Facility Condition Assessment

Chariho - Chariho Regional High School | *June 2017*

453 Switch Road, Wood River Junction, RI 02894

Introduction

Chariho Regional High School, located at 453 Switch Road in Wood River Junction, Rhode Island, was built in 1959. It comprises 156,676 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.

Chariho Regional High School serves grades 9 - 12, has 63 instructional spaces, and has an enrollment of 1,105. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Chariho Regional High School is 1,252 with a resulting utilization of 88%.

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 Chariho Regional High School the 5-year need is $10,751,294. 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 Chariho Regional 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 Chariho Regional High School campus, identified by discipline and building.

Site

The site level systems for this campus include:

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

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors
03 - Administration Offices:	Vinyl Siding Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
05 - Building-05:	Wood Siding Exterior Wall
	Overhead Exterior Utility Doors
06 - Building-06:	Wood Siding Exterior Wall
	Steel Exterior Entrance Doors
07 - Generator Shed:	CMU Exterior Wall
	Steel Exterior Entrance Doors

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

01 - Main Building:	EPDM Roofing
03 - Administration Offices:	Composition Shingle Roofing
05 - Building-05:	Composition Shingle Roofing
06 - Building-06:	Composition Shingle Roofing
07 - Generator Shed:	Composition Shingle Roofing

Interior

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

01 - Main Building:	Moveable Interior Partition
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Exposed Metal Structure Ceiling

01 - Main Building:	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Adhered Acoustical Ceiling Tiles
	Ceramic Tile Wall
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Vinyl Composition Tile Flooring
	Terrazzo Flooring
	Carpet
	Athletic/Sport Flooring
03 - Administration Offices:	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	Interior Wall Painting
	Concrete Flooring
	Vinyl Composition Tile Flooring
	Carpet
05 - Building-05:	Door Hardware
	Interior Wall Painting
	Wood Flooring
06 - Building-06:	Door Hardware
	Interior Wall Painting
	Concrete Flooring
	Wood Flooring
07 - Generator Shed:	Door Hardware
	CMU Wall
	Concrete Flooring

Mechanical

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

01 - Main Building:	400 MBH Cast Iron Water Boiler
	4,488 MBH Cast Iron Water Boiler
	Finned Wall Radiator
	Steam/Hot Water Heating Unit Vent
	DDC Heating System Controls
	2 Ton Ductless Split System
	5 Ton Package DX Unit
	Window Units
	5 HP Pump

01 - Main Building:	25 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	10,000 CFM Interior AHU
	Kitchen Exhaust Hoods
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	Wall Exhaust Fan
03 - Administration Offices:	Electronic Heating System Controls
	3 Ton Fan Coil - Water Cool/Water Heat
	3 Ton Outside Air Cooled Condenser
	4-Pipe Hydronic Distribution System
	Ductwork
	Roof Exhaust Fan

Plumbing

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

01 - Main Building:	Gas Piping System
03 - Administration Offices:	40 Gallon Electric Water Heater
01 - Main Building:	Domestic Water Piping System
03 - Administration Offices:	Domestic Water Piping System
01 - Main Building:	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
03 - Administration Offices:	Lavatories
	Mop/Service Sinks
	Restroom Lavatories
	Toilets
	Urinals
01 - Main Building:	10,000 Gallon Above Ground Fuel Oil Storage Tank

Electrical

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

01 - Main Building:	1200 kW Emergency Generator
	Automatic Transfer Switch
	1,200 Amp Switchgear
	3,000 Amp Switchgear

01 - Main Building:	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
	Light Fixtures
03 - Administration Offices:	Solar Panels
	Automatic Transfer Switch
	600 Amp Switchgear
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Light Fixtures
06 - Building-06:	Light Fixtures
07 - Generator Shed:	1200 kW Emergency Generator
	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	-	-	-	$28,329	-	$28,329	0.51 %
Roofing	-	-	$4,278	-	-	$4,278	0.08 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	$6,417	-	-	$27,095	$33,512	0.60 %
Interior	-	-	$1,685,159	$1,483,741	-	$3,168,900	56.90 %
Mechanical	-	-	$9,669	$153,901	-	$163,569	2.94 %
Electrical	$2,825	-	$17,405	-	$123,074	$143,304	2.57 %
Plumbing	-	-	-	$29,510	$98,479	$127,989	2.30 %
Fire and Life Safety	$22,817	-	-	-	-	$22,817	0.41 %
Technology	-	-	$1,754,654	-	-	$1,754,654	31.51 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	-	-	$121,499	$121,499	2.18 %
Total	$25,641	$6,417	$3,471,165	$1,695,480	$370,147	$5,568,850	

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

The building systems with the most need include:

Interior	-	$3,168,900
Technology	-	$1,754,654
Mechanical	-	$163,569

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

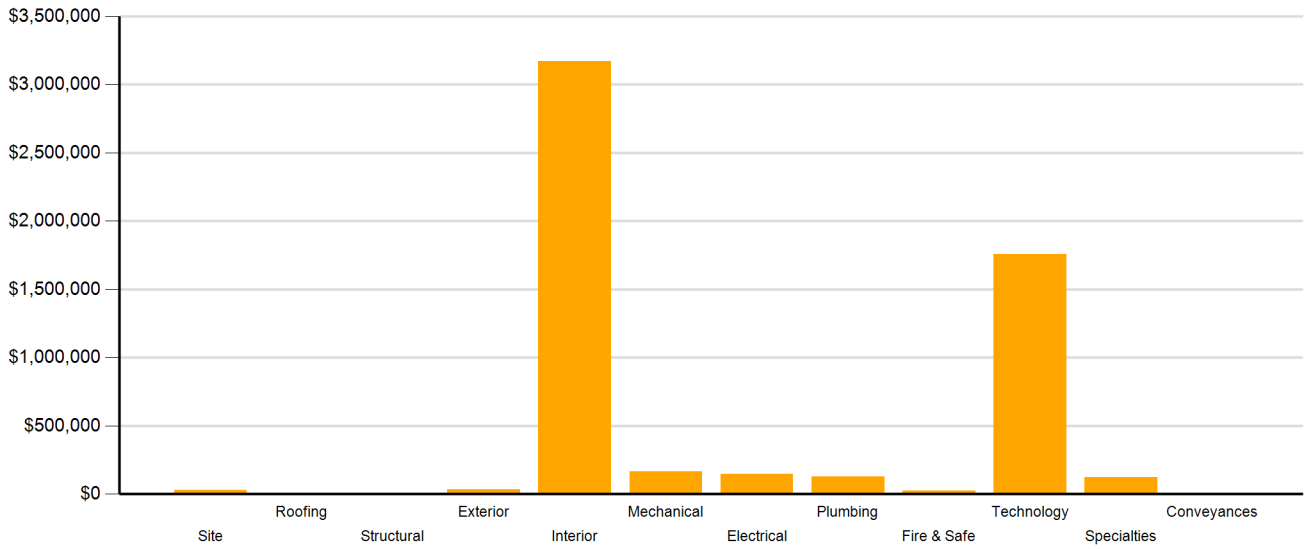

Figure 2: System Deficiencies

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	-	-	$524,371	-	-	$524,371
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	-	$6,417	$1,165,359	$1,459,342	$27,095	$2,658,213
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	$25,641	-	$79,859	$182,230	$343,052	$630,781
Functional Deficiency	-	-	$26,781	-	-	$26,781
Hazardous Material	-	-	-	$53,908	-	$53,908
Technology	-	-	$1,674,795	-	-	$1,674,795
Traffic	-	-	-	-	-	$0
Total	$25,641	$6,417	$3,471,165	$1,695,480	$370,147	$5,568,850

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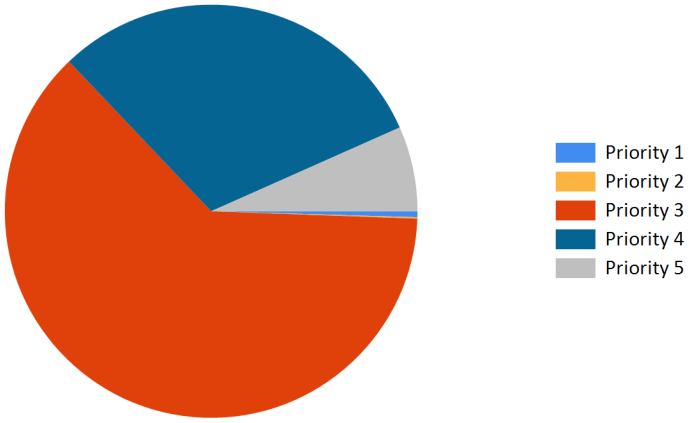

Figure 3: Current deficiencies by priority

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	$28,329	$0	$0	$397,022	$0	$0	$397,022	$425,351
Roofing	$4,278	$0	$0	$0	$0	$0	$0	$4,278
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$33,512	$0	$0	$0	$0	$23,981	$23,981	$57,493
Interior	$3,168,900	$0	$0	$1,204,959	$318,861	$1,290,279	$2,814,099	$5,982,999
Mechanical	$163,569	$0	$0	$272,355	$700,409	$0	$972,764	$1,136,333
Electrical	$143,304	$0	$0	$40,595	$0	$0	$40,595	$183,899
Plumbing	$127,989	$0	$0	$0	$12,066	$18,035	$30,101	$158,090
Fire and Life Safety	$22,817	$0	$0	$0	$0	$0	$0	$22,817
Technology	$1,754,654	$0	$0	$0	$0	$0	$0	$1,754,654
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$121,499	$0	$0	$0	$0	$895,024	$895,024	$1,016,523
Total	**$5,568,850**	**$0**	**$0**	**$1,914,931**	**$1,031,336**	**$2,227,319**	**$5,173,586**	**$10,742,436**

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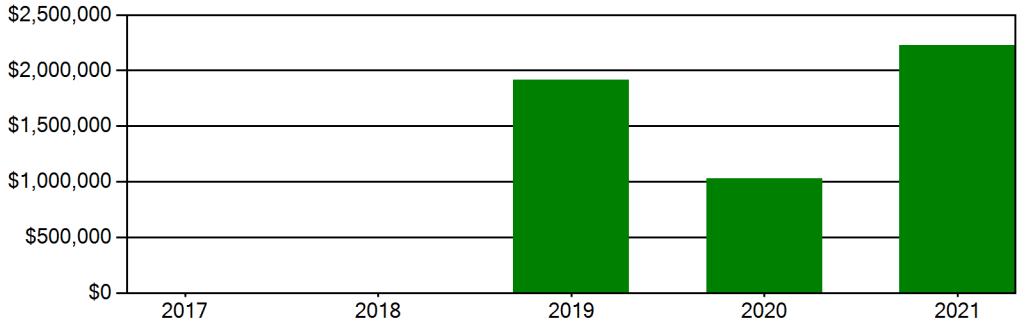
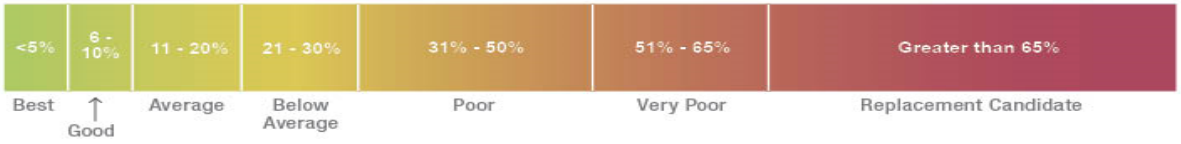


Figure 4: Life Cycle Capital Renewal Forecast

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 $56,403,360. For planning purposes, the total 5-year need at the Chariho Regional High School is $10,751,294 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Chariho Regional High School facility has a 5-year FCI of 19.05%.

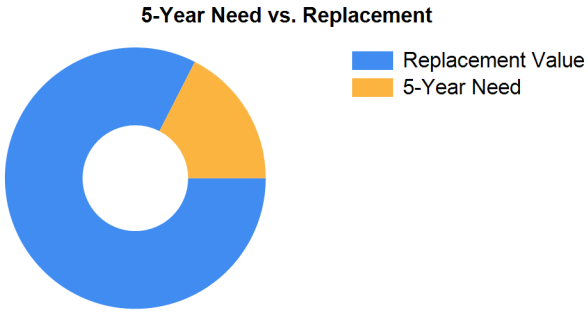


Figure 5: 5-Year FCI

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

Summary of Findings

The Chariho Regional High School comprises 156,676 square feet and was constructed in 1959. Current deficiencies at this school total $5,577,708. Five year capital renewal costs total $5,173,586. The total identified need for the Chariho Regional High School (current deficiencies and 5-year capital renewal costs) is $10,751,294. The 5-year FCI is 19.05%.

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
Chariho Regional High School Totals	156,676	1959	$5,577,708	$5,173,586	$10,751,294	19.05%

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

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

Cost Estimating

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

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

LEA Feedback

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

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28422
Note: Backstops Require Replacement						
	Sub Total for System	**1**	**items**		**$28,329**	
	Sub Total for School and Site Level	**1**	**items**		**$28,329**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Snap-On-Seams Require Repair	Capital Renewal	200	LF	3	$4,278	1736
Note: Ripples or blisters in the roof flashing should be addressed.						
	Sub Total for System	**1**	**items**		**$4,278**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation	Acoustics	63	Ea.	3	$524,371	4654
Note: All classrooms						
Interior CMU Walls Require Repair	Capital Renewal	500	SF	3	$18,158	1732
Note: Cracks in the CMU Block in Classroom B-15 and Cafeteria walls.						
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	116,521	SF	3	$1,052,374	4497
The Vinyl Composition Tile Requires Replacement	Capital Renewal	7,000	SF	3	$80,302	1735
Note: The VCT is separating and should be replaced along the B-Wing.						
Adhered Acoustical Ceiling Tile Requires Replacement	Capital Renewal	2,250	SF	4	$24,399	1733
Note: The ceilings in the F-Wing classrooms should be replaced. These are the Home Economics, Health and Art classrooms.						
Ceiling Grid Requires Replacement	Capital Renewal	116,521	SF	4	$1,381,997	1734
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	16	LF	4	$365	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	900	SF	4	$8,556	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	1	Ea.	4	$285	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - linear feet)	Hazardous Material	30	LF	4	$685	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	4,150	SF	4	$39,454	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	7	Ea.	4	$1,996	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	100	LF	4	$2,282	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas(> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - each)	Hazardous Material	1	Ea.	4	$285	Rollup
	Sub Total for System	**14**	**items**		**$3,135,510**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Component Insulation Deteriorated And Requires Replacement	Functional Deficiency	300	LF	3	$9,669	1740
Note: Pipe insulation in the main mechanical room needs the insulation replaced.						
Lab lacks an appropriate fume hood.	Educational Adequacy	7	Ea.	4	$153,901	Rollup
	Sub Total for System	**2**	**items**		**$163,569**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	2	Ea.	1	$2,825	Rollup
Panel Spacing Cover Plate Is Missing	Capital Renewal	7	Ea.	3	$293	1741
Note: Damaged covers in the old wings of the buildings need to be replaced.						
The Electrical Receptacles Are Inadequate And More are Needed	Functional Deficiency	30	Ea.	3	$17,113	1739
Note: Add additional electrical capacity in the classrooms.						

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Has Insufficient Electrical Outlets	Educational Adequacy	248	Ea.	5	$123,074	Rollup
	Sub Total for System	**4**	**items**		**$143,304**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Refrigerated Water Cooler Requires Replacement	Capital Renewal	4	Ea.	4	$29,510	2421
Room lacks a drinking fountain.	Educational Adequacy	6	Ea.	5	$6,617	Rollup
Room lacks a private shower area.	Educational Adequacy	1	Ea.	5	$10,235	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	54	Ea.	5	$81,627	Rollup
	Sub Total for System	**4**	**items**		**$127,989**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	2	Ea.	1	$22,817	Rollup
	Sub Total for System	**1**	**items**		**$22,817**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	14	Ea.	3	$79,859	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	48	Ea.	3	$23,767	3275
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	62	Ea.	3	$589,432	3278
Technology: Instructional spaces do not have local sound reinforcement.	Technology	62	Ea.	3	$294,716	3277
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	$45,253	3260
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	3251
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$39,216	3271
Technology: Intermediate Telecommunications Room needs M/E improvements.	Technology	1	Ea.	3	$24,338	3255
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$16,732	3265
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$16,732	3269
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3258
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3263
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3268
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3270
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	$6,932	3272
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$21,676	3249
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	90	Ea.	3	$38,503	3253
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	46	Ea.	3	$19,679	3257

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	50	Ea.	3	$21,391	3262
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	50	Ea.	3	$21,391	3267
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	48	Ea.	3	$21,391	3274
Technology: Network system inadequate and/or near end of useful life	Technology	10	Ea.	3	$76,056	3281
Technology: Network system inadequate and/or near end of useful life	Technology	24	Ea.	3	$114,084	3282
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3252
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3254
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3256
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3259
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3261
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3264
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3266
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,952	3273
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	62	Ea.	3	$94,309	3283
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	62	Ea.	3	$94,309	3284
	Sub Total for System	**33**	**items**		**$1,754,654**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks an appropriate refrigerator.	Educational Adequacy	11	Ea.	5	$94,119	Rollup
The room lacks a washer and/or dryer.	Educational Adequacy	2	Ea.	5	$27,380	Rollup
	Sub Total for System	**2**	**items**		**$121,499**	
	Sub Total for Building 01 - Main Building	**61**	**items**		**$5,473,619**	

Building: 03 - Administration Offices

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Exterior Requires Cleaning	Capital Renewal	10,000	SF Wall	5	$27,095	1725
Note: The exterior has pollen and mildew on the vinyl siding and should be power washed.						
	Sub Total for System	**1**	**items**		**$27,095**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Concrete Flooring Requires Replacement	Capital Renewal	1,800	SF	4	$23,436	1724
Note: There are cracks in the concrete floor basement storage area.						
	Sub Total for System	**1**	**items**		**$23,436**	
	Sub Total for Building 03 - Administration Offices	**2**	**items**		**$50,531**	

Building: 05 - Building-05

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Wood Flooring Requires Replacement	Capital Renewal	300	SF	3	$9,954	2456
Note: Wood flooring shows wear and tear and should be replaced.						
	Sub Total for System	**1**	**items**		**$9,954**	
	Sub Total for Building 05 - Building-05	**1**	**items**		**$9,954**	

Building: 07 - Generator Shed

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement	Capital Renewal	1	Door	2	$6,417	2816
	Sub Total for System	**1**	**items**		**$6,417**	
	Sub Total for Building 07 - Generator Shed	**1**	**items**		**$6,417**	
	Total for Campus	**66**	**items**		**$5,568,850**	

Buildings with no reported deficiencies

06 - Building-06

Chariho Regional High School - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Pavement	Asphalt	120	CAR	$397,022	3
Note:	Senior Lot				
	Sub Total for System	**1**	**items**	**$397,022**	
	Sub Total for Building -	**1**	**items**	**$397,022**	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Acoustical Suspended Ceilings	Ceiling Exposed Metal Structure	26,880	SF	$306,657	3
Wall Painting and Coating	Painting/Staining (Bldg SF)	135,455	SF	$894,998	3
Note:	The majority of the interior is painted on a regular cycle of every 2 to 3 years.				
Carpeting	Carpet	14,565	SF	$316,879	4
Resilient Flooring	Vinyl Composition Tile Flooring	111,016	SF	$1,273,547	5
	Sub Total for System	**4**	**items**	**$2,792,081**	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Window Units	10	Ea.	$33,388	3
HVAC Air Distribution	AHU 10,000 CFM Interior	2	Ea.	$238,967	3
Heat Generation	Boiler - Cast Iron - Water (4488 MBH)	2	Ea.	$531,261	4
Decentralized Heating Equipment	Heating Unit Vent - Steam/Hot water	10	Ea.	$169,148	4
	Sub Total for System	**4**	**items**	**$972,765**	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Power Distribution	Panelboard - 120/208 225A	7	Ea.	$40,595	3
	Sub Total for System	**1**	**items**	**$40,595**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Mop/Service Sinks	7	Ea.	$18,035	5
	Sub Total for System	**1**	**items**	**$18,035**	

Specialties

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Casework	Fixed Cabinetry	80	Room	$895,024	5
	Sub Total for System	**1**	**items**	**$895,024**	
	Sub Total for Building 01 - Main Building	**11**	**items**	**$4,718,499**	

Building: 03 - Administration Offices

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings	4,000	SF	$16,732	5
	Sub Total for System	**1**	**items**	**$16,732**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Toilets	2	Ea.	$5,704	4
Plumbing Fixtures	Restroom Lavatories	2	Ea.	$6,362	4
	Sub Total for System	**2**	**items**	**$12,066**	
	Sub Total for Building 03 - Administration Offices	**3**	**items**	**$28,799**	

Building: 05 - Building-05

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	Wood Siding - Bldg SF basis	300	SF	$8,993	5
	Sub Total for System	**1**	**items**	**$8,993**	

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		300	SF	$1,982	4
		Sub Total for System	**1**	**items**	**$1,982**	
		Sub Total for Building 05 - Building-05	**2**	**items**	**$10,975**	

Building: 06 - Building-06

Exterior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Exterior Wall Veneer	Wood Siding - Bldg SF basis		500	SF	$14,988	5
		Sub Total for System	**1**	**items**	**$14,988**	

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		500	SF	$3,304	3
		Sub Total for System	**1**	**items**	**$3,304**	
		Sub Total for Building 06 - Building-06	**2**	**items**	**$18,291**	
		Total for: Chariho Regional High School	**19**	**items**	**$5,173,586**	

Supporting Photos

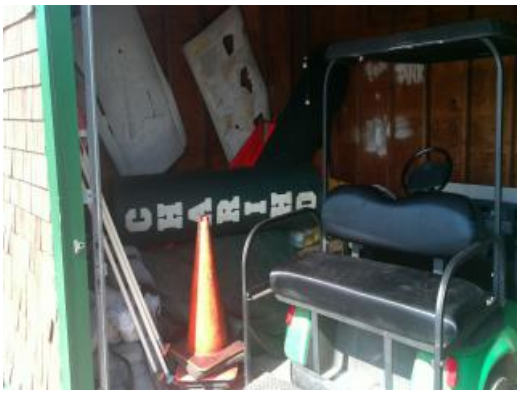
Site Aerial

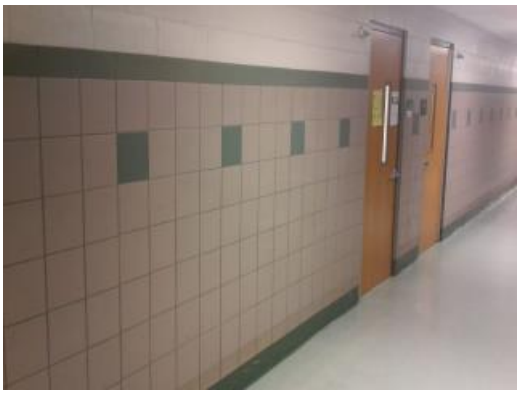
Stained Ceiling Tiles

Stained Ceiling Tiles

Building 5 Interior


Typical Door Hardware


Building 5 Interior Storage

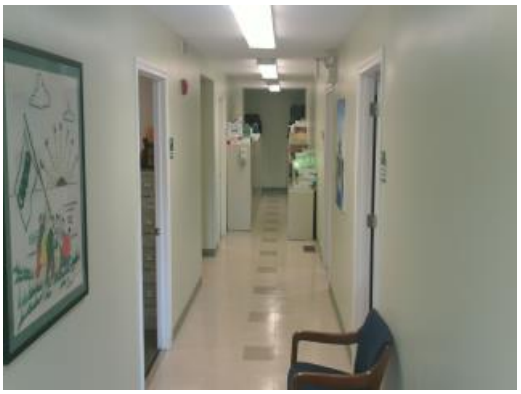

Hallway Finishes


Roof Exhaust Fans


Greenhouse


Admin Building Mildew And Pollen Stained Exterior

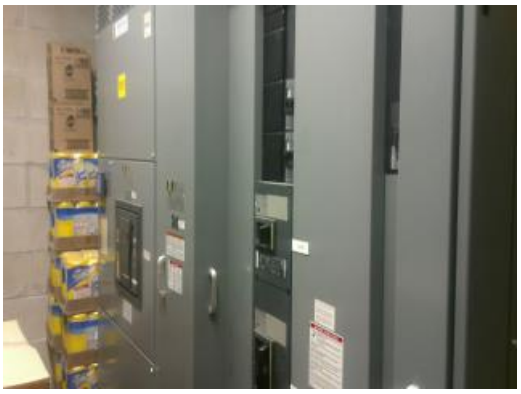
Corridor Panelboard



Admin Building North Hallway

Plaque

Library



Main Distribution Panel

Typical Lavatories

Building 6 Exterior


Building 6 Exposed Wood Ceiling


Hot Water Heater


Generator Shed


Building 5 Plywood Floor


Play Field


Ripples In The Membrane Flashing


Admin Building Basement Exterior Doors


Building 5 Overhead Door


Admin Building Cracked Concrete Floor


Admin Building Main Entrance


Admin Building Typical Office


Concrete Walkways


Elevation


Separating VCT


Football Field


Science Cabinetry


Fuel Oil Storage Tank


Building 5 Exterior


Building 6 Wood Floor


Rooftop Unit


Cracked CMU