

# FACILITY CONDITION ASSESSMENT



**BUREAU  
VERITAS**

*prepared for*

**Richmond Public Schools**  
301 North Ninth Street  
Richmond, VA 23219



Broad Rock Elementary School  
4615 Ferguson Lane  
Richmond, VA 23224

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**ON SITE DATE:**

*April 22-23, 2024*

**Bureau Veritas**

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# 1. Executive Summary

## Campus Overview and Assessment Details

General Information	
<b>Property Type</b>	Elementary School
<b>Number of Buildings</b>	1
<b>Main Address</b>	4615 Ferguson Lane, Richmond, VA 23234
<b>Site Developed</b>	2013
<b>Outside Occupants / Leased Spaces</b>	Broad Rock Community Center
<b>Date(s) of Visit</b>	April 22-23, 2024
<b>Management Point of Contact</b>	Daniel Alu Project Engineer 800 Yard Street, Suite 115 Columbus, Ohio 43212 Mobile: 614.949.1355 <a href="mailto:daniel.alu@gofmx.com">daniel.alu@gofmx.com</a>
<b>On-site Point of Contact (POC)</b>	Ronald (Bobby) Hathaway Jr., Director of Facilities Department of Facility Services 1461 A Commerce Road Richmond, VA 23234 Office: (804) 780-6251 Mobile: (804) 325-0740 Email: <a href="mailto:Rhathawa@rvaschools.net">Rhathawa@rvaschools.net</a>
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<b>AssetCalc Link</b>	Full dataset for this assessment can be found at: <a href="https://www.assetcalc.net/">https://www.assetcalc.net/</a>

## Significant/Systemic Findings and Deficiencies

### Historical Summary

Broad Rock Elementary School was constructed in 2013. The occupants of the facility are administration, teachers, and students used for education and community center activity. There are three modular buildings that are located on site to supplement as additional classrooms and cafeteria space.

### Architectural

The school's architecture and façade consists of brick, hard plank siding and curtain wall system. The structure shows no evidence of excessive settlement. The windows are aluminum and the exterior doors consist of aluminum and steel. The roofing consists of a single ply TPO membrane and metal finish. Evidence of roof leaks was not reported or observed during the on-site visit. There is ponding and standing water observed on the library roof. The interior finishes are all original and maintained. Typical lifecycle based interior and exterior finish replacements are anticipated and budgeted for the reserve term.

### Mechanical, Electrical, Plumbing and Fire (MEPF)

The HVAC system consists of a central boiler and chiller with a cooling tower feeding terminal units throughout the building. The rooftop packaged units serve select spaces. All HVAC components are original and operate as part of building automation system. The HVAC system reportedly struggles to maintain consistent temperatures on all three levels and variation can be as high as seven degrees. HVAC rebalancing adjustments should be made as needed. Some component lifecycle replacements are anticipated in the near term. The electrical system consists of a switchboard, transformers, and distribution panels. There is a generator present for emergency power. There is one electronic traction passenger elevator that serves both floors. Typical commercial plumbing fixtures are utilized in the restrooms. Electric water heaters with storage tank supply the hot waters. Plumbing leaks and water pressure problems were not observed or reported. Fire suppression consists of a sprinkler system that serves the entire building. The fire alarm control panel along with exit lights, emergency lighting, alarms, and fire extinguishers protect the entirety of the facility.

### Site

Overall, the site is well maintained with moderate landscaping features and irrigation is not present. There are three modular buildings on site. There are building mounted and pole lighting that appear to be adequate for the site. Asphalt parking lot serves the facility found to be in good condition. The play areas have several play structures, asphalt sports surfaces, and open playfields.

### Recommended Additional Studies

See the Systems Summary tables in the latter sections of this report for recommended additional studies associated with accessibility for Broad Rock Elementary School.



## Facility Condition Index (FCI)

One of the major goals of the FCA is to calculate the Facility Condition Index (FCI), which provides a theoretical objective indication of a facility’s overall condition. The FCI is defined as the ratio of the cost of current needs divided by the current replacement value (CRV) of the facility. In this report, each building is considered as a separate facility. The chart below presents the industry standard ranges and cut-off points.

FCI Ranges and Description	
<b>0 – 5%</b>	In new or well-maintained condition, with little or no visual evidence of wear or
<b>5 – 10%</b>	Subjected to wear but is still in a serviceable and functioning condition.
<b>10 – 30%</b>	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
<b>30% and above</b>	Has reached the end of its useful or serviceable life. Renewal is now necessary.

The deficiencies and lifecycle needs identified in this assessment provide the basis for a portfolio-wide capital improvement funding strategy. In addition to the current FCI, extended FCI’s have been developed to provide owners the intelligence needed to plan and budget for the “keep-up costs” for their facilities. As such the 3-year, 5-year, and 10-year FCI’s are calculated by dividing the anticipated needs of those respective time periods by current replacement value. As a final point, the FCI’s ultimately provide more value when used to compare facilities across a portfolio instead of being over-analyzed and scrutinized as stand-alone mathematical values. The table below presents the current, 3-year, 5-year, and 10-year FCI’s for each facility:

FCI Analysis   Broad Rock Elementary School(2013)			
	Replacement Value	Total SF	Cost/SF
	\$ 27,243,000	90,810	\$ 400
	Est Reserve Cost		FCI
<b>Current</b>	\$ 3,300		<b>0.0 %</b>
3-Year	\$ 99,500		0.4 %
5-Year	\$ 1,514,400		5.6 %
10-Year	\$ 6,314,800		23.2 %

Immediate Needs

Facility/Building	Total Items	Total Cost
Broad Rock Elementary School / Main Building	3	\$3,300
<b>Total</b>	<b>3</b>	<b>\$3,300</b>

Main Building

ID	Location Description	UF Code	Description	Condition	Plan Type	Cost
7541242	Roof	B3010	Roofing, any type, Repairs per Man-Day, Repair	Poor	Performance/Integrity	\$1,100
7636142	Restrooms	Y1050	ADA Restrooms, Lavatory, Pipe Wraps/Insulation, Install	NA	Accessibility	\$200
7636141	Staff Lounge	Y1060	ADA Kitchen & Laundry Areas, Sink/Counter/Maneuverability, Minor Reconfiguration, Modify	NA	Accessibility	\$2,000
<b>Total (3 items)</b>						<b>\$3,300</b>



Key Findings



**Exterior Walls in Poor condition.**

Fiber Cement Siding  
Main Building Broad Rock Elementary School  
Building Exterior

Uniformat Code: B2010  
Recommendation: **Replace in 2025**

Priority Score: **89.8**

Plan Type:  
Performance/Integrity

Cost Estimate: \$3,100

\$\$\$\$

Siding facing playfield is impact damaged. - AssetCALC ID: 7541236



**Roofing in Poor condition.**

any type, Repairs per Man-Day  
Main Building Broad Rock Elementary School  
Roof

Uniformat Code: B3010  
Recommendation: **Repair in 2024**

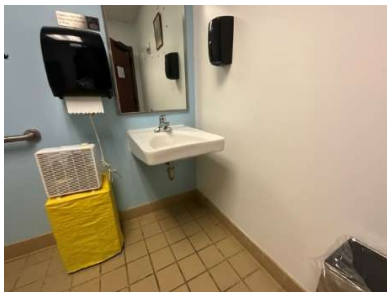
Priority Score: **88.9**

Plan Type:  
Performance/Integrity

Cost Estimate: \$1,100

\$\$\$\$

Improve drainage due to excessive standing water on roof. - AssetCALC ID: 7541242



**ADA Restrooms**

Lavatory, Pipe Wraps/Insulation  
Main Building Broad Rock Elementary School  
Restrooms

Uniformat Code: Y1050  
Recommendation: **Install in 2024**

Priority Score: **63.9**

Plan Type: Accessibility

Cost Estimate: \$200

\$\$\$\$

Missing pipe insulation - AssetCALC ID: 7636142



**ADA Kitchen & Laundry Areas**

Sink/Counter/Maneuverability, Minor  
Reconfiguration  
Main Building Broad Rock Elementary School  
Staff Lounge

Uniformat Code: Y1060  
Recommendation: **Modify in 2024**

Priority Score: **63.9**

Plan Type: Accessibility

Cost Estimate: \$2,000

\$\$\$\$

Knee clearance for sink - AssetCALC ID: 7636141



### HVAC System

Partial System Renovation/Upgrade, Medium Complexity  
Main Building Broad Rock Elementary School  
HVAC

Uniformat Code: D3050  
Recommendation: **Replace in 2029**

Priority Score: **54.5**

Plan Type:  
Retrofit/Adaptation

Cost Estimate: \$840,000

**\$\$\$\$**

Chronic HVAC problems reported with maintaining building comfort, losing compressors, refrigerant, drives, etc. - AssetCALC ID: 8337540

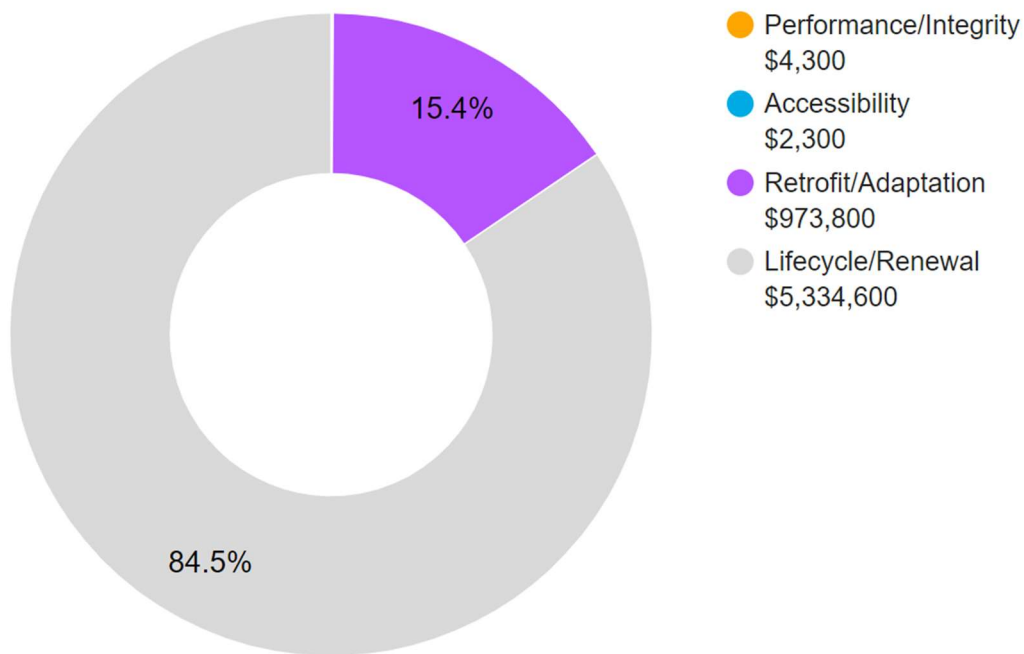
## Plan Types

Each line item in the cost database is assigned a Plan Type, which is the primary reason or rationale for the recommended replacement, repair, or other corrective action. This is the “why” part of the equation. A cost or line item may commonly have more than one applicable Plan Type; however, only one Plan Type will be assigned based on the “best” fit, typically the one with the greatest significance and highest on the list below.

### Plan Type Descriptions

<b>Safety</b>	■	An observed or reported unsafe condition that if left unaddressed could result in injury; a system or component that presents potential liability risk.
<b>Performance/Integrity</b>	■	Component or system has failed, is almost failing, performs unreliably, does not perform as intended, and/or poses risk to overall system stability.
<b>Accessibility</b>	■	Does not meet ADA, UFAS, and/or other accessibility requirements.
<b>Environmental</b>	■	Improvements to air or water quality, including removal of hazardous materials from the building or site.
<b>Retrofit/Adaptation</b>	■	Components, systems, or spaces recommended for upgrades in in order to meet current standards, facility usage, or client/occupant needs.
<b>Lifecycle/Renewal</b>	■	Any component or system that is neither deficient nor aged past EUL but for which future replacement or repair is anticipated and budgeted.

### Plan Type Distribution (by Cost)



10-YEAR TOTAL: \$6,315,000

## 2. Main Building



Main Building: Systems Summary		
<b>Address</b>	4615 Ferguson Lane, Richmond, VA 23234	
<b>Constructed/Renovated</b>	2013	
<b>Building Area</b>	90810 SF	
<b>Number of Stories</b>	2 above grade	
<i>System</i>	<i>Description</i>	<i>Condition</i>
<b>Structure</b>	Steel frame and masonry bearing walls with metal decks over concrete slab foundation	Good
<b>Façade</b>	Primary Wall Finish: Brick Secondary Wall Finish: Curtain wall, hardy board siding Windows: Aluminum	Fair
<b>Roof</b>	Primary: Flat construction with single-ply TPO membrane roofing Secondary: Shed construction with Metal	Fair
<b>Interiors</b>	Walls: Painted gypsum board & CMU Floors: Carpet, VCT, ceramic tile, quarry tile, wood strip Ceilings: Painted gypsum board, ACT	Fair
<b>Elevators</b>	Passenger: 1 traction car serving all floors	Fair

<b>Main Building: Systems Summary</b>		
<b>Plumbing</b>	Distribution: Copper supply and PVC waste & venting Hot Water: Electric domestic boilers with storage tanks Fixtures: Toilets, urinals, and sinks in restrooms	Good
<b>HVAC</b>	Central System: Boilers, cooling tower, water source heat pumps, hydronic radiant floor system Non-Central System: Packaged units and ductless split-systems Supplemental components: Suspended unit heaters BAS	Fair
<b>Fire Suppression</b>	Wet-pipe sprinkler system and kitchen hood system, dedicated computer/server room chemical system	Good
<b>Electrical</b>	Source & Distribution: Main switchboard with copper wiring Interior Lighting: Linear fluorescent, LED Exterior Building-Mounted Lighting: LED Emergency Power: Diesel generator with automatic transfer switch	Good
<b>Fire Alarm</b>	Alarm panel with smoke detectors, heat detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
<b>Equipment/Special</b>	Commercial kitchen equipment	Fair
<b>Accessibility</b>	Potential moderate/major issues have been identified at this building and a detailed accessibility study is recommended. See the appendix for associated photos and additional information.	
<b>Additional Studies</b>	No additional studies are currently recommended for the building.	
<b>Areas Observed</b>	Most of the interior spaces were observed to gain a clear understanding of the facility's overall condition. Other areas accessed and assessed included the exterior equipment and assets directly serving the buildings, the exterior walls of the facility, and the roofs.	
<b>Key Spaces Not Observed</b>	<p>All key areas of the facility were accessible and observed. Areas of note that were either inaccessible or not observed for other reasons are listed here:</p> <ul style="list-style-type: none"> <li>▪ Roof level leading from the library courtyard lack of ladder or other means of access</li> <li>▪ Community Center offices locked room and no key</li> </ul>	



The table below shows the anticipated costs by trade or building system over the next 20 years.

<b>System Expenditure Forecast</b>						
<b>System</b>	<b>Immediate</b>	<b>Short Term (1-2 yr)</b>	<b>Near Term (3-5 yr)</b>	<b>Med Term (6-10 yr)</b>	<b>Long Term (11-20 yr)</b>	<b>TOTAL</b>
Structure	-	-	-	\$2,100	\$2,800	\$4,900
Facade	-	\$3,200	-	\$67,100	\$482,600	\$552,900
Roofing	\$1,100	-	-	\$1,244,000	\$4,600	\$1,249,600
Interiors	-	-	\$65,600	\$1,030,500	\$532,800	\$1,628,900
Conveying	-	-	\$10,100	\$6,700	\$15,800	\$32,600
Plumbing	-	-	\$7,300	\$22,000	\$225,000	\$254,300
HVAC	-	-	\$1,296,200	\$515,100	\$920,800	\$2,732,200
Electrical	-	-	-	\$554,700	\$1,576,400	\$2,131,100
Fire Alarm & Electronic Systems	-	-	\$4,600	\$720,100	\$7,200	\$731,900
Equipment & Furnishings	-	-	\$96,600	\$319,900	\$223,600	\$640,100
Accessibility	\$2,200	-	-	-	-	\$2,200
<b>TOTALS (3% inflation)</b>	<b>\$3,300</b>	<b>\$3,200</b>	<b>\$1,480,500</b>	<b>\$4,482,100</b>	<b>\$3,991,600</b>	<b>\$9,960,700</b>



**NEEDS OVER TIME:** The vertical blue bars in the graphic below represent the year-by-year needs identified for the facility. The orange line forecasts what would happen to the FCI (left Y axis) over time, assuming zero capital expenditures over the next ten years. The dollar amounts allocated for each year are associated with the values along the right Y axis.

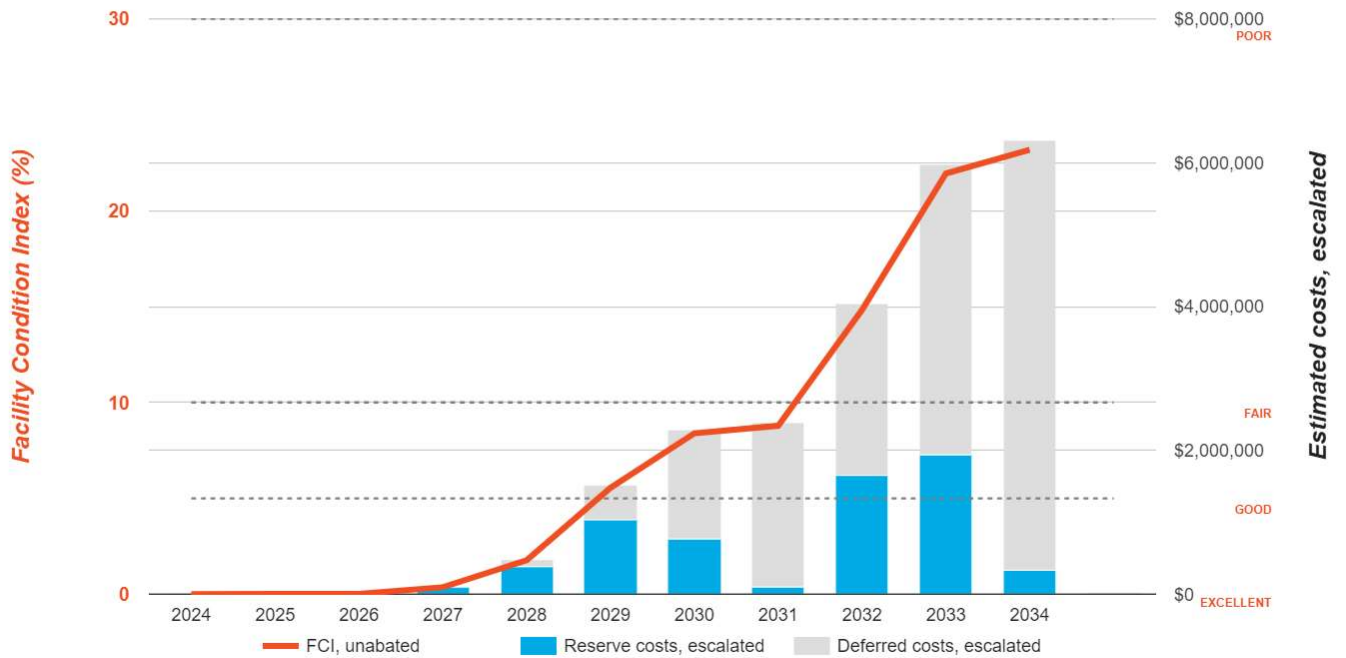
## Needs by Year with Unaddressed FCI Over Time

### FCI Analysis: Broad Rock Elementary School

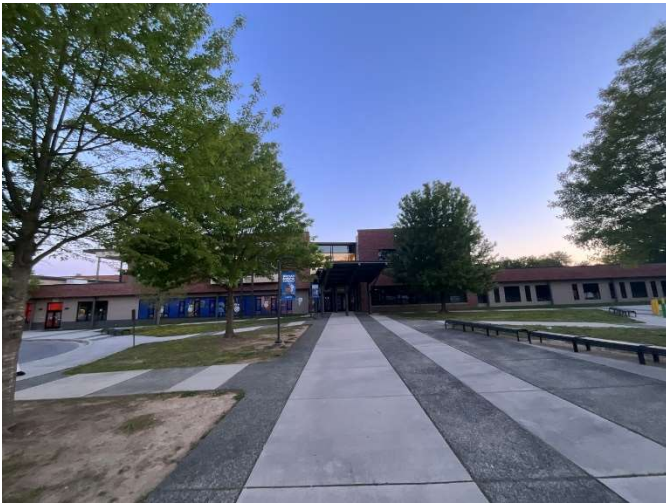
Replacement Value: \$27,243,000

Inflation Rate: 3.0%

Average Needs per Year: \$574,100



## Broad Rock Elementary School: Photographic Overview



1 - FRONT ELEVATION



2 - LEFT ELEVATION



3 - REAR ELEVATION



4 - RIGHT ELEVATION



5 - ROOFS OVERVIEW



6 - BUILDING FACADE





7 – MAIN ENTRANCE



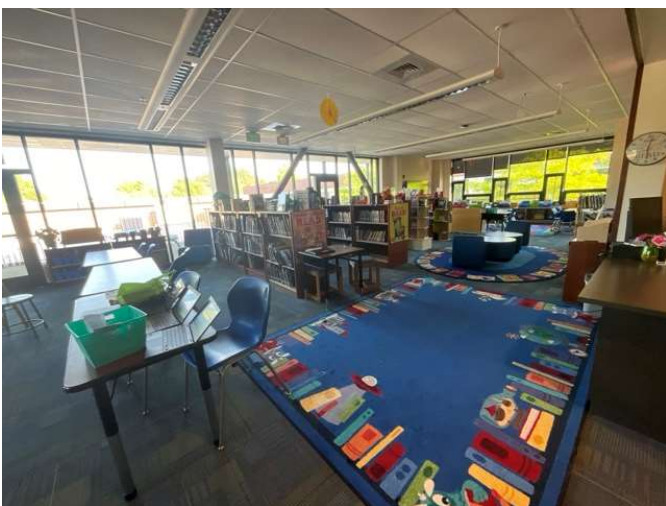
8 – CORRIDORS



9 – TYPICAL CLASSROOM



10 – OPEN CLASSROOM



11 - LIBRARY



12 - GYMNASIUM





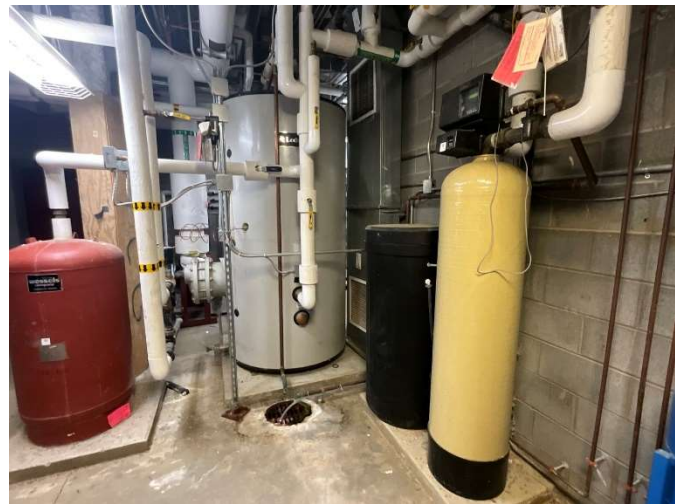
13 - CAFETERIA



14 - KITCHEN



15 - PLUMBING FIXTURES



16 - HOT WATER SUPPLY



17 - BOILERS



18 - COOLING TOWER

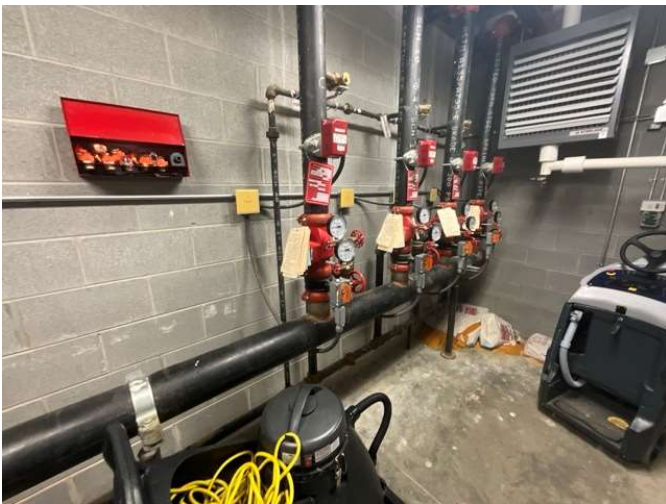




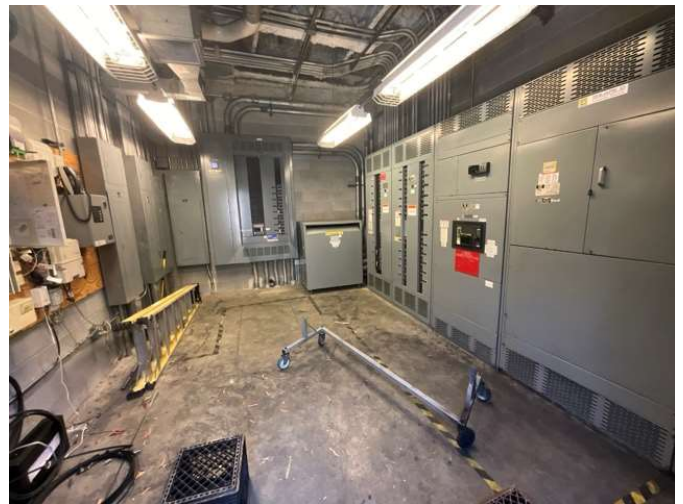
19 – ROOF TOP UNITS



20 – ELEVATOR



21 - FIRE SUPPRESSION SYSTEM



22 - MAIN ELECTRICAL SWITCHBOARD



23 - EMERGENCY GENERATOR



24 - FIRE ALARM PANEL

### 3. Site Summary



Site Information		
<b>Site Area</b>	14.2 acres (estimated)	
<b>Parking Spaces</b>	94 total spaces all in open lots; 6 of which are accessible	
<i>System</i>	<i>Description</i>	<i>Condition</i>
<b>Pavement/Flatwork</b>	Asphalt lots with limited areas of concrete aprons and pavement and adjacent concrete sidewalks and curbs	Fair
<b>Site Development</b>	Property entrance signage; chain link and wood board fencing wood board dumpster enclosures Sports fields and courts with fencing and site lights	Fair
<b>Landscaping and Topography</b>	Significant landscaping features including lawns, trees, bushes, and planters Irrigation not present Low to moderate site slopes throughout	Fair
<b>Utilities</b>	Municipal water and sewer Local utility-provided electric and natural gas	Fair
<b>Site Lighting</b>	Pole-mounted: LED	Fair
<b>Ancillary Structures</b>	None	--

Site Information	
<b>Site Accessibility</b>	Presently it does not appear an accessibility study is needed for the exterior site areas. See the appendix for associated photos and additional information.
<b>Site Additional Studies</b>	No additional studies are currently recommended for the exterior site areas.
<b>Site Areas Observed</b>	The exterior areas within the property boundaries were observed to gain a clear understanding of the site's overall condition.
<b>Site Key Spaces Not Observed</b>	All key areas of the exterior site were accessible and observed.

The table below shows the anticipated costs by trade or site system over the next 20 years.

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Site Development	-	-	-	\$150,800	\$558,400	\$709,200
Site Pavement	-	-	\$27,400	\$31,800	\$369,600	\$428,800
Site Utilities	-	-	-	\$135,700	-	\$135,700
<b>TOTALS (3% inflation)</b>	-	-	<b>\$27,400</b>	<b>\$318,300</b>	<b>\$928,000</b>	<b>\$1,273,700</b>



Site: Photographic Overview



1 – SITE OVERVIEW



2 – SITE PARKING OVERVIEW



3 - SITE WALKWAYS



4 – SITE PLAY AREAS



5 - SITE MODULAR BUILDING



6 - PROPERTY SIGNAGE



## 4. ADA Accessibility

Generally, Title II of the Americans with Disabilities Act (ADA) prohibits discrimination by entities to access and use of “areas of public accommodations” and “public facilities” on the basis of disability. Regardless of their age, these areas and facilities must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

A public entity (i.e. city governments) shall operate each service, program, or activity so that the service, program, or activity, when viewed in its entirety, is readily accessible to and usable by individuals with disabilities.

However, this does not:

1. Necessarily require a public entity to make each of its existing facilities accessible to and usable by individuals with disabilities;
2. Require a public entity to take any action that would threaten or destroy the historic significance of an historic property; or
3. Require a public entity to take any action that it can demonstrate would result in a fundamental alteration in the nature of a service, program, or activity or in undue financial and administrative burdens. In those circumstances where personnel of the public entity believe that the proposed action would fundamentally alter the service, program, or activity or would result in undue financial and administrative burdens, a public entity has the burden of proving that compliance with 35.150(a) of this part would result in such alteration or burdens. The decision that compliance would result in such alteration or burdens must be made by the head of a public entity or his or her designee after considering all resources available for use in the funding and operation of the service, program, or activity, and must be accompanied by a written statement of the reasons for reaching that conclusion. If an action would result in such an alteration or such burdens, a public entity shall take any other action that would not result in such an alteration or such burdens but would nevertheless ensure that individuals with disabilities receive the benefits or services provided by the public entity.

Removal of barriers to accessibility should be addressed from a liability standpoint in order to comply with federal law, but the barriers may or may not be building code violations. The Americans with Disabilities Act Accessibility Guidelines are part of the ADA federal civil rights law pertaining to the disabled and are not a construction code. State and local jurisdictions have adopted the ADA Guidelines or have adopted other standards for accessibility as part of their construction codes.

During the FCA, Bureau Veritas performed a limited high-level accessibility review of the facility non-specific to any local regulations or codes. The scope of the visual observation was limited to the same areas observed while performing the FCA and the categories set forth in the material included in the appendix. It is understood by the Client that the limited observations described herein do not comprise a full ADA Compliance Survey, and that such a survey is beyond the scope of this assessment. A full measured ADA survey would be required to identify more specific potential accessibility issues. Additional clarifications of this limited survey:

- This survey was visual in nature and actual measurements were not taken to verify compliance
- Only a representative sample of areas was observed
- Two overview photos were taken for each subsection regardless of perceived compliance or non-compliance
- Itemized costs for individual non-compliant items are included in the dataset
- For any “none” boxes checked or reference to “no issues” identified, that alone does not guarantee full compliance

The following table summarizes the accessibility conditions of the general site and each significant building included in this report:

<b>Accessibility Summary</b>			
<i>Facility</i>	<i>Year Built/ Renovated</i>	<i>Prior Study Provided?</i>	<i>Major/Moderate Issues Observed?</i>
General Site	2013	No	No
Building 1	2013	No	Yes

Reference the appendix for specific data, photos, and tables or checklists associated with this limited accessibility survey

## 5. Purpose and Scope

### Purpose

Bureau Veritas was retained by the client to render an opinion as to the Property's current general physical condition on the day of the site visit.

Based on the observations, interviews and document review outlined below, this report identifies significant deferred maintenance issues, existing deficiencies, and material code violations of record, which affect the Property's use. Opinions are rendered as to its structural integrity, building system condition and the Property's overall condition. The report also notes building systems or components that have realized or exceeded their typical expected useful lives.

The physical condition of building systems and related components are typically defined as being in one of five condition ratings. For the purposes of this report, the following definitions are used:

Condition Ratings	
<b>Excellent</b>	New or very close to new; component or system typically has been installed within the past year, sound and performing its function. Eventual repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
<b>Good</b>	Satisfactory as-is. Component or system is sound and performing its function, typically within the first third of its lifecycle. However, it may show minor signs of normal wear and tear. Repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
<b>Fair</b>	Showing signs of wear and use but still satisfactory as-is, typically near the median of its estimated useful life. Component or system is performing adequately at this time but may exhibit some signs of wear, deferred maintenance, or evidence of previous repairs. Repair or replacement will be required due to the component or system's condition and/or its estimated remaining useful life.
<b>Poor</b>	Component or system is significantly aged, flawed, functioning intermittently or unreliably; displays obvious signs of deferred maintenance; shows evidence of previous repair or workmanship not in compliance with commonly accepted standards; has become obsolete; or exhibits an inherent deficiency. The present condition could contribute to or cause the deterioration of contiguous elements or systems. Either full component replacement is needed or repairs are required to restore to good condition, prevent premature failure, and/or prolong useful life.
<b>Failed</b>	Component or system has ceased functioning or performing as intended. Replacement, repair, or other significant corrective action is recommended or required.
<b>Not Applicable</b>	Assigning a condition does not apply or make logical sense, most commonly due to the item in question not being present.

## Scope

The standard scope of the Facility Condition Assessment includes the following:

- Visit the Property to evaluate the general condition of the building and site improvements, review available construction documents in order to familiarize ourselves with, and be able to comment on, the in-place construction systems, life safety, mechanical, electrical, and plumbing systems, and the general built environment.
- Identify those components that are exhibiting deferred maintenance issues and provide cost estimates for Immediate Costs and Replacement Reserves based on observed conditions, maintenance history and industry standard useful life estimates. This will include a review of documented capital improvements completed within the last five-year period and work currently contracted for, if applicable.
- Provide a full description of the Property with descriptions of in-place systems and commentary on observed conditions.
- Provide a high-level categorical general statement regarding the subject Property's compliance to Title III of the Americans with Disabilities Act. This will not constitute a full ADA survey, but will help identify exposure to issues and the need for further review.
- Obtain background and historical information about the facility from a building engineer, property manager, maintenance staff, or other knowledgeable source. The preferred methodology is to have the client representative or building occupant complete a Pre-Survey Questionnaire (PSQ) in advance of the site visit. Common alternatives include a verbal interview just prior to or during the walk-through portion of the assessment.
- Review maintenance records and procedures with the in-place maintenance personnel.
- Observe a representative sample of the interior spaces/units, including vacant spaces/units, to gain a clear understanding of the property's overall condition. Other areas to be observed include the exterior of the property, the roofs, interior common areas, and the significant mechanical, electrical and elevator equipment rooms.
- Provide recommendations for additional studies, if required, with related budgetary information.
- Provide an Executive Summary at the beginning of this report, which highlights key findings and includes a Facility Condition Index as a basis for comparing the relative conditions of the buildings within the portfolio.

## 6. Opinions of Probable Costs

Cost estimates are attached throughout this report, with the Replacement Reserves in the appendix.

These estimates are based on Invoice or Bid Document/s provided either by the Owner/facility and construction costs developed by construction resources such as *R.S. Means*, *CBRE Whitestone*, and *Marshall & Swift*, Bureau Veritas's experience with past costs for similar properties, city cost indexes, and assumptions regarding future economic conditions.

Opinions of probable costs should only be construed as preliminary, order of magnitude budgets. Actual costs most probably will vary from the consultant's opinions of probable costs depending on such matters as type and design of suggested remedy, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a physical deficiency is repaired or replaced in whole, phasing or bundling of the work (if applicable), quality of contractor, quality of project management exercised, market conditions, use of subcontractors, and whether competitive pricing is solicited, etc. Certain opinions of probable costs cannot be developed within the scope of this guide without further study. Opinions of probable cost for further study should be included in the FCA.

### Methodology

Based upon site observations, research, and judgment, along with referencing Expected Useful Life (EUL) tables from various industry sources, Bureau Veritas opines as to when a system or component will most probably necessitate replacement. Accurate historical replacement records, if provided, are typically the best source of information. Exposure to the elements, initial quality and installation, extent of use, the quality and amount of preventive maintenance exercised, etc., are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual chronological age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its *effective age*, whether explicitly or implicitly stated. Projections of Remaining Useful Life (RUL) are based primarily on age and condition with the presumption of continued use and maintenance of the Property similar to the observed and reported past use and maintenance practices, in conjunction with the professional judgment of Bureau Veritas's assessors. Significant changes in occupants and/or usage may affect the service life of some systems or components.

Where quantities could not be or were not derived from an actual construction document take-off or facility walk-through, and/or where systemic costs are more applicable or provide more intrinsic value, budgetary square foot and gross square foot costs are used. Estimated costs are based on professional judgment and the probable or actual extent of the observed defect, inclusive of the cost to design, procure, construct and manage the corrections.

### Definitions

#### Immediate Needs

Immediate Needs are line items that require immediate action as a result of: (1) material existing or potential unsafe conditions, (2) failed or imminent failure of mission critical building systems or components, or (3) conditions that, if not addressed, have the potential to result in, or contribute to, critical element or system failure within one year or will most probably result in a significant escalation of its remedial cost.

For database and reporting purposes the line items with RUL=0, and commonly associated with *Safety* or *Performance/Integrity* Plan Types, are considered Immediate Needs.

## Replacement Reserves

Cost line items traditionally called Replacement Reserves (equivalently referred to as Lifecycle/Renewals) are for recurring probable renewals or expenditures, which are not classified as operation or maintenance expenses. The replacement reserves should be budgeted for in advance on an annual basis. Replacement Reserves are reasonably predictable both in terms of frequency and cost. However, Replacement Reserves may also include components or systems that have an indeterminable life but, nonetheless, have a potential for failure within an estimated time period.

Replacement Reserves generally exclude systems or components that are estimated to expire after the reserve term and are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that are not deemed to have a material effect on the use of the Property are also excluded. Costs that are caused by acts of God, accidents, or other occurrences that are typically covered by insurance, rather than reserved for, are also excluded.

Replacement costs are solicited from ownership/property management, Bureau Veritas's discussions with service companies, manufacturers' representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by the ownership's or property management's maintenance staff are also considered.

Bureau Veritas's reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the assessment period. The assessment period is defined as the effective age plus the reserve term. Additional information concerning system or component replacement costs (in today's dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Replacement Reserves Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined as Immediate Needs.

For the purposes of 'bucketizing' the System Expenditure Forecasts in this report, the Replacement Reserves have been subdivided and grouped as follows: Short Term (years 1-3), Near Term (years 4-5), Medium Term (years 6-10), and Long Term (years 11-20).

## Key Findings

In an effort to highlight the most significant cost items and not be overwhelmed by the Replacement Reserves report in its totality, a subsection of Key Findings is included within the Executive Summary section of this report. Key Findings typically include repairs or replacements of deficient items within the first five-year window, as well as the most significant high-dollar line items that fall anywhere within the ten-year term. Note that while there is some subjectivity associated with identifying the Key Findings, the Immediate Needs are always included as a subset.

## 7. Certification

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Richmond Public Schools (the Client) retained Bureau Veritas to perform this Facility Condition Assessment in connection with its continued operation of Broad Rock Elementary School, 4615 Ferguson Lane, Richmond, VA 23224, the "Property". It is our understanding that the primary interest of the Client is to locate and evaluate materials and building system defects that might significantly affect the value of the property and to determine if the present Property has conditions that will have a significant impact on its continued operations.

The conclusions and recommendations presented in this report are based on the brief review of the plans and records made available to our Project Manager during the site visit, interviews of available property management personnel and maintenance contractors familiar with the Property, appropriate inquiry of municipal authorities, our Project Manager's walk-through observations during the site visit, and our experience with similar properties.

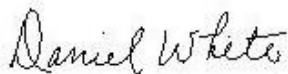
No testing, exploratory probing, dismantling or operating of equipment or in-depth studies were performed unless specifically required under the *Purpose and Scope* section of this report. This assessment did not include engineering calculations to determine the adequacy of the Property's original design or existing systems. Although walk-through observations were performed, not all areas may have been observed (see Section 1 for specific details). There may be defects in the Property, which were in areas not observed or readily accessible, may not have been visible, or were not disclosed by management personnel when questioned. The report describes property conditions at the time that the observations and research were conducted.

This report has been prepared for and is exclusively for the use and benefit of the Client identified on the cover page of this report. The purpose for which this report shall be used shall be limited to the use as stated in the contract between the client and Bureau Veritas.

This report, or any of the information contained therein, is not for the use or benefit of, nor may it be relied upon by any other person or entity, for any purpose without the advance written consent of Bureau Veritas. Any reuse or distribution without such consent shall be at the client's or recipient's sole risk, without liability to Bureau Veritas.

**Prepared by:** Soulihe Nida,  
Project Manager

**Reviewed by:**



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## 8. Appendices

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- Appendix A: Site Plan(s)
- Appendix B: Pre-Survey Questionnaire(s)
- Appendix C: Accessibility Review and Photos
- Appendix D: Component Condition Report
- Appendix E: Replacement Reserves
- Appendix F: Equipment Inventory List





# Appendix A:

## Site Plan(s)

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# Site Plan



 <b>BUREAU VERITAS</b>	<b>Project Number</b>	<b>Project Name</b>	
	166385.24R000-003.468	Broad Rock Elementary School	
	<b>Source</b>	<b>On-Site Date</b>	
	Google	April 22-23, 2024	

## Appendix B:

### Pre-Survey Questionnaire(s)

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## Bureau Veritas Facility Condition Assessment: Pre-Survey Questionnaire

**Building / Facility Name:** Broadrock Elementary

**Name of person completing form:** Ronald Hathaway

**Title / Association with property:** Director of Facilities

**Length of time associated w/ property:** 9

**Date Completed:** 4/13/2024

**Phone Number:** 804-325-0740

**Method of Completion:** Electronic

**Directions:** Please answer all questions to the best of your knowledge and in good faith. Please provide additional details in the Comments column, or backup documentation for any **Yes** responses.

Data Overview		Response		
1	Year/s constructed / renovated	2013		
2	Building size in SF	90810		
3	Major Renovation/Rehabilitation		Year	Additional Detail
		Façade		Hardiplank
		Roof		TPO
		Interiors		Sheetrock, drop ceilings, VCT, marmolium
		HVAC		Roof top heat pump units
		Electrical		Original
		Site Pavement		Asphalt
		Accessibility	2007	Satisfied the 2007 lawsuit requirement
Question		Response		
4	List other significant capital improvements (focus on recent years; provide approximate date).	None		
5	List any major capital expenditures planned/requested for the next few years. Have they been budgeted?	Plan to replace roof top HVAC equipment and redesign the system, unreliable comfort		
6	Describe any on-going extremely problematic, historically chronic, or immediate facility needs.	HVAC system struggles to maintain consistent temperatures on all three levels temperatures vary 2 to 7 degrees. Existing equipment requires		

Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any <b>Yes</b> responses. ( <b>NA</b> indicates "Not Applicable", <b>Unk</b> indicates "Unknown")						
Question		Response				Comments
		Yes	No	Unk	NA	
7	Are there any problems with foundations or structures, like excessive settlement?		X			
8	Are there any wall, window, basement or roof leaks?		X			
9	Has any part of the facility ever contained visible suspect mold growth, or have there been any indoor air quality or mold related complaints from occupants?		X			
10	Are your elevators unreliable, with frequent service calls?		X			
11	Are there any plumbing leaks, water pressure, or clogging/back-up problems?		X			
12	Have there been any leaks or pressure problems with natural gas, HVAC supply/return lines, or steam service?		X			
13	Are any areas of the facility inadequately heated, cooled or ventilated? Any poorly insulated areas?	X				Systems installed are designed to heat and cool three different levels and temperature vary from 2 to 7 degrees
14	Is the electrical service outdated, undersized, or otherwise problematic?		X			
15	Are there any problems or inadequacies with exterior lighting?		X			
16	Is site/parking drainage inadequate, with excessive ponding or other problems?		X			
17	Are there any other unresolved construction defects or significant issues/hazards at the property that have not yet been identified above?		X			
18	ADA: Has an accessibility study been performed at the site? If so, indicate when.	X				
19	ADA: If a study has occurred, have the associated recommendations been addressed? In full or in part?	X				Satisfied the 2007 lawsuit requirement
20	ADA: Have there been regular complaints about accessibility issues, or associated previous or pending litigation?		X			

## **Appendix C:** Accessibility Review and Photos

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## Visual Checklist - 2010 ADA Standards for Accessible Design

Property Name: Broad Rock Elementary School

BV Project Number: 166385.24R000-003.468

### Abbreviated Accessibility Checklist

#### Facility History and Interview

Question		Yes	No	Unk	Comments
1	Has an accessibility study been previously performed? If so, when?			X	
2	Have any ADA improvements been made to the property since original construction? Describe.	X			
3	Has building management reported any accessibility-based complaints or litigation?			X	



## Abbreviated Accessibility Checklist

### Parking



OVERVIEW OF ACCESSIBLE PARKING AREA



CLOSE-UP OF STALL

Question		Yes	No	NA	Comments
1	Does the required number of standard ADA designated spaces appear to be provided ?	✗			
2	Does the required number of van-accessible designated spaces appear to be provided ?	✗			
3	Are accessible spaces on the shortest accessible route to an accessible building entrance ?	✗			
4	Does parking signage include the International Symbol of Accessibility ?	✗			
5	Does each accessible space have an adjacent access aisle ?	✗			
6	Do parking spaces and access aisles appear to be relatively level and without obstruction ?	✗			

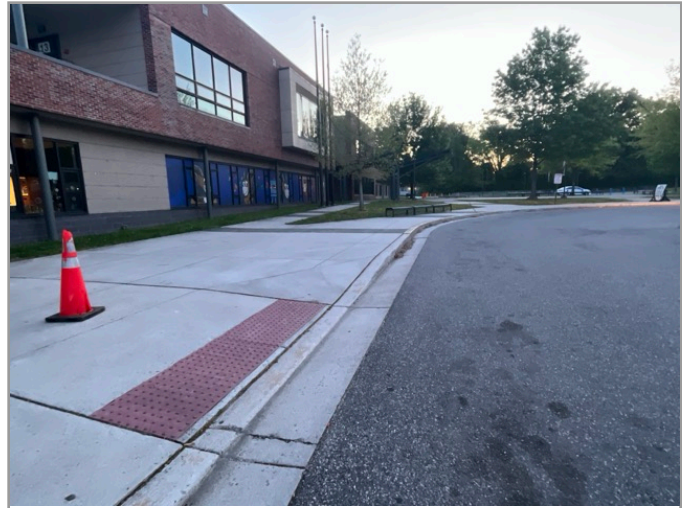


## Abbreviated Accessibility Checklist

### Exterior Accessible Route



ACCESSIBLE PATH



CURB CUT

Question		Yes	No	NA	Comments
1	Is an accessible route present from public transportation stops and municipal sidewalks on or immediately adjacent to the property ?	✘			
2	Does a minimum of one accessible route appear to connect all public areas on the exterior, such as parking and other outdoor amenities, to accessible building entrances ?	✘			
3	Are curb ramps present at transitions through raised curbs on all accessible routes?	✘			
4	Do curb ramps appear to have compliant slopes for all components ?	✘			
5	Do ramp runs on an accessible route appear to have compliant slopes ?			✘	
6	Do ramp runs on an accessible route appear to have a compliant rise and width ?			✘	

7	Do ramps on an accessible route appear to have compliant end and intermediate landings ?			X	
8	Do ramps and stairs on an accessible route appear to have compliant handrails?			X	
9	For stairways that are open underneath, are permanent barriers present that prevent or discourage access?			X	

# Abbreviated Accessibility Checklist

## Building Entrances



MAIN ENTRANCE



ADDITIONAL ENTRANCE

Question		Yes	No	NA	Comments
1	Do a sufficient number of accessible entrances appear to be provided ?	X			
2	If the main entrance is not accessible, is an alternate accessible entrance provided?	X			
3	Is signage provided indicating the location of alternate accessible entrances ?	X			
4	Do doors at accessible entrances appear to have compliant maneuvering clearance area on each side ?	X			
5	Do doors at accessible entrances appear to have compliant hardware ?	X			
6	Do doors at accessible entrances appear to have a compliant clear opening width ?	X			

7	Do pairs of accessible entrance doors in series appear to have the minimum clear space between them ?			X	
8	Do thresholds at accessible entrances appear to have a compliant height ?	X			

# Abbreviated Accessibility Checklist

## Interior Accessible Route



ACCESSIBLE INTERIOR PATH



DOOR HARDWARE

Question		Yes	No	NA	Comments
1	Does an accessible route appear to connect all public areas inside the building ?	✗			
2	Do accessible routes appear free of obstructions and/or protruding objects ?	✗			
3	Do ramps on accessible routes appear to have compliant slopes ?	✗			
4	Do ramp runs on an accessible route appear to have a compliant rise and width ?	✗			
5	Do ramps on accessible routes appear to have compliant end and intermediate landings ?	✗			
6	Do ramps on accessible routes appear to have compliant handrails ?	✗			



7	Are accessible areas of refuge and the accessible means of egress to those areas identified with accessible signage ?	X			
8	Do public transaction areas have an accessible, lowered service counter section ?			X	
9	Do public telephones appear mounted with an accessible height and location ?			X	
10	Do doors at interior accessible routes appear to have compliant maneuvering clearance area on each side ?	X			
11	Do doors at interior accessible routes appear to have compliant hardware ?	X			
12	Do non-fire hinged, sliding, or folding doors on interior accessible routes appear to have compliant opening force ?	X			
13	Do doors on interior accessible routes appear to have a compliant clear opening width ?	X			

## Abbreviated Accessibility Checklist

### Elevators



LOBBY LOOKING AT CAB



EMERGENCY CALL PANEL

Question	Yes	No	NA	Comments
1 Are hallway call buttons configured with the "UP" button above the "DOWN" button?	✘			
2 Is accessible floor identification signage present on the hoistway sidewalls on each level ?	✘			
3 Do the elevators have audible and visual arrival indicators at the lobby and hallway entrances?	✘			
4 Do the elevator hoistway and car interior appear to have a minimum compliant clear floor area ?	✘			
5 Do the elevator car doors have automatic re-opening devices to prevent closure on obstructions?	✘			
6 Do elevator car control buttons appear to be mounted at a compliant height ?	✘			

7	Are tactile and Braille characters mounted to the left of each elevator car control button ?	X			
8	Are audible and visual floor position indicators provided in the elevator car?	X			
9	Is the emergency call system on or adjacent to the control panel and does it not require voice communication ?	X			

# Abbreviated Accessibility Checklist

## Public Restrooms



RESTROOM ACCESSORIES



SINK, FAUCET HANDLES AND ACCESSORIES

Question		Yes	No	NA	Comments
1	Do publicly accessible toilet rooms appear to have a minimum compliant floor area ?	✗			
2	Does the lavatory appear to be mounted at a compliant height and with compliant knee area ?	✗			
3	Does the lavatory faucet have compliant handles ?	✗			
4	Is the plumbing piping under lavatories configured to protect against contact ?		✗		Missing pipe insulation
5	Are grab bars provided at compliant locations around the toilet ?	✗			
6	Do toilet stall doors appear to provide the minimum compliant clear width ?	✗			

7	Do toilet stalls appear to provide the minimum compliant clear floor area ?	X			
8	Where more than one urinal is present in a multi-user restroom, does minimum one urinal appear to be mounted at a compliant height and with compliant approach width ?	X			
9	Do accessories and mirrors appear to be mounted at a compliant height ?	X			



## Abbreviated Accessibility Checklist

### Kitchens/Kitchenettes



KITCHEN OVERVIEW



SINK CLEARANCE

Question		Yes	No	NA	Comments
1	Do kitchens/kitchenettes appear to have a minimum compliant path of travel or area of maneuverability ?	✗			
2	Are the appliances centered for a parallel or forward approach with adequate clear floor space ?	✗			
3	Is there an accessible countertop/preparation space of proper width and height ?	✗			
4	Is there an accessible sink space of proper width and height ?		✗		Knee clearance for sink
5	Does the sink faucet have compliant handles ?	✗			
6	Is the plumbing piping under the sink configured to protect against contact ?	✗			

7	Are the cooktop/range controls front-mounted (or in a location that does not require reaching across the burners) ?			X	
---	---	--	--	---	--

# Abbreviated Accessibility Checklist

## Playgrounds and Swimming Pools



OVERVIEW OF PLAYGROUND



ACCESSIBLE ROUTE TO PLAYGROUND

Question		Yes	No	NA	Comments
1	Is there an accessible route to the play area / s?	X			
2	Has the play area been reviewed for accessibility ?	X			
3	Are publicly accessible swimming pools equipped with an entrance lift ?			X	

## Appendix D:

### Component Condition Report

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**Component Condition Report | Broad Rock Elementary School / Main Building**

UF L3 Code	Location	Condition	Asset/Component/Repair	Quantity	RUL	ID
<b>Structure</b>						
A1010		Good	Foundation System, Concrete	90,810 SF	64	7660784
B1010	Building	Good	Structural Framing, Masonry (CMU) Bearing Walls	90,810 SF	64	7660785
B1080	Throughout building	Good	Stair/Ramp Rails, Metal, Refinish	1,090 LF	8	7541244
<b>Facade</b>						
B2010	Building Exterior	Fair	Exterior Walls, any painted surface, 1-2 Story Building, Prep & Paint	18,740 SF	6	7636251
B2010	Building Exterior	Fair	Exterior Walls, Brick Veneer	8,410 SF	31	7491334
B2010	Building Exterior	Good	Exterior Walls, Aluminum Siding	1,180 SF	29	7636143
B2010	Building Exterior	Poor	Exterior Walls, Fiber Cement Siding	280 SF	1	7541236
B2020	Building Exterior	Fair	Window, Aluminum Double-Glazed, 16-25 SF	132	19	7541238
B2020	Building Exterior	Fair	Storefront, Glazing & Framing	1,250 SF	19	7541237
B2050	Building Exterior	Fair	Overhead/Dock Door, Aluminum, 12'x12' (144 SF)	2	19	7614235
B2050	Building Exterior	Good	Exterior Door, Steel, Standard	11	29	7541239
B2050	Building Exterior	Fair	Exterior Door, Aluminum-Framed & Glazed, Standard Swing	16	19	7541240
<b>Roofing</b>						
B3010	Roof	Poor	Roofing, any type, Repairs per Man-Day, Repair	1	0	7541242
B3010	Roof	Fair	Roofing, Metal	822 SF	29	7541241
B3010	Roof	Fair	Roofing, Single-Ply Membrane, TPO/PVC	57,764 SF	8	7491312
B3060	Roof	Fair	Roof Hatch, Metal	2	19	7541243
<b>Interiors</b>						
C1030	Throughout building	Fair	Interior Door, Wood, Solid-Core	154	29	7491347
C1030	Throughout building	Good	Door Hardware, School, per Door	162	23	7541246
C1030	Throughout building	Good	Interior Door, Steel, Fire-Rated at 90 Minutes or Over	18	29	7614267
C1030	Throughout building	Good	Interior Door, Wood, Solid-Core Decorative High-End w/ Glazing	8	29	7541245
C1070	Throughout building	Fair	Suspended Ceilings, Acoustical Tile (ACT)	64,468 SF	10	7491294
C1090	Restrooms	Fair	Toilet Partitions, Plastic/Laminate	19	10	7541248
C2010	Throughout building	Fair	Wall Finishes, Fabric	410 SF	8	7541308
C2010	Throughout building	Fair	Wall Finishes, any surface, Prep & Paint	137,000 SF	6	7491319
C2010	Restrooms	Good	Wall Finishes, Ceramic Tile	1,950 SF	29	7491333
C2010	Throughout building	Good	Wall Finishes, Wood Paneling, Refinish	280 SF	7	7491307
C2030	Kitchen	Good	Flooring, Quarry Tile	3,000 SF	39	7541251
C2030	Restrooms	Good	Flooring, Maple Sports Floor, Refinish	3,550 SF	7	7491293
C2030	Classrooms	Fair	Flooring, Carpet, Commercial Standard	8,000 SF	3	7541253
C2030	Restrooms	Good	Flooring, Ceramic Tile	2,500 SF	29	7541250
C2030	Throughout building	Fair	Flooring, Vinyl Tile (VCT)	73,450 SF	6	7491314
C2050	Corridor	Good	Ceiling Finishes, Wood Paneling	3,410 SF	19	7541255
C2050	Corridor	Good	Ceiling Finishes, Gypsum Board/Plaster	18,400 SF	39	7541254
<b>Conveying</b>						



**Component Condition Report | Broad Rock Elementary School / Main Building**

UF L3 Code	Location	Condition	Asset/Component/Repair	Quantity	RUL	ID
D1010	Elevator	Fair	Elevator Controls, Automatic, 1 Car	1	10	7541257
D1010	Elevator	Fair	Passenger Elevator, Overhead Traction, 2-5 Floors, Renovate	1	24	7541256
D1010	Elevator	Good	Elevator Cab Finishes, Standard	1	4	7491280
<b>Plumbing</b>						
D2010	Throughout building	Good	Plumbing System, Supply & Sanitary, Medium Density (excludes fixtures)	90,810 SF	29	7541315
D2010	Restrooms	Good	Sink/Lavatory, Wall-Hung, Enameled Steel	9	22	7541264
D2010	Utility closet	Fair	Sink/Lavatory, Service Sink, Floor	5	24	7491330
D2010	Boiler room	Fair	Water Heater, Electric, Residential	1	5	7491285
D2010	Modular restroom	Fair	Water Heater, Electric, Residential	1	9	7614225
D2010	Restrooms	Good	Sink/Lavatory, Service Sink, Laundry	2	19	7491321
D2010	Kitchen	Fair	Sink/Lavatory, Drop-In Style, Stainless Steel	4	14	7541270
D2010	Restrooms	Good	Sink/Lavatory, Wall-Hung, Vitreous China	29	19	7491300
D2010	Throughout building	Good	Drinking Fountain, Wall-Mounted, Bi-Level	4	10	7541263
D2010	Mechanical room	Fair	Pump, Circulation/Booster, Domestic Water	1	7	7614244
D2010	Boiler room	Fair	Water Heater, Indirect, 80 to 120 GAL	1	4	7541259
D2010	Restrooms	Fair	Toilet, Commercial Water Closet	28	13	7541266
D2010	Restrooms	Fair	Urinal, Standard	8	11	7541269
D2010	Modular restroom	Good	Water Heater, Electric, Residential	1	9	7614231
D2010	Boiler room	Fair	Water Softener, Domestic Water	1	14	7614233
D2010	Mechanical room	Fair	Pump Station, Duplex Mounted	1	14	7541260
D2020	Kitchen	Fair	Supplemental Components, Grease Trap/Interceptor, Undercounter	1	8	7541258
<b>HVAC</b>						
D3020	Boiler room	Good	Boiler Supplemental Components, Expansion Tank	1	29	7614229
D3020	Boiler room	Good	Boiler Supplemental Components, Expansion Tank [7668]	1	29	7491320
D3020	Boiler room	Good	Boiler Supplemental Components, Expansion Tank	1	29	7614246
D3020	Boiler room	Fair	Heat Exchanger, Plate & Frame, HVAC	1	24	7614270
D3020	Boiler room	Good	Boiler Supplemental Components, Expansion Tank	1	29	7614265
D3020	Boiler room	Fair	Boiler, Gas, HVAC [Boiler 1]	1	19	7614272
D3020	Boiler room	Good	Boiler Supplemental Components, Expansion Tank	1	29	7614273
D3020	Building entrances	Good	Unit Heater, Electric, 6 to 10 KW	7	15	7541272
D3020	Boiler room	Fair	Boiler, Gas, HVAC [Boiler 2]	1	19	7614271
D3030	Boiler room	Fair	Heat Pump, Water Source, 30 TON [WW-1]	1	4	7614279
D3030	Boiler room	Fair	Heat Pump, Water Source, 30 TON [WW-1]	1	4	7491352
D3030	Roof	Fair	Split System Ductless, Single Zone, 2.5 to 3 TON	1	4	7614260
D3030	Roof	Fair	Split System Ductless, Single Zone, 2.5 to 3 TON	1	4	7614245
D3030	Roof	Fair	Split System Ductless, Single Zone, 2.5 to 3 TON	1	4	7491354
D3030	Boiler room	Fair	Heat Pump, Water Source, 30 TON [WW-1]	1	4	7614280
D3030	Boiler room	Fair	Heat Pump, Water Source, 30 TON [WW-1]	1	4	7614224
D3030	Site	Fair	Cooling Tower, (Typical) Open Circuit , 101 to 200 TON	1	14	7541273

**Component Condition Report | Broad Rock Elementary School / Main Building**

UF L3 Code	Location	Condition	Asset/Component/Repair	Quantity	RUL	ID
D3050	Boiler room	Fair	Pump, Distribution, HVAC Heating Water	1	14	7614276
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted [RTU 1]	1	9	7614258
D3050	HVAC	NA	HVAC System, Partial System Renovation/Upgrade, Medium Complexity	40,000 SF	5	8337540
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted [ERU-4]	1	9	7614236
D3050	Boiler room	Fair	Pump, Distribution, HVAC Chilled or Condenser Water [7666]	1	14	7614247
D3050	Building entrances	Fair	Pump, Distribution, HVAC Heating Water	1	7	7541276
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted	1	9	7614243
D3050	Boiler room	Fair	Pump, Distribution, HVAC Heating Water	1	12	7614278
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted [ERU-1]	1	9	7614249
D3050	Boiler room	Fair	Pump, Distribution, HVAC Chilled or Condenser Water [7665]	1	14	7491308
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted [ERU-3]	1	9	7614254
D3050	Boiler room	Fair	Pump, Distribution, HVAC Heating Water	1	4	7614264
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted [ERU-2]	1	9	7614274
D3050	Boiler room	Fair	Pump, Distribution, HVAC Heating Water	1	4	7614277
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted [ERU-5]	1	9	7491278
D3050	Roof	Fair	Packaged Unit, RTU, Pad or Roof-Mounted [ERU-6]	1	9	7614239
D3060	Roof	Fair	Exhaust Fan, Centrifugal, 12" Damper [EF-9]	1	14	7614281
D3060	Roof	Fair	Exhaust Fan, Centrifugal, 12" Damper [EF-8]	1	13	7541279
D3060	Roof	Fair	Exhaust Fan, Centrifugal, 12" Damper [EF-7]	1	13	7614257
<b>Fire Protection</b>						
D4010	Throughout building	Good	Fire Suppression System, Full System Install/Retrofit, Medium Density/Complexity, Renovate	90,810 SF	29	7541312
<b>Electrical</b>						
D5010	Roof	Fair	Solar Power, Inverter [Inverter #1]	1	6	7614248
D5010	Roof	Fair	Solar Power, Inverter [Inverter #3]	1	6	7614251
D5010	Building exterior	Good	Generator, Gas or Gasoline	1	16	7491296
D5010	Electrical room 1303D	Good	Automatic Transfer Switch, ATS [ATS-OPT]	1	16	7491289
D5010	Electrical room	Good	Solar Power, Photovoltaic (PV) Panel, 24 SF	490	14	7491332
D5010	Roof	Fair	Solar Power, Inverter [Inverter #2]	1	6	7614237
D5020	Electrical room 1303D	Good	Secondary Transformer, Dry, Stepdown [TC]	1	19	7541283
D5020	Electrical room 1303D	Fair	Secondary Transformer, Dry, Stepdown	1	19	7614226
D5020	Electrical room 1303D	Good	Switchboard, 277/480 V	1	29	7541282
D5020	Electrical room 1303D	Good	Distribution Panel, 277/480 V, 1200 AMP [DPC]	1	18	7541284
D5030	Mechanical room	Good	Variable Frequency Drive, VFD, by HP of Motor, 100 HP, Replace/Install	1	13	7541285
D5030	Throughout building	Good	Electrical System, Wiring & Switches, Average or Low Density/Complexity	90,810 SF	29	7541311
D5040	Throughout building	Fair	Interior Lighting System, Full Upgrade, Medium Density & Standard Fixtures	90,810 SF	9	7541261
<b>Fire Alarm &amp; Electronic Systems</b>						
D6060	Throughout building	Fair	Intercom/PA System, Public Address Upgrade, Facility-Wide	90,810 SF	9	7541313
D7030	Throughout building	Good	Security/Surveillance System, Full System Upgrade, Average Density	90,810 SF	9	7541310
D7050	1406 Data	Fair	Fire Alarm Panel, Multiplex	1	5	7614255

**Component Condition Report | Broad Rock Elementary School / Main Building**

UF L3 Code	Location	Condition	Asset/Component/Repair	Quantity	RUL	ID
D8010	Boiler room	Fair	BAS/HVAC Controls, Basic System or Legacy Upgrades, Upgrade/Install	90,810 SF	8	7541309
<b>Equipment &amp; Furnishings</b>						
E1030	Kitchen	Fair	Foodservice Equipment, Food Warmer, Proofing Cabinet on Wheels [6]	1	7	7614228
E1030	Kitchen	Fair	Foodservice Equipment, Prep Table Refrigerated, Salad/Sandwich	1	4	7541295
E1030	Kitchen	Good	Foodservice Equipment, Dairy Cooler/Wells [6]	1	11	7541292
E1030	Kitchen	Fair	Foodservice Equipment, Convection Oven, Single [3]	1	5	7614263
E1030	Kitchen	Good	Foodservice Equipment, Walk-In, Refrigerator	1	14	7614242
E1030	Kitchen	Fair	Foodservice Equipment, Convection Oven, Single [2]	1	5	7614282
E1030	Kitchen	Fair	Foodservice Equipment, Convection Oven, Single [4]	1	5	7614238
E1030	Kitchen	Fair	Foodservice Equipment, Food Warmer, Proofing Cabinet on Wheels [6]	1	7	7614266
E1030	Kitchen	Fair	Foodservice Equipment, Dairy Cooler/Wells [11]	1	4	7491304
E1030	Kitchen	Fair	Foodservice Equipment, Convection Oven, Single [6]	1	5	7614262
E1030	Kitchen	Fair	Foodservice Equipment, Deep Fryer	1	8	7541301
E1030	Kitchen	Fair	Sink/Lavatory, Commercial Kitchen, 3-Bowl	1	15	7541265
E1030	Kitchen	Fair	Foodservice Equipment, Convection Oven, Single	1	5	7614240
E1030	1302 Kitchen	Fair	Foodservice Equipment, Steamer, Tabletop	1	4	7614250
E1030	Kitchen	Fair	Foodservice Equipment, Food Warmer, Proofing Cabinet on Wheels [7]	1	5	7541290
E1030	Kitchen	Good	Foodservice Equipment, Mixer, Freestanding	1	18	7541302
E1030	Kitchen	Fair	Foodservice Equipment, Ice maker, Freestanding	1	4	7541296
E1030	Kitchen	Fair	Sink/Lavatory, Commercial Kitchen, 2-Bowl	1	11	7541267
E1030	Kitchen	Fair	Foodservice Equipment, Refrigerator, 2-Door Reach-In [2]	1	9	7491357
E1030	Kitchen	Fair	Foodservice Equipment, Food Warmer, Proofing Cabinet on Wheels [8]	1	5	7614227
E1030	Kitchen	Good	Foodservice Equipment, Walk-In, Refrigerator	1	15	7541294
E1030	Kitchen	Fair	Foodservice Equipment, Steam Kettle	1	9	7541298
E1030	Kitchen	Good	Foodservice Equipment, Freezer, 2-Door Reach-In [6]	1	9	7614252
E1030	Kitchen	Fair	Foodservice Equipment, Prep Table Refrigerated, Salad/Sandwich	1	7	7614230
E1030	Kitchen	Fair	Foodservice Equipment, Food Warmer, Proofing Cabinet on Wheels [4]	1	7	7614232
E1030	Kitchen	Fair	Foodservice Equipment, Convection Oven, Single [G]	1	5	7541297
E1030	Kitchen	Fair	Foodservice Equipment, Prep Table Refrigerated, Salad/Sandwich	1	8	7614269
E1030	1302 Kitchen	Fair	Foodservice Equipment, Steamer, Tabletop	1	4	7614234
E1030	Kitchen	Fair	Foodservice Equipment, Convection Oven, Single [1]	1	5	7614275
E1030	Kitchen	Good	Foodservice Equipment, Freezer, 2-Door Reach-In [2]	1	9	7491279
E1030	Kitchen	Fair	Foodservice Equipment, Steamer, Tabletop	1	4	7491339
E1030	Kitchen	Good	Foodservice Equipment, Freezer, 2-Door Reach-In [4]	1	9	7614259
E1030	Staff Lounge	Good	Foodservice Equipment, Refrigerator, 2-Door Reach-In	1	4	7491284
E1030	Kitchen	Fair	Foodservice Equipment, Exhaust Hood, 8 to 10 LF	3	8	7541293
E1040	Throughout building	Good	Healthcare Equipment, Defibrillator (AED), Cabinet-Mounted	2	7	7541304
E1060	Kitchen	Good	Residential Appliances, Washer/Dryer Combo Unit	1	4	7541305
E1060	Kitchen	Good	Residential Appliances, Washer	1	11	7614256

**Component Condition Report | Broad Rock Elementary School / Main Building**

UF L3 Code	Location	Condition	Asset/Component/Repair	Quantity	RUL	ID
E2010	Throughout building	Fair	Casework, Countertop, Plastic Laminate	710 LF	8	7541307
E2010	Throughout building	Fair	Casework, Cabinetry, Economy	710 LF	9	7541306
<b>Accessibility</b>						
Y1050	Restrooms	NA	ADA Restrooms, Lavatory, Pipe Wraps/Insulation, Install	3	0	7636142
Y1060	Staff Lounge	NA	ADA Kitchen & Laundry Areas, Sink/Counter/Maneuverability, Minor Reconfiguration, Modify	1	0	7636141

**Component Condition Report | Broad Rock Elementary School / Site**

UF L3 Code	Location	Condition	Asset/Component/Repair	Quantity	RUL	ID
<b>Special Construction &amp; Demo</b>						
F1020	Site	Fair	Ancillary Building, Classroom/Office Module, Standard/Permanent	12,000 SF	24	7614241
F1020	Site	Fair	Ancillary Building, Classroom/Office Module, Standard/Permanent	4,300 SF	24	7614261
F1020	Site	Fair	Ancillary Building, Classroom/Office Module, Standard/Permanent	12,000 SF	24	7614268
<b>Pedestrian Plazas &amp; Walkways</b>						
G2020	Site	Fair	Parking Lots, Pavement, Asphalt, Mill & Overlay	55,758 SF	12	7541234
G2020	Site	Fair	Parking Lots, Pavement, Asphalt, Seal & Stripe	55,758 SF	3	7541233
G2030	Site	Fair	Sidewalk, Concrete, Large Areas	820 SF	16	7541232
<b>Athletic, Recreational &amp; Playfield Areas</b>						
G2050	Site	Fair	Athletic Surfaces & Courts, Basketball/General, Asphalt Pavement	54,900 SF	11	7491351
G2050	Site	Fair	Play Structure, Multipurpose, Large	1	7	7491298
G2050	Site	Fair	Playground Surfaces, Rubber, Chips 3" Depth	2,440 SF	7	7541230
G2050	Site	Fair	Athletic Surfaces & Courts, Basketball/General, Asphalt Pavement, Mill & Overlay	7,870 SF	14	7491299
G2050	Site	Fair	Sports Apparatus, Basketball, Backboard/Rim/Pole	2	13	7491305
G2050	Site	Fair	Play Structure, Multipurpose, Large	2	9	7541231
<b>Sitework</b>						
G2060	Building Exterior	Fair	Dumpster Enclosure, Wood/Vinyl Walls, 8' High (per LF), Replace/Install	44 LF	9	7541226
G2060	Site	Fair	Fences & Gates, Fence, Chain Link 6'	195 LF	24	7541229
G2060	Site	Fair	Signage, Property, Monument, Replace/Install	2	13	7541228
G2060	Site	Fair	Signage, Property, Monument, Replace/Install	1	9	7491342
G4050	Site	Fair	Pole Light Fixture w/ Lamps, any type 20' High, w/ LED Replacement, 400 W, Replace/Install	26	9	7541227

## Appendix E: Replacement Reserves

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Replacement Reserves Report



10/10/2024

Uniformat Code	Location	Description ID	Cost Description	Lifespan (EUL)	EA	RUL	Quantity	Unit	Unit Cost * Subtotal	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	Deficiency Repair Estimate
E1030	Kitchen	7491279	Foodservice Equipment, Freezer, 2-Door Reach-In, Replace	15	6	9	1	EA	\$5,100.00	\$5,100									\$5,100											\$5,100	
E1030	Kitchen	7491357	Foodservice Equipment, Refrigerator, 2-Door Reach-In, Replace	15	6	9	1	EA	\$4,600.00	\$4,600									\$4,600											\$4,600	
E1030	Kitchen	7541298	Foodservice Equipment, Steam Kettle, Replace	20	11	9	1	EA	\$30,000.00	\$30,000									\$30,000											\$30,000	
E1030	Kitchen	7614259	Foodservice Equipment, Freezer, 2-Door Reach-In, Replace	15	6	9	1	EA	\$5,100.00	\$5,100									\$5,100											\$5,100	
E1030	Kitchen	7614252	Foodservice Equipment, Freezer, 2-Door Reach-In, Replace	15	6	9	1	EA	\$5,100.00	\$5,100									\$5,100											\$5,100	
E1030	Kitchen	7541267	Sink/Lavatory, Commercial Kitchen, 2-Bowl, Replace	30	19	11	1	EA	\$2,100.00	\$2,100										\$2,100										\$2,100	
E1030	Kitchen	7541292	Foodservice Equipment, Dairy Cooler/Wells, Replace	15	4	11	1	EA	\$3,600.00	\$3,600										\$3,600										\$3,600	
E1030	Kitchen	7614242	Foodservice Equipment, Walk-In, Refrigerator, Replace	20	6	14	1	EA	\$15,000.00	\$15,000													\$15,000							\$15,000	
E1030	Kitchen	7541265	Sink/Lavatory, Commercial Kitchen, 3-Bowl, Replace	30	15	15	1	EA	\$2,500.00	\$2,500														\$2,500						\$2,500	
E1030	Kitchen	7541294	Foodservice Equipment, Walk-In, Refrigerator, Replace	20	5	15	1	EA	\$15,000.00	\$15,000														\$15,000						\$15,000	
E1030	Kitchen	7541302	Foodservice Equipment, Mixer, Freestanding, Replace	25	7	18	1	EA	\$14,000.00	\$14,000																\$14,000				\$14,000	
E1040	Throughout building	7541304	Healthcare Equipment, Defibrillator (AED), Cabinet-Mounted, Replace	10	3	7	2	EA	\$1,500.00	\$3,000							\$3,000									\$3,000				\$6,000	
E1060	Kitchen	7541305	Residential Appliances, Washer/Dryer Combo Unit, Replace	15	11	4	1	EA	\$1,400.00	\$1,400				\$1,400													\$1,400			\$2,800	
E1060	Kitchen	7614256	Residential Appliances, Washer, Replace	15	4	11	1	EA	\$850.00	\$850										\$850										\$850	
E2010	Throughout building	7541307	Casework, Countertop, Plastic Laminate, Replace	15	7	8	710	LF	\$50.00	\$35,500							\$35,500													\$35,500	
E2010	Throughout building	7541306	Casework, Cabinetry, Economy, Replace	20	11	9	710	LF	\$175.00	\$124,250								\$124,250												\$124,250	
Y1050	Restrooms	7636142	ADA Restrooms, Lavatory, Pipe Wraps/Insulation, Install	0	0	0	3	EA	\$80.00	\$240	\$240																			\$240	
Y1060	Staff Lounge	7636141	ADA Kitchen & Laundry Areas, Sink/Counter/Maneuverability, Minor Reconfiguration, Modify	0	0	0	1	EA	\$2,000.00	\$2,000	\$2,000																			\$2,000	
<b>Totals, Unescalated</b>										\$3,340	\$3,080	\$0	\$60,000	\$342,300	\$888,200	\$646,970	\$42,870	\$1,273,968	\$1,307,452	\$250,888	\$15,350	\$22,000	\$134,200	\$1,060,700	\$72,100	\$325,720	\$21,870	\$29,635	\$798,190	\$9,000	\$7,307,833
<b>Totals, Escalated (3.0% inflation, compounded annually)</b>										\$3,340	\$3,172	\$0	\$65,564	\$385,262	\$1,029,667	\$772,516	\$52,725	\$1,613,825	\$1,705,928	\$337,172	\$21,248	\$31,367	\$197,077	\$1,604,404	\$112,329	\$522,685	\$36,148	\$50,452	\$1,399,631	\$16,255	\$9,960,766

Broad Rock Elementary School / Site

Uniformat Code	Location	Description ID	Cost Description	Lifespan (EUL)	EA	RUL	Quantity	Unit	Unit Cost * Subtotal	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	Deficiency Repair Estimate
G2020	Site	7541233	Parking Lots, Pavement, Asphalt, Seal & Stripe	5	2	3	55758	SF	\$0.45	\$25,091			\$25,091				\$25,091					\$25,091					\$25,091			\$100,364	
G2020	Site	7541234	Parking Lots, Pavement, Asphalt, Mill & Overlay	25	13	12	55758	SF	\$3.50	\$195,153											\$195,153									\$195,153	
G2030	Site	7541232	Sidewalk, Concrete, Large Areas, Replace	50	34	16	820	SF	\$9.00	\$7,380															\$7,380				\$7,380		
G2050	Site	7491351	Athletic Surfaces & Courts, Basketball/General, Asphalt Pavement, Replace	25	14	11	54900	SF	\$6.50	\$356,850										\$356,850									\$356,850		
G2050	Site	7491305	Sports Apparatus, Basketball, Backboard/Rim/Pole, Replace	25	12	13	2	EA	\$4,750.00	\$9,500												\$9,500							\$9,500		
G2050	Site	7491299	Athletic Surfaces & Courts, Basketball/General, Asphalt Pavement, Mill & Overlay	25	11	14	7870	SF	\$3.50	\$27,545													\$27,545						\$27,545		
G2050	Site	7491298	Play Structure, Multipurpose, Large, Replace	20	13	7	1	EA	\$35,000.00	\$35,000						\$35,000													\$35,000		
G2050	Site	7541230	Playground Surfaces, Rubber, Chips 3" Depth, Replace	15	8	7	2440	SF	\$3.50	\$8,540						\$8,540													\$8,540		
G2050	Site	7541231	Play Structure, Multipurpose, Large, Replace	20	11	9	2	EA	\$35,000.00	\$70,000								\$70,000											\$70,000		
G2060	Site	7491342	Signage, Property, Monument, Replace/Install	20	11	9	1	EA	\$3,000.00	\$3,000								\$3,000											\$3,000		
G2060	Site	7541228	Signage, Property, Monument, Replace/Install	20	7	13	2	EA	\$3,000.00	\$6,000											\$6,000								\$6,000		
G2060	Building Exterior	7541226	Dumpster Enclosure, Wood/Vinyl Walls, 8' High (per LF), Replace/Install	20	11	9	44	LF	\$35.00	\$1,540								\$1,540											\$1,540		
G4050	Site	7541227	Pole Light Fixture w/ Lamps, any type 20' High, w/ LED Replacement, 400 W, Replace/Install	20	11	9	26	EA	\$4,000.00	\$104,000								\$104,000											\$104,000		
<b>Totals, Unescalated</b>										\$0	\$0	\$0	\$25,091	\$0	\$0	\$0	\$43,540	\$25,091	\$178,540	\$0	\$356,850	\$195,153	\$40,591	\$27,545	\$0	\$7,380	\$0	\$25,091	\$0	\$0	\$924,872
<b>Totals, Escalated (3.0% inflation, compounded annually)</b>										\$0	\$0	\$0	\$27,418	\$0	\$0	\$0	\$53,549	\$31,785	\$232,954	\$0	\$493,964	\$278,242	\$59,609	\$41,664	\$0	\$11,843	\$0	\$42,716	\$0	\$0	\$1,273,743

## Appendix F: Equipment Inventory List

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**D10 Conveying**

Index	ID	UFCode	Component Description	Attributes	Capacity	Building	Location Detail	Manufacturer	Model	Serial	Dataplate Yr	Barcode	Qty
1	7541257	D1010	<b>Elevator Controls</b>	Automatic, 1 Car	2500	Broad Rock Elementary School / Main Building	Elevator				2013		
2	7541256	D1010	<b>Passenger Elevator</b>	Overhead Traction, 2-5 Floors	2500 LB	Broad Rock Elementary School / Main Building	Elevator				2013		

**D20 Plumbing**

Index	ID	UFCode	Component Description	Attributes	Capacity	Building	Location Detail	Manufacturer	Model	Serial	Dataplate Yr	Barcode	Qty
1	7614244	D2010	<b>Pump</b>	Circulation/Booster, Domestic Water	5 HP	Broad Rock Elementary School / Main Building	Mechanical room	Lancaster Pumps	E90BH-5-3	2X0	2013	7690	
2	7541260	D2010	<b>Pump Station</b>	Duplex Mounted	10 HP	Broad Rock Elementary School / Main Building	Mechanical room	Lancaster Pumps	E90BH 5-3	2X0	2013	7672	
3	7491285	D2010	<b>Water Heater</b>	Electric, Residential	40 GAL	Broad Rock Elementary School / Main Building	Boiler room	Bradford White	M240S6DS-1NCWW	LM35335129	2013	7426	
4	7614225	D2010	<b>Water Heater</b>	Electric, Residential	40 GAL	Broad Rock Elementary School / Main Building	Modular restroom	Bradford White	Inaccessible	Inaccessible	2013		
5	7614231	D2010	<b>Water Heater</b>	Electric, Residential	40 GAL	Broad Rock Elementary School / Main Building	Modular restroom	Bradford White	RE340S6	NE37660014	2013	7714	
6	7541259	D2010	<b>Water Heater</b>	Indirect, 80 to 120 GAL	120 GAL	Broad Rock Elementary School / Main Building	Boiler room	Lochinvar	GV0504JR-5-006	D12J00050269	2013	7667	
7	7614233	D2010	<b>Water Softener</b>	Domestic Water	100 GPM	Broad Rock Elementary School / Main Building	Boiler room	Wessels Company	No dataplate	No dataplate	2013	7671	



8	7541258	D2020	<b>Supplemental Components</b>	Grease Trap/Interceptor, Undercounter	1	Broad Rock Elementary School / Main Building	Kitchen	No dataplate	No dataplate	No dataplate	2013		
<b>D30 HVAC</b>													
Index	ID	UFCode	Component Description	Attributes	Capacity	Building	Location Detail	Manufacturer	Model	Serial	Dataplate Yr	Barcode	Qty
1	7614272	D3020	<b>Boiler</b> [Boiler 1]	Gas, HVAC	2500 MBH	Broad Rock Elementary School / Main Building	Boiler room	MACH	C-2500	89071 27956	2013	7675	
2	7614271	D3020	<b>Boiler</b> [Boiler 2 ]	Gas, HVAC	2500 MBH	Broad Rock Elementary School / Main Building	Boiler room	MACH	C-2500	89071 27955	2013	7676	
3	7614270	D3020	<b>Heat Exchanger</b>	Plate & Frame, HVAC	10 GPM	Broad Rock Elementary School / Main Building	Boiler room	NA	No dataplate	No dataplate	2013	7688	
4	7541272	D3020	<b>Unit Heater</b>	Electric, 6 to 10 KW	10 KW	Broad Rock Elementary School / Main Building	Building entrances	SterliSterling erlingng	Inaccessible	Inaccessible	2013	7683	7
5	7614229	D3020	<b>Boiler Supplemental Components</b>	Expansion Tank	100 GAL	Broad Rock Elementary School / Main Building	Boiler room	Armstrong	No dataplate	No dataplate	2013	7673	
6	7614246	D3020	<b>Boiler Supplemental Components</b>	Expansion Tank	100 GAL	Broad Rock Elementary School / Main Building	Boiler room	Wessels Company	No dataplate	No dataplate	2013	7670	
7	7614265	D3020	<b>Boiler Supplemental Components</b>	Expansion Tank	100 GAL	Broad Rock Elementary School / Main Building	Boiler room	Armstrong	No dataplate	No dataplate	2013	7674	
8	7614273	D3020	<b>Boiler Supplemental Components</b>	Expansion Tank	100 GAL	Broad Rock Elementary School / Main Building	Boiler room	Wessels Company	No dataplate	No dataplate	2013	7669	
9	7491320	D3020	<b>Boiler Supplemental Components</b> [7668]	Expansion Tank	100 GAL	Broad Rock Elementary School / Main Building	Boiler room	Wessels Company	No dataplate	No dataplate	2013	7668	
10	7541273	D3030	<b>Cooling Tower</b>	(Typical) Open Circuit , 101 to 200 TON	120 TON	Broad Rock Elementary School / Main Building	Site	McQuay	12120-230	10122303502-011	2013	7689	

11	7614279	D3030	<b>Heat Pump</b> [WW-1]	Water Source, 30 TON	30 TON	Broad Rock Elementary School / Main Building	Boiler room	FHP Manufacturing	WW360-4CSC	3540-203-000002-T111M49053	2013	7663
12	7491352	D3030	<b>Heat Pump</b> [WW-1]	Water Source, 30 TON	30 Ton	Broad Rock Elementary School / Main Building	Boiler room	FHP Manufacturing	WW360-4CSC	3540-203-000001-T111M49053	2013	7661
13	7614280	D3030	<b>Heat Pump</b> [WW-1]	Water Source, 30 TON	30 TON	Broad Rock Elementary School / Main Building	Boiler room	FHP Manufacturing	WW360-4CSC	3540-203-000005-T111M49053	2013	7664
14	7614224	D3030	<b>Heat Pump</b> [WW-1]	Water Source, 30 TON	30 TON	Broad Rock Elementary School / Main Building	Boiler room	FHP Manufacturing	WW360-4CSC	3540-203-000003-T111M49053	2013	7662
15	7614260	D3030	<b>Split System Ductless</b>	Single Zone, 2.5 to 3 TON	3 TON	Broad Rock Elementary School / Main Building	Roof	EMI	Illegible	Illegible	2013	7751
16	7614245	D3030	<b>Split System Ductless</b>	Single Zone, 2.5 to 3 TON	3 TON	Broad Rock Elementary School / Main Building	Roof	EMI	Illegible	Illegible	2013	7744
17	7491354	D3030	<b>Split System Ductless</b>	Single Zone, 2.5 to 3 TON	3 TON	Broad Rock Elementary School / Main Building	Roof	EMI	Inaccessible	Illegible	2013	7745
18	7614276	D3050	<b>Pump</b>	Distribution, HVAC Heating Water	30 HP	Broad Rock Elementary School / Main Building	Boiler room	Weg	1030 L80T3E286TC	286TC	2013	7679
19	7541276	D3050	<b>Pump</b>	Distribution, HVAC Heating Water	3 HP	Broad Rock Elementary School / Main Building	Building entrances	Armstrong Air	4300T	700314	2013	7681
20	7614278	D3050	<b>Pump</b>	Distribution, HVAC Heating Water	30 HP	Broad Rock Elementary School / Main Building	Boiler room	Weg	30180138286TC	Illegible	2013	7680
21	7614264	D3050	<b>Pump</b>	Distribution, HVAC Heating Water	3 HP	Broad Rock Elementary School / Main Building	Boiler room	Weg	4300T	No dataplate	2013	7678

22	7614277	D3050	<b>Pump</b>	Distribution, HVAC Heating Water	3 HP	Broad Rock Elementary School / Main Building	Boiler room	WEG	101-263-4545	No dataplate	2013	7677
23	7491308	D3050	<b>Pump</b> [7665]	Distribution, HVAC Chilled or Condenser Water	20 HP	Broad Rock Elementary School / Main Building	Boiler room	WEG	020180T3E256TC	22SET1 110 13402241	2013	7665
24	7614247	D3050	<b>Pump</b> [7666]	Distribution, HVAC Chilled or Condenser Water	20 HP	Broad Rock Elementary School / Main Building	Boiler room	WEG	02018013E2561C	22SET11 1013402243	2013	7666
25	7614243	D3050	<b>Packaged Unit</b>	RTU, Pad or Roof-Mounted	12 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	Inaccessible	Inaccessible	2013	7758
26	7614249	D3050	<b>Packaged Unit</b> [ERU-1]	RTU, Pad or Roof-Mounted	25 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	RN-025-3-0-E70-000	201205-BNCT05513	2013	7753
27	7614274	D3050	<b>Packaged Unit</b> [ERU-2]	RTU, Pad or Roof-Mounted	20 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	RN-018-3-0-E70-000	201205-BNCT05514	2013	7754
28	7614254	D3050	<b>Packaged Unit</b> [ERU-3]	RTU, Pad or Roof-Mounted	18 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	RN-018-3-0-E70-000	201205-BNCT05515	2013	7750
29	7614236	D3050	<b>Packaged Unit</b> [ERU-4]	RTU, Pad or Roof-Mounted	26 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	RN-026-3-0-E70A-000	201205-BNCT05519	2013	7752
30	7491278	D3050	<b>Packaged Unit</b> [ERU-5]	RTU, Pad or Roof-Mounted	25 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	RN-025-3-0-E70-000	201205-BNCR05516	2013	7746
31	7614239	D3050	<b>Packaged Unit</b> [ERU-6]	RTU, Pad or Roof-Mounted	25 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	RN-025-3-0-E70-000	201205-BNCT05517	2013	7743
32	7614258	D3050	<b>Packaged Unit</b> [RTU 1]	RTU, Pad or Roof-Mounted	40 TON	Broad Rock Elementary School / Main Building	Roof	AAON, Inc.	RN-040-3-0-E70A-000	201206-BNCV05520	2013	7749

33	7614257	D3060	<b>Exhaust Fan</b> [EF-7]	Centrifugal, 12" Damper	110 CFM	Broad Rock Elementary School / Main Building	Roof	Cook	GB-071-6-X	12848621 1204	2013	7654	
34	7541279	D3060	<b>Exhaust Fan</b> [EF-8]	Centrifugal, 12" Damper	110 CFM	Broad Rock Elementary School / Main Building	Roof	Cook	6B-071-6-X	12848627 1205	2013	7747	
35	7614281	D3060	<b>Exhaust Fan</b> [EF-9]	Centrifugal, 12" Damper	150 CFM	Broad Rock Elementary School / Main Building	Roof	Greenheck	GB-071-6-X	12848621 1205	2013	7755	
<b>D50 Electrical</b>													
Index	ID	UFCode	Component Description	Attributes	Capacity	Building	Location Detail	Manufacturer	Model	Serial	Dataplate Yr	Barcode	Qty
1	7491296	D5010	<b>Generator</b>	Gas or Gasoline	80 KW	Broad Rock Elementary School / Main Building	Building exterior	Olympian	No dataplate	No dataplate	2013	7687	
2	7614248	D5010	<b>Solar Power</b> [Inverter #1]	Inverter	60 KW	Broad Rock Elementary School / Main Building	Roof	Chnt power	CPS SCA60KTL-D0/US-480	101780910	2013	7756	
3	7614237	D5010	<b>Solar Power</b> [Inverter #2]	Inverter	60 KW	Broad Rock Elementary School / Main Building	Roof	Chnt power	CPS SCA60KTL-D0/US-480	1013001911000	2013	7742	
4	7614251	D5010	<b>Solar Power</b> [Inverter #3]	Inverter	60 KW	Broad Rock Elementary School / Main Building	Roof	Chnt power	CPS SCA60KTL-D0/US-480	11451417017	2013	7757	
5	7491289	D5010	<b>Automatic Transfer Switch</b> [ATS-OPT]	ATS	600 AMP	Broad Rock Elementary School / Main Building	Electrical room 1303D	Zenith	75T3HFISCUNLP	34349-17222-041	2013	7691	
6	7614226	D5020	<b>Secondary Transformer</b>	Dry, Stepdown	30 KVA	Broad Rock Elementary School / Main Building	Electrical room 1303D	Square D	EE30T3H	No dataplate	2013	7684	
7	7541283	D5020	<b>Secondary Transformer</b> [TC]	Dry, Stepdown	30 KVA	Broad Rock Elementary School / Main Building	Electrical room 1303D	Square D	EE30T3H	No dataplate	2013	7692	
8	7541282	D5020	<b>Switchboard</b>	277/480 V	2000 AMP	Broad Rock Elementary School / Main Building	Electrical room 1303D	Square D	29938411001	No dataplate	2013	7685	

9	7541284	D5020	<b>Distribution Panel [DPC]</b>	277/480 V, 1200 AMP	1200 AMP	Broad Rock Elementary School / Main Building	Electrical room 1303D	Square D	1229938411002001	No dataplate	2013	5670
10	7541285	D5030	<b>Variable Frequency Drive</b>	VFD, by HP of Motor, 100 HP	100 HP	Broad Rock Elementary School / Main Building	Mechanical room	ABB	ACH550-VCR-031A-4	L1000CZZLZ	2013	7682

### D70 Electronic Safety & Security

Index	ID	UFCode	Component Description	Attributes	Capacity	Building	Location Detail	Manufacturer	Model	Serial	Dataplate Yr	Barcode	Qty
1	7614255	D7050	<b>Fire Alarm Panel</b>	Multiplex		Broad Rock Elementary School / Main Building	1406 Data	SimplexGrinnell	No dataplate	No dataplate	2013		

### E10 Equipment

Index	ID	UFCode	Component Description	Attributes	Capacity	Building	Location Detail	Manufacturer	Model	Serial	Dataplate Yr	Barcode	Qty
1	7614240	E1030	<b>Foodservice Equipment</b>	Convection Oven, Single		Broad Rock Elementary School / Main Building	Kitchen	Blodgett	Inaccessible	Inaccessible	2013	7711	
2	7541301	E1030	<b>Foodservice Equipment</b>	Deep Fryer		Broad Rock Elementary School / Main Building	Kitchen	Cleveland Range	SET10208P	120823054342	2013	7294	
3	7541293	E1030	<b>Foodservice Equipment</b>	Exhaust Hood, 8 to 10 LF		Broad Rock Elementary School / Main Building	Kitchen	CaptiveAire Systems	6024ND 2	No dataplate	2013	7488	3
4	7541296	E1030	<b>Foodservice Equipment</b>	Icemaker, Freestanding		Broad Rock Elementary School / Main Building	Kitchen	Hoshizaki	IYT0450A161	1120490248	2013	7737	
5	7541302	E1030	<b>Foodservice Equipment</b>	Mixer, Freestanding		Broad Rock Elementary School / Main Building	Kitchen	Hobart	HL200	311 603770	2013	7485	
6	7541295	E1030	<b>Foodservice Equipment</b>	Prep Table Refrigerated, Salad/Sandwich		Broad Rock Elementary School / Main Building	Kitchen	Delfield	SCSC 60 B	1207150002224	2013	7735	
7	7614230	E1030	<b>Foodservice Equipment</b>	Prep Table Refrigerated, Salad/Sandwich		Broad Rock Elementary School / Main Building	Kitchen	Delfield	SCSC 60 B	Illegible	2013	7707	



8	7614269	E1030	<b>Foodservice Equipment</b>	Prep Table Refrigerated, Salad/Sandwich	Broad Rock Elementary School / Main Building	Kitchen	Delfield	SCSC 60 B	1207150002230	2013	7734
9	7491284	E1030	<b>Foodservice Equipment</b>	Refrigerator, 2-Door Reach-In	Broad Rock Elementary School / Main Building	Staff Lounge	Manitowoc	GBR1-S	1120057800	2013	7708
10	7541298	E1030	<b>Foodservice Equipment</b>	Steam Kettle	Broad Rock Elementary School / Main Building	Kitchen	Cleveland	Inaccessible	Inaccessible	2013	7728
11	7614250	E1030	<b>Foodservice Equipment</b>	Steamer, Tabletop	Broad Rock Elementary School / Main Building	1302 Kitchen	Delfield	SC-5-NU	221-2820101719	2013	7733
12	7614234	E1030	<b>Foodservice Equipment</b>	Steamer, Tabletop	Broad Rock Elementary School / Main Building	1302 Kitchen	Delfield	SCSC-60-NU	1508150002	2013	7706
13	7491339	E1030	<b>Foodservice Equipment</b>	Steamer, Tabletop	Broad Rock Elementary School / Main Building	Kitchen	Convotherm	SC-5-NU	221-2820101720	2013	7736
14	7614242	E1030	<b>Foodservice Equipment</b>	Walk-In, Refrigerator	Broad Rock Elementary School / Main Building	Kitchen	Nor-Lake	Inaccessible	Inaccessible	2013	7704
15	7541294	E1030	<b>Foodservice Equipment</b>	Walk-In, Refrigerator	Broad Rock Elementary School / Main Building	Kitchen	Thermkool	Inaccessible	Inaccessible	2013	7482
16	7614275	E1030	<b>Foodservice Equipment [1]</b>	Convection Oven, Single	Broad Rock Elementary School / Main Building	Kitchen	Convotherm	OSG-6.20	1208230000060	2013	7697
17	7491304	E1030	<b>Foodservice Equipment [11]</b>	Dairy Cooler/Wells	Broad Rock Elementary School / Main Building	Kitchen	True Manufacturing Co	No dataplate	No dataplate	2013	7409
18	7614282	E1030	<b>Foodservice Equipment [2]</b>	Convection Oven, Single	Broad Rock Elementary School / Main Building	Kitchen	Convotherm	OSG-6.20	1208230000060*	2013	7700

19	7491279	E1030	<b>Foodservice Equipment [2]</b>	Freezer, 2-Door Reach-In	Broad Rock Elementary School / Main Building	Kitchen	Traulsen	620010	T48405113	2013	7693
20	7491357	E1030	<b>Foodservice Equipment [2]</b>	Refrigerator, 2-Door Reach-In	Broad Rock Elementary School / Main Building	Kitchen	Traulsen	GCR2P-S	1120460019	2013	7705
21	7614263	E1030	<b>Foodservice Equipment [3]</b>	Convection Oven, Single	Broad Rock Elementary School / Main Building	Kitchen	Convotherm	OSG-6.20	1208230000064	2013	7698
22	7614238	E1030	<b>Foodservice Equipment [4]</b>	Convection Oven, Single	Broad Rock Elementary School / Main Building	Kitchen	Convotherm	OSG-6.20	1208230000063	2013	7722
23	7614232	E1030	<b>Foodservice Equipment [4]</b>	Food Warmer, Proofing Cabinet on Wheels	Broad Rock Elementary School / Main Building	Kitchen	True Manufacturing Co	TR2R 2S	753-2679	2013	7730
24	7614259	E1030	<b>Foodservice Equipment [4]</b>	Freezer, 2-Door Reach-In	Broad Rock Elementary School / Main Building	Kitchen	True Manufacturing Co	TR2R 2S	753-2675	2013	7729
25	7614262	E1030	<b>Foodservice Equipment [6]</b>	Convection Oven, Single	Broad Rock Elementary School / Main Building	Kitchen	Garland	Inaccessible	Illegible	2013	7739
26	7541292	E1030	<b>Foodservice Equipment [6]</b>	Dairy Cooler/Wells	Broad Rock Elementary School / Main Building	Kitchen	Beverage-Air Corporation	TMC 49 S DS SS	7292720	2013	774q
27	7614228	E1030	<b>Foodservice Equipment [6]</b>	Food Warmer, Proofing Cabinet on Wheels	Broad Rock Elementary School / Main Building	Kitchen	True Manufacturing Co	TR2R 2S	753-2678	2013	7731
28	7614266	E1030	<b>Foodservice Equipment [6]</b>	Food Warmer, Proofing Cabinet on Wheels	Broad Rock Elementary School / Main Building	Kitchen	Cres Cor	No dataplate	No dataplate	2013	7709
29	7614252	E1030	<b>Foodservice Equipment [6]</b>	Freezer, 2-Door Reach-In	Broad Rock Elementary School / Main Building	Kitchen	True Manufacturing Co	TR2R 2S	753-2674	2013	7732

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30	7541290	E1030	<b>Foodservice Equipment</b> [7]	Food Warmer, Proofing Cabinet on Wheels	Broad Rock Elementary School / Main Building	Kitchen	Cleveland	22CGT6.1	1208230000550	2013	7727
31	7614227	E1030	<b>Foodservice Equipment</b> [8]	Food Warmer, Proofing Cabinet on Wheels	Broad Rock Elementary School / Main Building	Kitchen	Cleveland	22CGT6.1	1208230000565	2013	7726
32	7541297	E1030	<b>Foodservice Equipment</b> [G]	Convection Oven, Single	Broad Rock Elementary School / Main Building	Kitchen	5	Inaccessible	Inaccessible	2013	7724
33	7541304	E1040	<b>Healthcare Equipment</b>	Defibrillator (AED), Cabinet-Mounted	Broad Rock Elementary School / Main Building	Throughout building				2013	2

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