating Windows	Aluminum - Windows per SF	100	SF	\$17,129	5
Exterior Entrance Doors	Steel - Insulated and Painted	2	Door	\$12,991	5
Sub Total for System		2	items	\$30,119	



Facility Condition Assessment

Cranston - Cranston High School West

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Interior Swinging Doors	Wood	1	Door	\$4,667	5
Interior Door Supplementary Components	Door Hardware	1	Door	\$3,176	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	1,000	SF	\$9,142	5
Wall Painting and Coating	Painting/Staining (Bldg SF)	1,000	SF	\$6,688	5
Resilient Flooring	Vinyl Composition Tile Flooring	1,000	SF	\$11,612	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System	1,000	SF	\$12,005	5
Sub Total for System		6	items	\$47,289	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exhaust Air	Roof Exhaust Fan	1	Ea.	\$5,268	5
Sub Total for System		1	items	\$5,268	
Sub Total for Building 06 - Building 6		9	items	\$82,675	
Total for: Cranston High School West		46	items	\$8,573,175	



Supporting Photos



Site Aerial



Weathered Roadway Asphalt



Cracked And Weathered Sidewalk



E Building Exterior



Facility Condition Assessment

Cranston - Cranston High School West



Rusted Disconnects



Uneven Sidewalk



Damaged Curb At Main Entrance



Corroded Disconnect



East Cafeteria



E Building Entrance



Facility Condition Assessment

Cranston - Cranston High School West



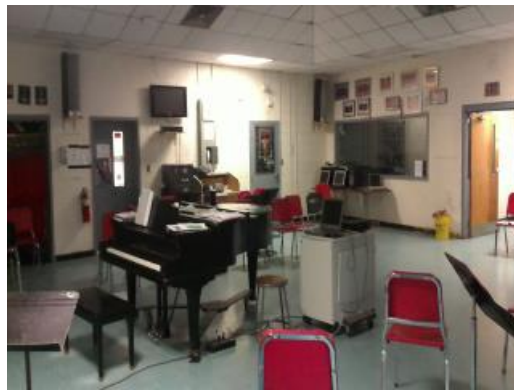
Gymnasium South Entry



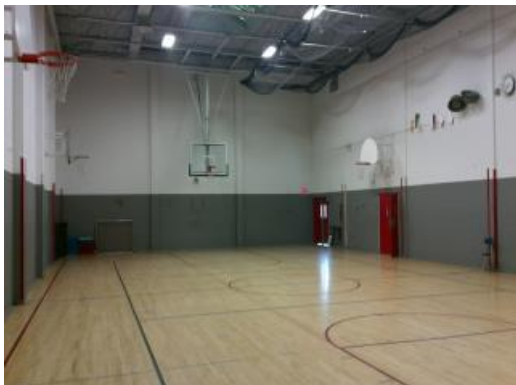
Art Room



Library



Vocal Music Room



Gymnasium



E Building Classroom



Facility Condition Assessment

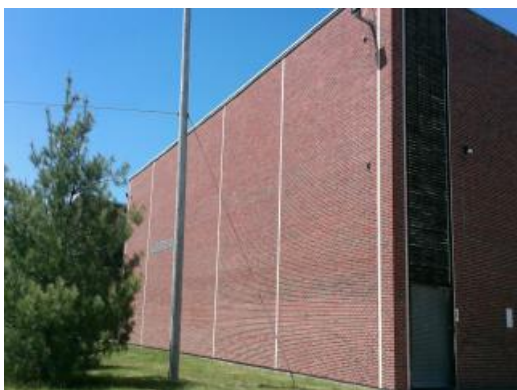
Cranston - Cranston High School West



Science Classroom



West Building Exterior



Exterior Brick



Science Classroom



Original Wood Door



Restroom Finishes



Facility Condition Assessment

Cranston - Cranston High School West



Weathered Roof



9x9 Tile



Worn Vinyl Composition Tile



Damaged Lockers



Southwest Facade



Auditorium Seating



Facility Condition Assessment

Cranston - Cranston High School West



Auditorium Stage



Gymnasium Elevation



Gymnasium



South Elevation Main Entrance



Typical Classroom



Band Classroom



Facility Condition Assessment

Cranston - Cranston High School West



Computer Lab



Auditorium Exterior



East Building Cafeteria



Southwest Elevation



Auditorium Exterior Doors



Chipped Handrail Paint



Facility Condition Assessment

Cranston - Cranston High School West



Wood Louver



Weathered Gym Roofing



Ponding On Roof



Worn And Stained Carpet



Worn And Stained VCT



Damaged Metal Facade



Facility Condition Assessment

Cranston - Cranston High School West



Metal Classroom Building



Damaged Facade



Damaged Facade



Asphalt Parking Pot Holes



Alligatoring Parking Lot



Aged Panelboard



Facility Condition Assessment

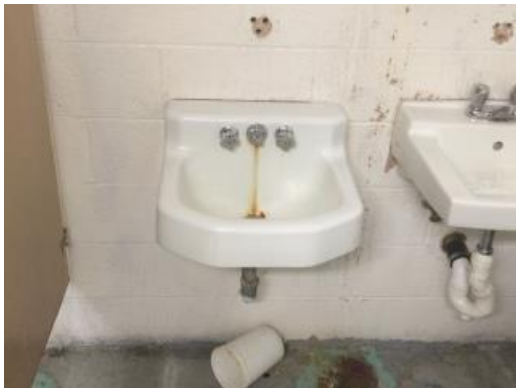
Cranston - Cranston High School West



Aged Electrical Distribution



Aged Shower Fixtures



Rusted Sink



Aged Heating Unit



Aged Panelboard



Aged Urinal



Facility Condition Assessment

Cranston - Cranston High School West



Fume Hood Exhaust Fan Stack



Aged Exhaust Fans