Revision Date - 09/24/2021

FACILITY CONDITION ASSESSMENT

Princeton Elementary School | **2021**

Executive Summary

Princeton Elementary School is located at 1321 S. Deshon Rd in Lithonia, GA. It comprises 101,822 gross square feet. At the time of the assessment the oldest building was 13 years old.

The findings contained within this report are the result of an assessment of building systems performed by building professionals experienced in disciplines including architecture, mechanical, plumbing and electrical. Only those systems that were identified as having either an associated deficiency or life cycle event within a 10-year window is contained within this report. The full list of each school's systems that are present along with the associated priorities can be found in the flat file data grids submitted to Dekalb County. The projected replacement year of those assets within each system is also included within this table.The total current deficiencies for this site, in 2020 construction cost dollars, are estimated at $679,258. A ten-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Princeton Elementary School the ten-year need is $13,821,062.

For planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined to calculate a Facility Condition Index (FCI). 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. After the 5-year FCI was calculated, this value was subtracted from 100 to calculate the FCA Score in a similar fashion to report cards.

The Princeton Elementary School facility has a FCA score of 89.97% which is considered "Average".

Summary of Findings

The table below summarizes the condition findings at Princeton Elementary School.

Table 1: Facility Condition by Building

Number	Building Name	Current Deficiencies	5-Year Life Cycle Cost	Yrs 6-10 Life Cycle Cost	Total 5 Yr Need (Yr 1-5 + Current Defs)	Total 10 Yr Need (Yr 1-10 + Current Defs)	Replacement Cost	FCA Score
Exterior Site								
	Exterior Site	$47,003	$0	$975,706	$47,003	$1,022,709		
Permanent Building(s)								
2010	Building 2010	$632,255	$2,153,775	$10,012,323	$2,786,030	$12,798,353	$28,232,180	90.13%
	Sub Total for Permanent Building(s):	*$632,255*	*$2,153,775*	*$10,012,323*	*$2,786,030*	*$12,798,353*	*$28,232,184*	
	Total for Site:	$679,258	$2,153,775	$10,988,029	$2,833,033	$13,821,062	$28,232,184	89.97%

Note 1: Sitework improvements are proportionally incorporated into the building CRV and used to calulate the overall FCA Score.

Note 2: Aerial map including building number, gross SF, and year built of each building on the site is found on Page 3.

Aerial Images

Approach and Methodology

The facility condition assessment includes a visual assessment of building systems that are readily available during a facility walk-through. The standard process does not reflect invasive, destructive assessment methods that would require special equipment, testing or scheduled power outages. The assessment was accomplished with a view toward identifying significant maintenance and repair deficiencies that need correction. For the purposes of this assessment, deficient conditions captured were limited to those items that did not qualify as routine maintenance repairs. Copies of previous reports and other documentation that were relevant to the inspection were utilized if made available in the process. Additionally, feedback from appropriate personnel to provide background information relative to specific building operations, function, equipment conditions, past improvements and planned upgrades were incorporated into the results if made available to the teams while on site. 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, deferred maintenance, 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 the ages of a building's systems to forecast system replacement as they reach the end of serviceable life. Estimated Useful Lives were determined based on a combination of our (Jacobs) professional experience, RS Means, and from industry standard tables (BOMA, ASHRAE). 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.

All members of the survey team recorded existing conditions, identified problems and deficiencies, and documented corrective action and quantities. The team took digital photos at each site to better identify significant deficiencies.

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 site'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.

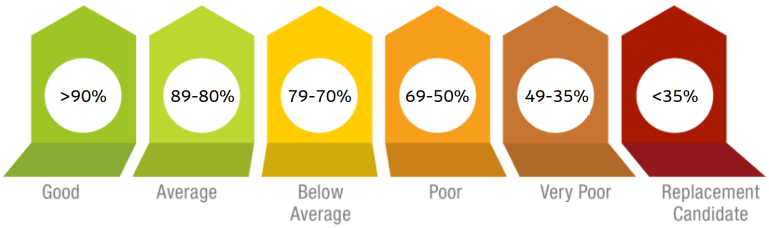
Priority 3 – Short-Term Conditions: Deficiencies that are necessary to the site's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and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

Facility Condition Assessment(FCA) Score

Facility Condition Assessment (FCA) Scores are assigned after the Facility Condition Index (FCI) is calculated. 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 sites. The FCI is derived by dividing the total repair cost, including site-related repairs, by the total replacement cost of all buildings. It should be noted that costs in the New Construction category are not included in the FCI calculation. **In an effort to match the report card metrics, the FCI is subtracted from 100 to assign the FCA Score. A facility with a lower FCA Score has more need, or higher priority, than a facility with a higher FCA Score.**



The replacement value represents the estimated cost of replacing the current building with another building of like size, based on 2021 estimated cost of construction in the DeKalb County area. The estimated replacement cost for this facility is $28,232,184. For planning purposes, the total 5-year need at the Princeton Elementary School is $2,833,033 (Life Cycle Years 1-5 plus the current FCI deficiency cost).

The Princeton Elementary School facility has an FCA Score of 89.97%. which is considered "Average".

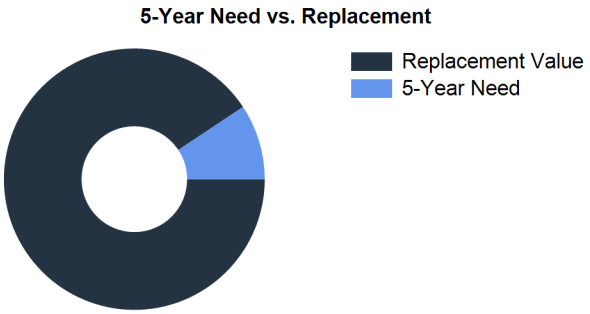


Figure 1: 5-Year FCI

The following table summarizes this site's current deficiencies by building system and priority.

Table 2: System by Priority (Site & Permanent Buildings)

	Priority						
System	**1**	**2**	**3**	**4**	**5**	**Total**	**% of Total**
Site	$0	$0	$42,780	$737	$4,128	$47,644	7.01 %
Roofing	$0	$0	$393	$584	$0	$978	0.14 %
Structural	$12,137	$0	$0	$0	$0	$12,137	1.79 %
Exterior	$0	$338	$0	$0	$28,171	$28,508	4.20 %
Interior	$0	$0	$0	$0	$0	$0	0.00 %
Mechanical	$0	$272,532	$203,913	$0	$0	$476,445	70.14 %
Electrical	$0	$0	$98,758	$0	$0	$98,758	14.54 %
Plumbing	$0	$0	$14,788	$0	$0	$14,788	2.18 %
Fire and Life Safety	$0	$0	$0	$0	$0	$0	0.00 %
Conveyances	$0	$0	$0	$0	$0	$0	0.00 %
Specialties	$0	$0	$0	$0	$0	$0	0.00 %
Total:	$12,137	$272,870	$360,632	$1,321	$32,298	$679,258	

The building systems at the site with the most need include:

Mechanical	-	$476,445
Electrical	-	$98,758
Site	-	$47,644

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

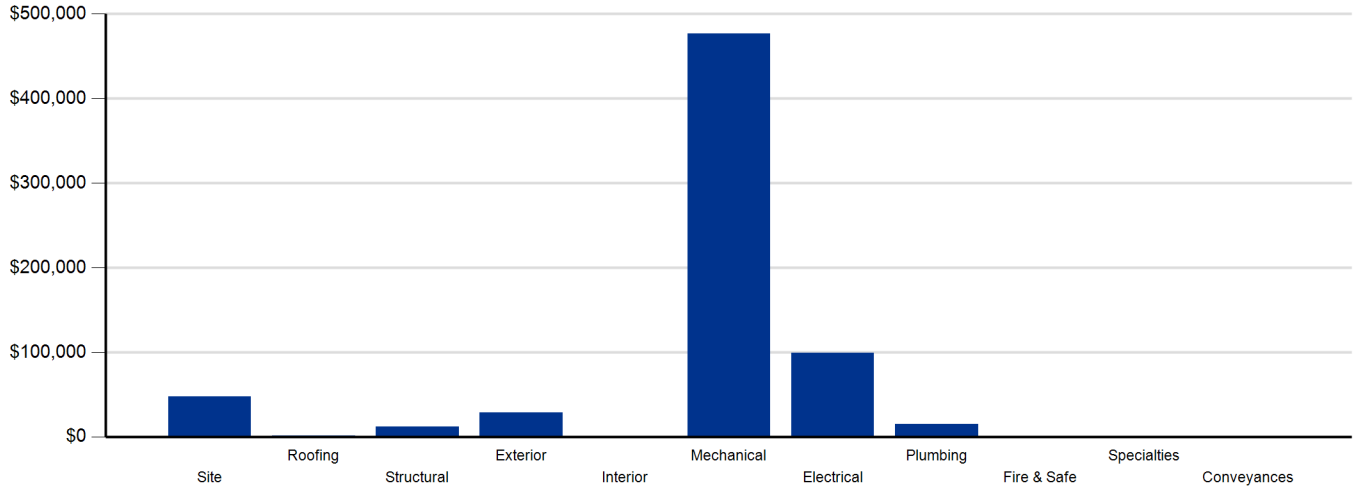


Figure 2: System Deficiencies

Life Cycle Capital Renewal Forecast

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

However, 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 ten-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 tables show ten-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 3a: Capital Renewal Forecast (Yrs 1-5)

	Life Cycle Capital Renewal Projections					
System	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Total 1-5
Site	$0	$0	$0	$0	$0	$0
Roofing	$0	$0	$0	$31,091	$0	$31,091
Exterior	$0	$0	$0	$0	$0	$0
Interior	$0	$0	$0	$0	$0	$0
Mechanical	$0	$0	$0	$111,842	$1,416,914	$1,528,756
Electrical	$0	$0	$0	$0	$0	$0
Plumbing	$0	$0	$0	$0	$0	$0
Fire and Life Safety	$0	$593,928	$0	$0	$0	$593,928
Conveyances	$0	$0	$0	$0	$0	$0
Specialties	$0	$0	$0	$0	$0	$0
Total	**$0**	**$593,928**	**$0**	**$142,933**	**$1,416,914**	**$2,153,775**

Table 3b: Capital Renewal Forecast (Yrs 6-10)

		Life Cycle Capital Renewal Projections						
System	Total 1-5	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Total 6-10	Total 1-10
Site	$0	$0	$0	$0	$0	$697,209	$697,209	$697,209
Roofing	$31,091	$0	$0	$0	$0	$2,514,597	$2,514,597	$2,545,688
Exterior	$0	$0	$0	$0	$0	$532,720	$532,720	$532,720
Interior	$0	$289,423	$105,511	$711,496	$0	$73,206	$1,179,636	$1,179,636
Mechanical	$1,528,756	$0	$0	$147,710	$0	$1,097,389	$1,245,100	$2,773,856
Electrical	$0	$80,915	$4,817	$0	$0	$2,465,782	$2,551,515	$2,551,515
Plumbing	$0	$0	$0	$28,919	$0	$951,804	$980,723	$980,723
Fire and Life Safety	$593,928	$1,276,441	$0	$0	$0	$0	$1,276,441	$1,870,368
Conveyances	$0	$0	$0	$0	$0	$10,089	$10,089	$10,089
Specialties	$0	$0	$0	$0	$0	$0	$0	$0
Total	**$2,153,775**	**$1,646,778**	**$110,328**	**$888,126**	**$0**	**$8,342,797**	**$10,988,029**	**$13,141,804**

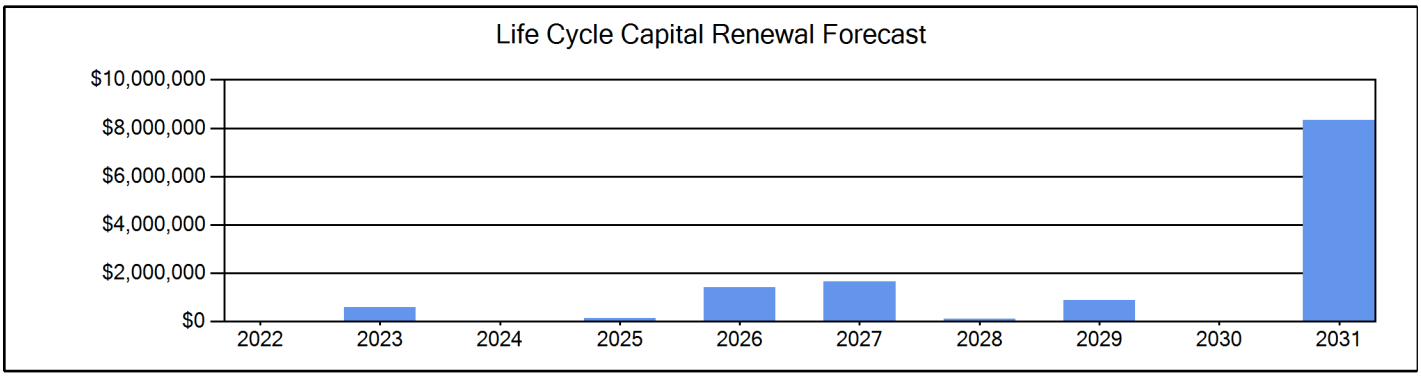


Figure 3: Ten Year Capital Renewal Forecast

Summary of High Priority Deficiencies

Priority 1 - Mission Critical Concerns		Cost
Evidence of Structural Deficiency		$12,137
	Total for Priority 1	**$12,137**

Priority 2 - Indirect Impact to Educational Mission		Cost
Brick Exterior Replacement (Bldg SF)		$132
Dryvit Exterior Repair		$206
Exterior Metal Cooling Tower Replacement		$54,369
Heat Pump HVAC Component Replacement		$172,591
Package Roof Top Unit Replacement		$45,572
	Total for Priority 2	**$272,870**

Deficiency Summary

(Items below detail the totals referenced in Table 2)

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Driveways Replacement	Capital Renewal	10	SF	3	$117	530
Note: Repair 10 Feet Of Broken Curb At Dumpster And Compacter						
Location: Front Of Building						
Playground Equipment Replacement	Capital Renewal	2	Ea.	3	$42,022	10569
Fencing Replacement (8' - 10' high Chain Link Fence)	Capital Renewal	10	LF	4	$737	529
Note: Tree On West Side Fell On Fence, Repair Fence, Remove 2 Fallen Trees						
Paving Restriping	Deferred Maintenance	121	CAR	5	$3,783	531
Note: Faded						
Location: Front Lot						
Tree Trimming	Deferred Maintenance	2	Ea.	5	$345	532
Note: Two Fallen Trees, Remove Both Trees, One Tree On Fence, Repair 10' Of Fence						
Location: West Side Of Site; At Retention Basin With Concrete Walls						
	Sub Total for System	**5**	**items**		**$47,003**	
	Sub Total for School and Site Level	**5**	**items**		**$47,003**	

Building: 2010 - Building 2010

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Car Accessible Parking Spaces Restiriping	ADA Compliance	6	Ea.	3	$641	963
Location: Front Lots						
	Sub Total for System	**1**	**items**		**$641**	

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Roof Drain Cleaning	Deferred Maintenance	6	Ea.	3	$393	538
Note: Clean Gutters At 3 Stair Towers						
Location: Back Of Classroom Wings						
Splash Block Replacement	Deferred Maintenance	10	Ea.	4	$584	965
Note: Replace Splash Blocks On Roof						
	Sub Total for System	**2**	**items**		**$978**	

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Evidence of Structural Deficiency	Capital Renewal	1	Ea.	1	$12,137	10696
	Sub Total for System	**1**	**items**		**$12,137**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Brick Exterior Replacement (Bldg SF)	Capital Renewal	5	SF	2	$132	534
Note: Replace Missing Bricks At Front Entry Box Planters						
Dryvit Exterior Repair	Deferred Maintenance	30	SF Wall	2	$206	535
Note: Cracks At Front						
Exterior Cleaning	Deferred Maintenance	7,400	SF Wall	5	$26,945	537
Note: Wash Brick Stains						
Location: Classroom Wings, Front 4' Tall Wall, Front Covered Walkway Brick Columns						

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Exterior Painting	Capital Renewal	1,000	SF Wall	5	$1,226	536
Note: Paint						
Location: Front Entryway Outside Steel Beams						
	Sub Total for System	**4**	**items**		**$28,508**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Exterior Metal Cooling Tower Replacement	Capital Renewal	1	Ea.	2	$54,369	10709
Heat Pump HVAC Component Replacement	Capital Renewal	4	Ea.	2	$172,591	966
Note: RLT, Original Units						
Package Roof Top Unit Replacement	Capital Renewal	2	Ea.	2	$45,572	1418
Note: Not Working						
Location: Roof						
Testing And Balancing	Deferred Maintenance	101,822	SF	3	$203,913	533
	Sub Total for System	**4**	**items**		**$476,445**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Canopy Lighting Replacement	Capital Renewal	1	Ea.	3	$1,958	540
Note: Yellowed Lens						
Location: Exterior By Cafeteria						
Exterior Mounted Building Lighting Replacement	Capital Renewal	26	Ea.	3	$22,042	967
Note: Beyond Useful Life						
Location: Building Perimeter						
Lightning Protection System Installation	Functional Deficiency	101,822	SF	3	$74,757	539
Note: Not Installed						
	Sub Total for System	**3**	**items**		**$98,758**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Existing Lavatory/Sink Is Not ADA Compliant	ADA Compliance	8	Ea.	3	$14,788	964
Note: Add Insulation To Pipes						
	Sub Total for System	**1**	**items**		**$14,788**	
	Sub Total for Building 2010 - Building 2010	**16**	**items**		**$632,255**	
	Total for Campus	**21**	**items**		**$679,258**	

Life Cycle Summary Yrs 1-10

(Items below detail the totals referenced in Tables 3a & 3b)

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Pavement	Asphalt	3	121	CAR	$221,805	10
Roadway Pavement	Asphalt Driveways	3	55,600	SF	$451,744	10
Roadway Pavement	Concrete Driveways	3	1,500	SF	$23,660	10
		Sub Total for System	**3**	**items**	**$697,209**	

Roofing

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Canopy Roofing	Aluminum panels	4	4,350	SF	$278,497	10
		Sub Total for System	**1**	**items**	**$278,497**	
		Sub Total for Building -	**4**	**items**	**$975,706**	

Building: 2010 - Building 2010

Roofing

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Steep Slope Roofing	Composition Shingle	2	1,600	SF	$31,091	4
Low-Slope Roofing	Built-Up Roofing (BUR)	2	64,000	SF	$2,236,100	10
		Sub Total for System	**2**	**items**	**$2,267,191**	

Exterior

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Exterior Operating Windows	Aluminum - Windows per SF	2	2,424	SF	$325,761	10
Exterior Operating Windows	Aluminum - Windows per SF	2	396	SF	$53,218	10
Exterior Operating Windows	Aluminum - Windows per SF	2	1,144	SF	$153,741	10
		Sub Total for System	**3**	**items**	**$532,720**	

Interior

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Carpeting	Carpet	4	20,364	SF	$289,423	6
Note:	offices					
Wall Painting and Coating	Painting/Staining (Bldg SF)	5	20,364	SF	$105,511	7
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	4	86,549	SF	$602,806	8
Suspended Plaster and	Painted ceilings	5	5,091	SF	$12,627	8
Compartments and Cubicles	Toilet Partitions	4	40	Stall	$96,063	8
Interior Swinging Doors	Storefront door (Aluminum/Glass)	3	16	Door	$73,206	10
		Sub Total for System	**6**	**items**	**$1,179,636**	

Mechanical

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Ductless Split System (2 Ton)	2	2	Ea.	$10,046	4
HVAC Air Distribution	Roof Top Unit - DX Gas (5 Ton)	2	3	Ea.	$50,504	4
HVAC Air Distribution	Roof Top Unit - DX Gas (10 Ton)	2	2	Ea.	$51,292	4
HVAC Air Distribution	Ductwork (Bldg.SF)	3	101,822	SF	$1,416,914	5
Heat Generation	Boiler - Steel Tube (2400 MBH)	3	1	Ea.	$119,273	8
Decentralized Heating Equipment	Unit Heater Electric (5 KW)	3	5	Ea.	$7,737	8
Decentralized Heating Equipment	Unit Heater Electric (3 KW)	3	2	Ea.	$2,235	8
Facility Hydronic Distribution	Pump - 1HP or Less (Ea.)	4	1	Ea.	$5,137	8
Exhaust Air	Kitchen Exhaust Hoods	3	1	Ea.	$13,329	8
Heat Generation	Heat Exchanger - Water to Water (34 GPM)	2	1	Ea.	$14,370	10
Facility Hydronic Distribution	Pump - 50HP - (Ea.)	4	2	Ea.	$145,824	10
Facility Hydronic Distribution	Pump- 10HP (Ea.)	4	2	Ea.	$29,214	10
Central Cooling	Cooling Tower - Metal (300 Tons)	2	1	Ea.	$73,067	10
Facility Hydronic Distribution	2-Pipe System (Cold)	3	101,822	SF	$230,053	10
Facility Hydronic Distribution	2-Pipe Steam System (Hot)	3	101,822	SF	$547,294	10
Exhaust Air	Roof Exhaust Fan - Small	3	2	Ea.	$4,952	10
Exhaust Air	Roof Exhaust Fan - Large	3	5	Ea.	$50,769	10

Mechanical

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Exhaust Air	Interior Ceiling Exhaust Fan	3	3	Ea.	$1,845	10
		Sub Total for System	**18**	**items**	**$2,773,856**	

Electrical

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Audio-Video Systems	PA Communications No Head Unit (Bldg SF)	2	101,822	SF	$80,915	6
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	4	2	Ea.	$4,817	7
Note:	main entrance					
Packaged Generator Assemblies	Emergency Generator (150 KW)	2	1	Ea.	$106,476	10
Note:	exterior fence area					
Lighting Fixtures	Light Fixtures (Bldg SF)	4	101,822	SF	$2,359,306	10
		Sub Total for System	**4**	**items**	**$2,551,515**	

Plumbing

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Electric - 52 gallon	2	4	Ea.	$12,786	8
Domestic Water Equipment	Water Heater - Gas - 100 Gallon	2	1	Ea.	$7,603	8
Plumbing Fixtures	Sink - Service / Mop Sink	5	9	Ea.	$8,530	8
Plumbing Fixtures	Classroom Lavatory	4	79	Ea.	$255,981	10
Plumbing Fixtures	Restroom Lavatory	3	47	Ea.	$161,306	10
Plumbing Fixtures	Toilets	3	72	Ea.	$460,266	10
Plumbing Fixtures	Urinals	3	19	Ea.	$32,511	10
Plumbing Fixtures	Refrigerated Drinking Fountain	4	15	Ea.	$41,741	10
		Sub Total for System	**8**	**items**	**$980,723**	

Fire and Life Safety

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	1	101,822	SF	$593,928	2
Security System Component	Security Alarm System	1	101,822	SF	$1,276,441	6
		Sub Total for System	**2**	**items**	**$1,870,368**	

Conveyances

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Elevators	Passenger elevator cab finishes	4	1	Ea.	$10,089	10
		Sub Total for System	**1**	**items**	**$10,089**	
		Sub Total for Building 2010 - Building 2010	**44**	**items**	**$12,166,098**	
		Total for: Princeton Elementary School	**48**	**items**	**$13,141,804**	

Supporting Photos

OAU-1, Heat Pump Roof Top Unit, 30 Ton, Rls, Typ. Of 4

RTU 7 & 5 3 Ton Units

RTU 6 , 4 Ton Unit Replace Unit Not Working

RTU 4 , Replace Unit

RTU 9 , Replace, Unit Beyond Useful Life

ADA Drain Insulation

ADA Need Repainting

Need Structural Evaluation Of Cooling Tower Support Beams