



# FACILITIES MANAGEMENT BUILDING

17307 Cannery Road, Milford, Virginia 22514

## Facility Condition Assessment

Caroline County Public Schools

April 4, 2024



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# SECTION ONE

*Overview*



## OVERVIEW

### Purpose

RRMM Architects is pleased to present this Facility Condition Assessment to Caroline County Public Schools. The overall purpose of this assessment is to document the present condition of the Maintenance Building to assist Caroline County Public Schools (“CCPS”) in forecasting funding requirements to address deficiencies, upgrades, renovations and/or replacement. RRMM Architects was asked to produce an assessment for the Maintenance Building in order to provide CCPS a summary of current school and site deficiencies with a method to forecast future costs pertaining to potential upgrades, replacement, renovations and/or building additions.

### Methodology

RRMM Architects assembled a highly-experienced team of design professionals that have experience working together on many projects over many years for this assessment. Our team includes:

RRMM Architects, Prime Consultant and Team Leader, Richmond, VA;

VHB, Inc., Civil Engineers, Richmond, VA;

Speight, Marshall & Francis, Structural Engineers, Richmond, VA;

Thompson Consulting Engineers, Mechanical, Electrical, and Plumbing Engineers, Glen Allen, VA;

Foodservice Consultants Studio, Foodservice Consultants, Richmond, VA.

This study is built around the following primary components:

1. Assessment of the condition of all building systems and site features.
2. Assessment of each facility in comparison to modern standards for safety, security, energy conservation, accessibility and code compliance.

### Limits of this Study

This assessment is focused on a physical inspection of the existing building (interior and exterior) and site conditions to include the areas or building systems noted below;

- Exterior Site Conditions
- Exterior Building Envelope
- Interior Finishes
- ADA Accessibility Compliance
- Building Code and Safety/Security (OSHA) Concerns
- Roofing System
- Mechanical Systems
- Electrical Systems
- Plumbing Systems
- Structural Assessment

- Fire Protection System Assessment
- Food Service (Kitchen) Assessment
- Hazardous Materials Assessment

Physical inspections were limited to analyzing the condition of building systems, components and/or elements that were visible. Destructive investigation was not a part of this assessment.

### **Basis for Recommendations / How to use this Study**

It is important to note that our evaluations and recommendations offered herein involve professional judgment, practical experience, and generally-accepted design industry practices. However, the consideration of renovating or maintaining buildings can be a complex and tedious undertaking. The various systems within a building are inter-connected; therefore, a decision or recommendation on one system can easily have a “ripple” effect on other systems. We also want to emphasize that our recommendations are not complete without active and thorough discussions with you as our client, to make sure we carefully consider the values and priorities of Caroline County Public Schools.

### **Assessment Format**

Following this Overview are individual sections that focus on the condition of the Maintenance Building. Each section is divided into the following areas:

#### **Introduction**

The introduction (and executive summary) includes a brief description of the facility, its age and a brief summary of the primary concerns at the facility.

#### **Civil Assessment (Site and Outdoor Facilities)**

An overview of the existing site and outdoor facilities conditions.

#### **Architectural Assessment**

This assessment reviews the physical condition of the exterior and interior of each school structure and evaluates the condition of building systems, materials and finishes.

#### **ADA (Americans with Disabilities Act) Compliance**

As part of this assessment, we conducted a limited visual observation for ADA compliance. It should be noted that the limited observations described herein do not comprise a full ADA Compliance Survey, but only a general comparison of the existing facility to the requirements of the 2010 ADA Standards for Accessible Design requirements for altered and new construction.

#### **Building Code and Safety/Security (OSHA) Concerns**

This assessment evaluates those items that are most deficient in comparison to modern building standards, that are considered reasonably achievable, and that have the most detrimental impact on health, safety or accessibility if not remedied. Building Code “compliance” is a subjective consideration since most existing facilities are “grandfathered” due to their compliance at the time of their original construction.

This assessment also evaluates building conditions that create and/or potentially create safety/security concerns relative to OSHA regulations and standards.

#### Roof Systems Assessment

This assessment investigates the roof assemblies and their condition. This includes materials, performance, active leaks (if any) and remaining life.

#### Mechanical Systems Assessment

This assessment evaluates the types of heating, ventilating and cooling systems that are operating within the school. The study evaluates these components based on age and condition and describes shortcomings and/or recommendations compared to the current building code requirements.

#### Electrical Systems Assessment

This assessment evaluates the electrical service to the building and power distribution throughout, the interior and exterior lighting needs, energy conservation and the emergency power and fire alarm systems. This study also includes intercom and clock systems, surveillance systems and provides information on compliance with fire alarm code requirements.

#### Plumbing Systems Assessment

The plumbing evaluation focuses on the domestic water service and plumbing components distributed throughout the facility. This evaluation also includes domestic hot water equipment and sanitary systems.

#### Structural Assessment

This assessment provides a visual structural survey of the existing building structure based on the structural components and as-built drawings provided by CCPS.

#### Fire Protection System Assessment

An overview of the existing fire protection (fire alarm and sprinkler) system conditions.

#### Food Service (Kitchen) Assessment

This assessment evaluates the age and condition of the kitchen equipment and kitchen/equipment finishes relative to code compliance.

#### Hazardous Materials Assessment

A hazardous materials assessment was not completed as a part of this study. A copy of a previously completed Hazardous Materials Assessment or AHERA Report was not provided to the design/evaluation team for review.

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# SECTION TWO

## *Executive Summary*



## EXECUTIVE SUMMARY

### Snapshot Overview

The overall objective of this assessment is to document the present condition of the Maintenance Building to assist Caroline County Public Schools (CCPS) in forecasting funding requirements to address deficiencies, upgrades, renovations and/or replacement. A physical review and analysis of the existing site and building conditions was performed with the overall condition snapshot of significant building systems, equipment and/or issues identified in the table below.

### Summary

As summarized in the table below, the Facility Condition Assessment completed for the Maintenance Building indicates the school is overall in **fair condition** and identified several exterior and interior concerns along with ADA and code compliance issues that should be considered in further detail for performance by the school system.

ASSESSED AREA	OVERALL CONDITION				
	Very Poor	Poor	Fair	Good	Excellent
Civil Assessment	N/A				
Architectural Assessment (Exterior)			✘		
Architectural Assessment (Interior)				✘	
ADA Compliance			✘		
Code Compliance (and Safety/Security)				✘	
Roof Systems Assessment				✘	
Mechanical Systems Assessment		✘			
Electrical Systems Assessment			✘		
Plumbing Systems Assessment		✘			
Structural Assessment				✘	
Fire Protection System Assessment		✘			
Food Service (Kitchen) Assessment	N/A				
Hazardous Materials Assessment	N/A				
<b>TOTALS</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>0</b>

An "✘" positioned on the line between two overall condition ratings (i.e. poor and fair) indicates the overall assessed area condition is between ratings. Typically, this reveals an equal split in the ranking of several systems or components within an assessed area. In this case, the overall condition is always accounted for in the lesser of the two overall condition totals at the bottom of the matrix.

### Overall Condition Rankings

The overall purpose of this section is to provide greater clarity as to the rating categories (i.e. Excellent, Good, Fair, Poor and Very Poor) used above to categorize building assets or systems for Caroline County Public Schools. Each rating category identifies the level of maintenance, deficiency, upgrade, renovation and/or replacement required per building asset or system. The below rating categories were used by the assessor to represent the general condition of each building asset or system.

CONDITION RANKINGS		
5	EXCELLENT	New or Like-New Condition (no issues to report; normal scheduled maintenance required)
4	GOOD	Good Condition (no reported issues/concerns; minimal minor repairs needed)
3	FAIR	Average Wear for Building Age (some functional challenges; minor/major repairs needed)
2	POOR	Worn from Use (functional challenges; major repairs needed; close to end of life cycle)
1	VERY POOR	Extremely Worn or Damaged (immediate replacement required; system unsafe)
N/A	N/A	Not Applicable

### **Excellent**

System is in “like new” condition and operating as designed.

- No defects
- As new condition and appearance

Works that:

- can be reasonably deferred beyond 10 years and reassessed at a future date.

### **Good**

System is operating as designed with minor maintenance and/or remedial work recommended. Newer system and well maintained and/or little or no observed items of concern requiring attention in the near future.

- Minor defects
- Superficial wear and tear
- Some deterioration to finishes
- Major maintenance not required

Works that:

- have minimal effect on the operational functionality of the system
- are likely to need attention if not properly maintained in 6-10 years.

### **Fair**

System is aging with noteworthy corrective action required. Older item and/or some observed items of concern requiring attention, repair or replacement in the near future.

- Average condition
- Defects are evident
- Worn finishes require maintenance
- Services are functional but need attention
- Significant deferred maintenance work exists

Works that:

- affect the operational functionality of the system
- are likely to lead to serious deterioration and higher future repair costs if not addressed between 3-6 years.

### **Poor**

System replacement and/or major corrective action is required. Projects requiring immediate action to provide safety and protection to people and/or protection against costly damage. Numerous items of concern observed and/or general overall deterioration of the system requiring attention, repair or replacement in the near future.

- Significant defects are evident
- Functional challenges exist
- Potential structural problems
- Inferior appearance
- Major repairs are needed
- Components fail frequently

Works needed to:

- Meet maintenance and/or code related statutory obligation and due diligence requirements
- Prevent serious disruption of building activities and/or may incur higher costs if not addressed within 1-3 years.

### **Very Poor**

Immediate system replacement is required. Projects requiring immediate action to provide safety and protection to people and/or protection against costly damage. Significant overall deterioration of the system requiring attention, repair or replacement immediately.

- Badly deteriorated
- Structural problems
- Inferior appearance
- Major defects are evident
- Components fail frequently
- Not operational or viable

Works needed to:

- Meet maintenance and/or code related statutory obligation and due diligence requirements
- Ensure the health and safety of building occupants and users
- Prevent serious disruption of building activities and/or may incur higher costs if not addressed within 0-1 year.

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# SECTION THREE

## *Assessments*



## CONDITION ASSESSMENT

### Introduction

The Maintenance Building was originally constructed in 2006 comprises approximately 4,350 square feet while situated on an approximately 14.22 site, shared with Bowling Green Elementary School.

Below is a breakdown of operational functions currently housed within the structure.

#### Original Building (2006)

The original structure totaling approximately 4,350 square feet (shown below in yellow) currently houses an administration office suite, restrooms, and shop/storage area for Caroline County Facilities Management.



Original Building (Yellow)

2006

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## Civil Assessment

A civil (site) assessment was not completed as a part of this Facility Condition Assessment. Based on the age and projected future use of the Maintenance Building, the school division indicated the completion of a civil (site) assessment was not required.

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## Architectural Assessment

### Exterior

The building is generally in fair condition.

The exterior sheet metal and metal framed walls are in fair condition with limited deterioration including exterior dirt/algae growth and leaks at the downspout-to-gutter connections. By not efficiently directing water through the downspouts, water may prematurely erode and penetrate other building materials and lead to additional deficiencies in the coming years.



**PHOTO AE.01A**  
**EXTERIOR DIRT / ALGAE GROWTH**

*Condition: Fair*  
*Quantity: 100% Exterior Powerwash*



**PHOTO AE.01B**  
**EXTERIOR DIRT / ALGAE GROWTH**

*Condition: Fair*  
*Quantity: 100% Exterior Powerwash*



**PHOTO AE.02A**  
**DETERIORATED GUTTERS & DOWNSPOUTS**

*Condition: Fair*  
*Quantity: Approx. 160 LF*



**PHOTO AE.02B**  
**DETERIORATED GUTTERS & DOWNSPOUTS**

*Condition: Fair*  
*Quantity: Approx. 160 LF*



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## Interior

Overall, the building's interior appears to be in fair to good condition. The building interior finishes are in fair condition. The main office suite has vinyl composition tile (VCT) flooring in fair condition. The storage bay has sealed concrete flooring in fair condition. The main office suite has gypsum wallboard walls and ceilings in good condition. The storage bay has exposed structural frame walls with building insulation and exposed ceiling in good condition.

Single toilets have vinyl composition tile (VCT) flooring which appears to be in good condition. The walls and ceilings are gypsum wall board and appear to be in good condition. The sinks and toilet fixtures appear to be in good condition.

**PHOTO AI.01**  
**DAMAGED FLOORING (VCT) AND DOOR**  
**WEATHER STRIP**

*Condition: Fair*  
*Quantity: Approx. 6 SF*





**PHOTO AI.02**  
**FRONT OFFICE AREA**



**PHOTO AI.03**  
**REAR OFFICE AREA**  
Section 3.4 - 2



## ADA (Americans with Disabilities Act) Compliance

A limited ADA Compliance Assessment of the Maintenance Building (built in 2006) was conducted as part of the Facility Condition Assessment. The following requirements to provide additional accessible accommodations for students, staff and visitors were noted:

1. Replace existing doorknobs with code compliant hardware.
2. Provide adequate/proper maneuvering clearances on pull and push sides of manual swinging doors.
3. Provide guards on exposed under sink piping.
4. Upgrade restroom to meet accessibility standards.

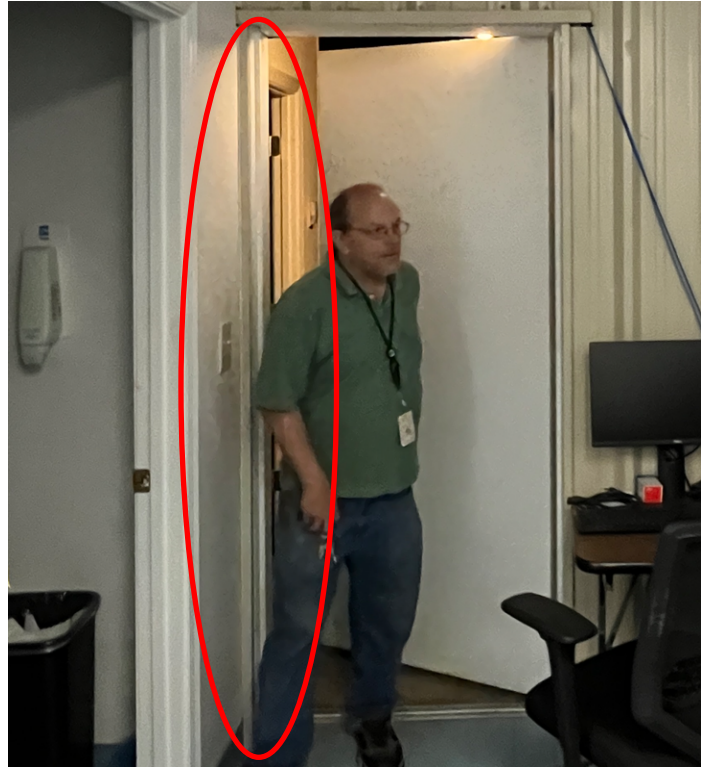
**PHOTO AA.01**  
**DOOR HARDWARE - OPERABLE PARTS**  
**(ADAAG 309.4)**

*Condition: Poor*  
*Quantity: (3) Locations*



**PHOTO AA.02**  
**MANUEVERING CLEARANCES TO STORAGE**  
**BAY**  
**(ADAAG 404.2.4.1)**

*Condition: Fair*  
*Quantity: (1) Location*



**PHOTO AA.03**  
**LAVATORIES & SINKS - EXPOSED PIPES**  
**(ADAAG 606.5)**

*Condition: Poor / Fair*  
*Quantity: (2) Sinks*



**PHOTO AA.04**  
**TOILET ROOM(S) - GRAB BAR SPACE,**  
**EXPOSED PIPES, AND REMOVE STORED**  
**MATERIALS**  
**(ADAAG 604.3, 604.5, 606.5 & 609.3)**

*Condition: Fair*  
*Quantity: (1) Restroom*



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## **Building Code Compliance (and Safety/Security) Assessment**

A limited Building Code Compliance and Safety/Security assessment of the Maintenance Building (built in 2006) was conducted as part of the Facility Condition Assessment. The following code compliance and safety/security concerns were noted during our site visit.

1. Missing guards / lenses on lighting fixtures
2. Stored items around electrical panel boards and within panelboard clearances.

**PHOTO AB.01  
FLOURESCENT LIGHT GUARDS (OSHA)**

*Condition: Fair  
Quantity: Storage Area*



**PHOTO AB.02  
PROPER ELECTRICAL PANEL CLEARANCE  
(NEC 110-26)**

*Condition: Fair / Good  
Quantity: (1) Location*



## Roof Systems Assessment

Overall, the roof is in good condition.

The overall roof consists of standing seam metal panel roof system of different elevations and totals approximately 4,350 square feet. The sloped standing seam metal panel roof shows limited evidence of deterioration.

A standing seam metal (SSM) roof is a durable roofing system constructed with long panels running vertically from the roof's ridge down to the eaves with panels that have raised interlocking seams connecting them side by side. SSM roofs allow for thermal movement, meaning the panels can expand and contract with temperature changes without compromising the integrity of the roof. The life expectancy for this type of roof is 40 to 50 years.

To maintain the life expectancy of the roof system, the roof should be routinely checked for: roof panel oxidation (rusting), algae/mildew growth, and debris build up in roof gutters. Oxidation of the roof panels and standing moisture from debris will allow moisture to penetrate the roof system and compromise its integrity and effectiveness, resulting in a premature failure of the roof system.



**PHOTO AR.01**  
**STANDING SEAM METAL PANEL ROOF**

*Condition: Good*  
*Quantity: 4,350 SF*





## Mechanical Systems Assessment

Overall, the mechanical system is in poor to fair condition.

**Decentralized HVAC** equipment provides air conditioning and ventilation for the front office. The front office area of the building is served by a residential split air handling unit. This equipment was installed in 2005 and is nearing the end of its expected life and should be considered for replacement. There is also no outside air provided for ventilation. This should be added per code requirements.

**Terminal heating** equipment provides heat for the warehouse. There is one propane fired unit heater that is in fair condition and should be considered for replacement in four (4) to six (6) years.

**Ductwork and Air Terminals.** The ductwork above the admin portion of the building was above a hard ceiling and was inaccessible. The air terminals in the admin area were in good condition. The exposed ductwork in the warehouse portion of the building is in good condition. There is a ceiling exhaust fan that is in poor condition and should be replaced.

**Building Controls.** The building does not have a building automation system with direct digital controls. The split system residential unit has a stand-alone thermostats.

**PHOTO M.01  
ADMIN AREA DIFFUSER**

*Condition: Good  
Quantity: (6)*



**PHOTO M.02**  
**AHU THERMOSTAT**

*Condition: Good*  
*Quantity: (1)*



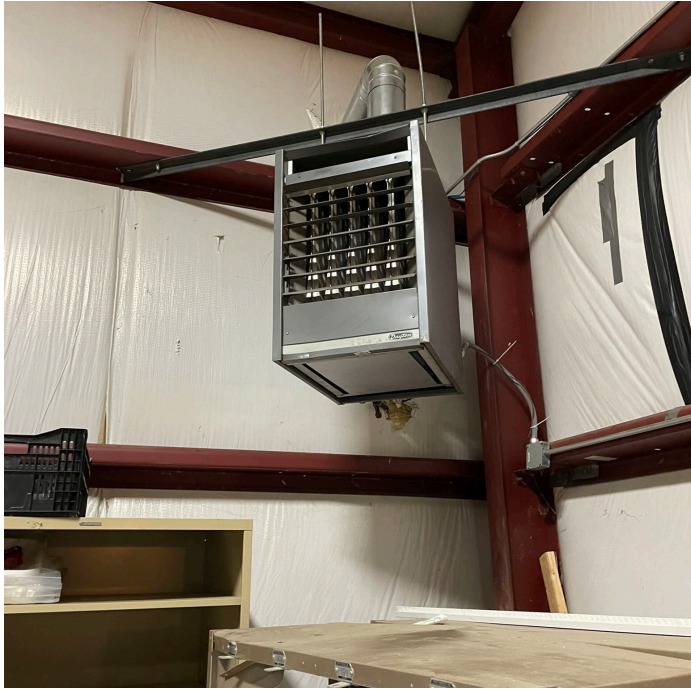
**PHOTO M.03**  
**AIR HANDLING UNIT**

*Condition: Poor*  
*Quantity: (1)*



**PHOTO M.04  
UNIT HEATER**

*Condition: Fair  
Quantity: (1)*



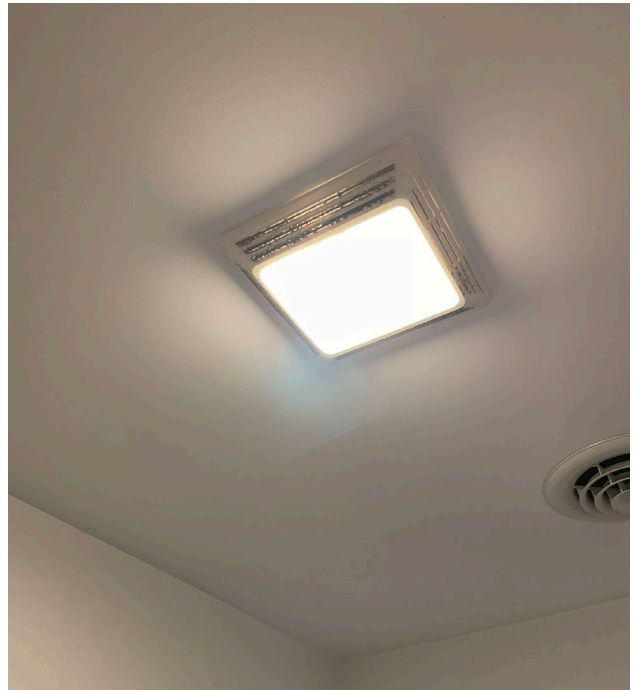
**PHOTO M.05  
AHU CONDENSING UNIT**

*Condition: Poor  
Quantity: (1)*



**PHOTO M.06  
EXHAUST FAN**

*Condition: Poor  
Quantity: (1)*



Overall Recommendations

1. The residential split system should be replaced within the next three (3) years as it is nearing the end of its expected life.
2. Outside air needs to be added to the occupied spaces.
3. The ceiling exhaust fan should be replaced.
4. The terminal unit heater is in fair condition and should be replaced in four (4) to six (6) years.

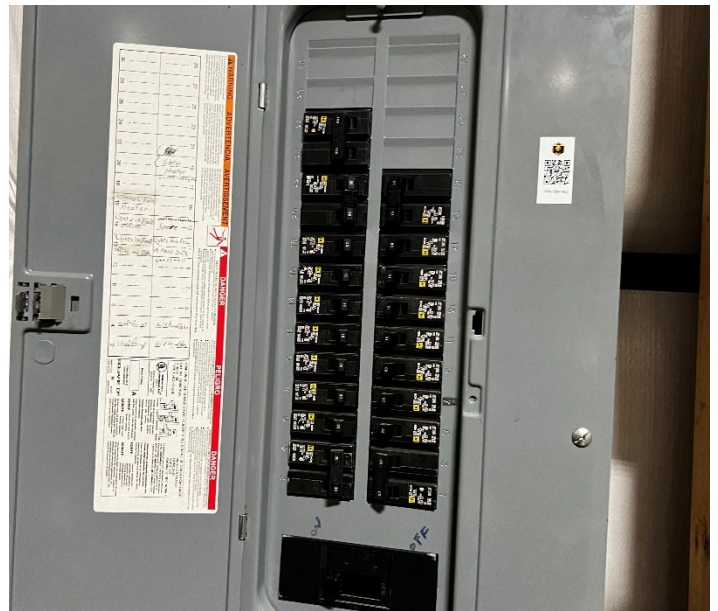
## Electrical Systems Assessment

Overall, the electrical system is in fair condition.

**Power distribution** is provided via a Square D main distribution Panelboard. The panel seems to be in good condition and does not need to be replaced.

**PHOTO E.01**  
**MAIN DISTRIBUTION PANEL**

*Condition: Good*  
*Quantity: (1)*



The remainder of the electrical equipment has mostly remained original to the facility, only devices seem to have been replaced, or been added for additions/renovations. Many of the electrical connections seem to be poorly done with exposed wiring, or broken conduits and such. Overall, there are many spots that require maintenance or upkeep that seem neglected and that should be addressed.

The facility currently does not have a generator that is connected.

**Interior lighting** consists of a mixture of fixture types and lamp types, none seemed to be LED. The controllability is very limited and doesn't meet the current energy code, namely the International Energy Conservation Code (IECC). Multiple fixtures were either not working properly or some of the bulbs were not working. It is recommended that all non-led light fixtures should be replaced with efficient LED light fixtures and sufficient battery backup emergency lighting be added. Additionally, the associated occupancy sensing, dimming, and daylight harvesting lighting controls should be replaced/added to reduce energy usage of the building. The existing exit signs should be upgraded, as applicable, to LED type and supplemental signs added where needed.

**PHOTO E.02  
LIGHTING**

*Condition: Poor / Fair  
Quantity: Approx. 4,350 SF*



**PHOTO E.03  
EXIT SIGN**

*Condition: Fair  
Quantity: Approx. (4) Exit Signs*



**Exterior building mounted lighting** was mostly not present on this site, exterior lighting should be added as needed based on the building use.

**Parking lot lighting** is not present on site.

The **fire alarm system** was not present in this building and should be added to comply with code per building type.

**Wiring devices** consist of devices original to the building and newer devices added overtime. There are areas where a water source is present, and the receptacles are not GFCI protected. Some existing conditions related to grounding and ground-fault protection do not comply with current NEC requirements and associated devices should be replaced. There also appears to be a lack of power outlets within rooms as there are multiple power strips throughout the office area. Additionally, outlets should be provided to avoid the use of power strips. It is advisable to replace all the devices and associated wiring.

Local means of disconnects appear to be integrated into some of the equipment, or consist of the turning off the breaker in the panel or unplugging the equipment as there were not many safety switches present on this site.

**PHOTO E.04  
POWER STRIP**

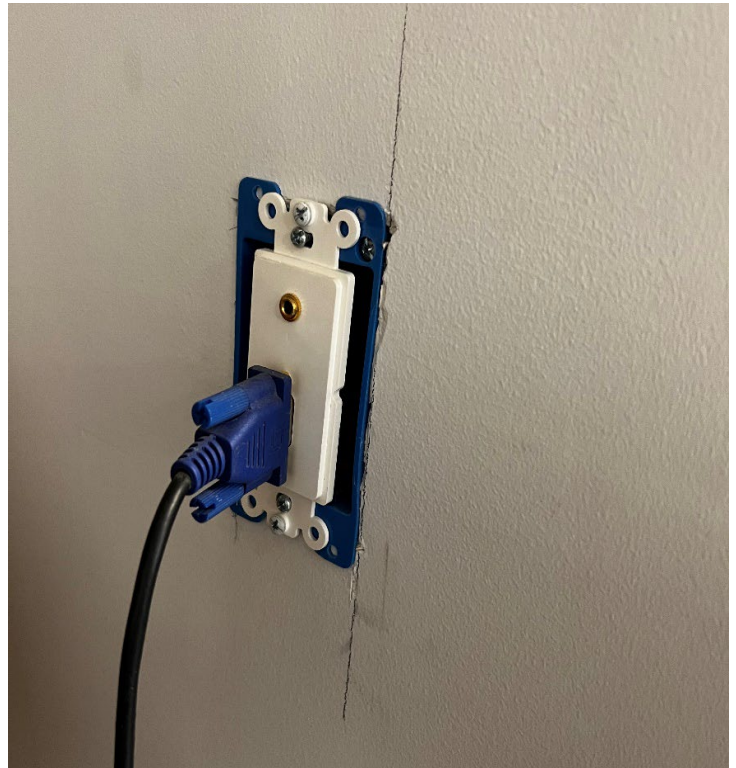
*Condition: Poor  
Quantity: Approx. (3) Locations*



The **intercom/clock system** was not installed in this building.

**PHOTO E.05**  
**DATA DEVICE**

*Condition: Fair*  
*Quantity: Approx. (3) Locations*



The **data/phone/CATV/AV** systems seem to only be used for internet and projection needs and seem to be sufficient for office use.

The **closed-circuit security camera (CCTV) system** was installed on the exterior of the building and seems to be in good shape and does need to be replaced, but additional devices should be added as needed for more coverage.

The **security** note was present in this building.



### Overall Recommendations

1. The existing service entrance MDP does not need be replaced.
2. Emergency backup lighting should be installed for better coverage.
3. All existing interior non-LED light fixtures should be upgraded to LED light fixtures that conform to the current version of the IECC.
4. It is recommended that existing toggle switch lighting controls be replaced with code compliant lighting controls consisting of dimming, occupancy sensing, and daylight harvesting controls as mentioned above.
5. Parking lot lighting should be added as needed for building usage.
6. Fire alarm system should be added to comply with code.
7. It is recommended that devices be checked and maintained, and broken parts be replaced.
8. It is recommended that the CCTV system be added/replaced in its entirety. The replacement system should meet the current cloud-based system standards of the school system.

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## Plumbing Systems Assessment

Overall, the plumbing system is in poor to fair condition.

**Domestic Water** service enters the building in one of the restrooms. There is no backflow preventer. The pressure reducing valve and domestic service entrance are original to the building. The pressure reducing valve shows signs of age. There is visible corrosion and rust. The PVC piping shows signs of age and is not insulated. There is one (1) tankless electric water heater that serves the restroom that is in poor condition. All the domestic cold water and hot water piping distributed around the building is original and is in poor condition.

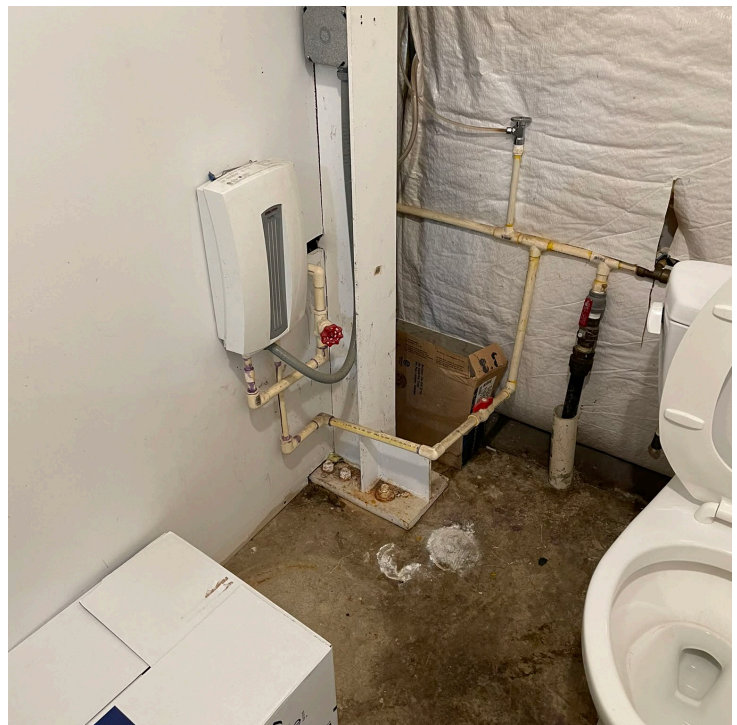
**Sanitary drain** piping is below the floor slab and general condition could not be determined.

**Exterior gas piping** is completely rusted. The gas pipe is close to the end of its expected service life and should be replaced immediately.

**Plumbing fixtures.** Water closets are floor mounted white vitreous china with manual flush valves. The water closets appeared to be in fair condition and have been replaced at some point since original construction. The lavatories are wall mounted white vitreous china with manual faucets. The lavatories in restrooms appeared in fair condition.

**PHOTO P.01A**  
**TANKLESS WATER HEATER AND**  
**PIPING**

*Condition: Poor*  
*Quantity: (1)*



**PHOTO P.01B**  
**DOMESTIC WATER HEATER**

*Condition: Poor*  
*Quantity: (1)*



**PHOTO P.02**  
**LAVATORY**

*Condition: Fair*  
*Quantity: (2)*



**PHOTO P.03A**  
**FRONT OFFICE WATER CLOSET**

*Condition: Poor / Fair*  
*Quantity: (1)*



**PHOTO P.03B**  
**SHOP WATER CLOSET**

*Condition: Poor*  
*Quantity: (1)*



**PHOTO P.04A**  
**GAS PIPING**

*Condition: Poor*  
*Quantity: Approx. 130 LF*



**PHOTO P.04B**  
**GAS PIPING**

*Condition: Poor*  
*Quantity: Approx. 130 LF*



### Recommendations

1. The plumbing systems are at or near the end of their life and should be considered for replacement within the next three (3) to five (5) years.
2. The gas piping should be replaced immediately.
3. The sanitary piping below the slab was inaccessible and should be scoped with a camera to determine the condition.

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## Structural Assessment

Overall, the structural system is in good condition.

The Maintenance Building is a single-story pre-engineered metal building constructed in approximately 2006 in Milford, Caroline County, Virginia.

The structure is constructed of pre-engineered rigid steel frames with secondary steel framing between the rigid frames. The exterior façade is pre-engineered wall panels. The building is assumed to be supported by shallow concrete footing foundations with slab-on-grade floors.

Interior structural issues were limited to the slab-on-grade. Uneven/sloping surfaces in the office was observed (Photo S.01) and cracking and spalling of the slab-on-grade in the maintenance bay was observed (Photo S.02).

The uneven slab-on-grade in the office is most likely due to improperly prepared subgrade or continual subgrade issues. The cracks in the maintenance bay slab-on-grade are most likely due to the concentrated point loads from the heavily loaded storage racks within the space or from heavy machinery/vehicles parked in the space.

**PHOTO S.01**  
**INTERIOR OFFICE SLAB-ON-GRADE**

*Condition: Good*  
*Quantity: Approx. 400 SF*



**PHOTO S.02**  
**INTERIOR MAINTENANCE BAY SLAB-ON-GRADE SLAB CRACK**

*Condition: Poor*  
*Quantity: Approx. 64 LF*



## Fire Protection System Assessment

Overall, the fire protection system is in poor to fair condition.

The Maintenance Building is not protected with a fire suppression (sprinkler) system. Major renovations may require the need for a full NFPA fire suppression (sprinkler) system. It is recommended that the fire protection system be upgraded to provide adequate fire suppression coverage throughout the warehouse and administration portion of the building. There were no fire extinguishers easily accessible in this building. They should immediately be added near the exits and throughout the warehouse.

**PHOTO FS.1  
ADMINISTRATION AREA**

*Condition: Not Applicable  
Quantity: None*



**PHOTO FS.2  
WAREHOUSE AREA**

*Condition: Not Applicable  
Quantity: None*



## **Food Service (Kitchen) Assessment**

A food service (kitchen) assessment was not completed as a part of this Facility Condition Assessment. Based on the age and projected future use of the Maintenance Building, the school division indicated the completion of a food service (kitchen) assessment was not required.

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## **Hazardous Materials Assessment**

A hazardous materials assessment was not completed as a part of this Facility Condition Assessment. Based on the year the Maintenance Building was built, it is presumed that hazardous materials were NOT utilized in the construction of the school.

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# SECTION FOUR

## *Deferred Maintenance Schedule*







**DEFERRED MAINTENANCE SCHEDULE (2024 - 2038)**



School Name: Maintenance Building (As of April 2024)  
Gross Square Feet: 4,350

Item Description	Qty	Units	Unit Rate	Item Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	Notes
ET.7 Remove Power Strips & Extension Cords	3	EA	\$ 75.00	\$ 225																Annual Operating Expense
ET.8 Install Data Device Cover Plates	3	EA	\$ 1.79	\$ 5																Annual Operating Expense
ET.9 Replace CCTV System	4,350	SF	\$1.50	\$ 6,525					\$ 7,634											
<b>SUBTOTAL ELECTRICAL &amp; TECHNOLOGY SYSTEMS</b>				\$ 103,351	\$ -	\$ -	\$ 85,558	\$ 21,076	\$ 7,634	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PLUMBING SYSTEM (Plumbing System Assessment)</b>																				
P.1 Replace Water Heater	1	EA	\$ 3,863.00	\$ 3,863			\$ 4,249													
P.2 Replace Piping	100	LF	\$ 11.53	\$ 1,153						\$ 1,384										
P.3 Replace Lavatory	2	EA	\$ 1,391.00	\$ 2,782						\$ 3,338										
P.4 Replace Water Closets	2	EA	\$ 1,860.00	\$ 3,720			\$ 4,092													
P.5 Replace Gas Piping and Regulator	130	LF	\$ 22.52	\$ 2,928		\$ 3,074														
<b>SUBTOTAL PLUMBING SYSTEM</b>				\$ 14,446	\$ -	\$ 3,074	\$ 8,341	\$ -	\$ -	\$ 4,722	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>STRUCTURAL SYSTEM (Structural System Assessment)</b>																				
S.1 Remove/Replace Interior Slab-On-Grade	400	SF	\$ 14.85	\$ 5,940							\$ 7,306									
S.2 Rout/Seal Slab-On-Grade Cracks	64	LF	\$ 57.24	\$ 3,663			\$ 4,030													
<b>SUBTOTAL STRUCTURAL SYSTEM</b>				\$ 9,603	\$ -	\$ -	\$ 4,030	\$ -	\$ -	\$ -	\$ 7,306	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>FIRE PROTECTION SYSTEM (Fire Suppression System Assessment)</b>																				
FS.1 Add Sprinkler System	4,350	SF	\$ 8.56	\$ 37,236						\$ 44,683										
<b>SUBTOTAL FIRE SUPPRESSION SYSTEM</b>				\$ 37,236	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,683	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>FOOD SERVICE (Food Service (Kitchen) Assessment)</b>																				
K.1 No Food Service (Kitchen) Assessment Completed																				
<b>SUBTOTAL FOOD SERVICE</b>				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>HAZARDOUS MATERIALS (Hazardous Materials (HAZMAT) Assessment)</b>																				
HM.1 Not Applicable																				
<b>SUBTOTAL HAZARDOUS MATERIALS</b>				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL ESTIMATED PROJECT COSTS PER CATEGORY</b>					\$ -	\$ 3,074	\$ 110,490	\$ 27,264	\$ 23,164	\$ 75,092	\$ 7,306	\$ -	\$ -	\$ 294,048	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**TOTAL ESTIMATED DEFERRED MAINTENANCE COSTS - YEARS 2024 THRU 2025 (USED TO CALCULATE FCI)** \$ 113,564





## DEFERRED MAINTENANCE SCHEDULE (2024 - 2038)



**School Name:** Maintenance Building (Amended – Reflects Deferred Maintenance Items Completed by the McClure Company through December 2024)  
**Gross Square Feet:** 4,350

Item Description	Qty	Units	Unit Rate	Item Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	Notes
ET.7 Remove Power Strips & Extension Cords	3	EA	\$ 75.00	\$ 225																Annual Operating Expense
ET.8 Install Data Device Cover Plates	3	EA	\$ 1.79	\$ 5																Annual Operating Expense
ET.9 Replace CCTV System	4,350	SF	\$1.50	\$ 6,525					\$ 7,634											
<b>SUBTOTAL ELECTRICAL &amp; TECHNOLOGY SYSTEMS</b>				\$ 103,351	\$ -	\$ -	\$ 85,558	\$ 21,076	\$ 7,634	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PLUMBING SYSTEM (Plumbing System Assessment)</b>																				
P.1 Replace Water Heater	1	EA	\$ 3,863.00	\$ 3,863			\$ 4,249													
P.2 Replace Piping	100	LF	\$ 11.53	\$ 1,153						\$ 1,384										
P.3 Replace Lavatory	2	EA	\$ 1,391.00	\$ 2,782						\$ 3,338										
P.4 Replace Water Closets	2	EA	\$ 1,860.00	\$ 3,720			\$ 4,092													
P.5 Replace Gas Piping and Regulator	130	LF	\$ 22.52	\$ 2,928		\$ 3,074														
<b>SUBTOTAL PLUMBING SYSTEM</b>				\$ 14,446	\$ -	\$ 3,074	\$ 8,341	\$ -	\$ -	\$ 4,722	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>STRUCTURAL SYSTEM (Structural System Assessment)</b>																				
S.1 Remove/Replace Interior Slab-On-Grade	400	SF	\$ 14.85	\$ 5,940							\$ 7,306									
S.2 Rout/Seal Slab-On-Grade Cracks	64	LF	\$ 57.24	\$ 3,663			\$ 4,030													
<b>SUBTOTAL STRUCTURAL SYSTEM</b>				\$ 9,603	\$ -	\$ -	\$ 4,030	\$ -	\$ -	\$ -	\$ 7,306	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>FIRE PROTECTION SYSTEM (Fire Suppression System Assessment)</b>																				
FS.1 Add Sprinkler System	4,350	SF	\$ 8.56	\$ 37,236						\$ 44,683										
<b>SUBTOTAL FIRE SUPPRESSION SYSTEM</b>				\$ 37,236	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,683	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>FOOD SERVICE (Food Service (Kitchen) Assessment)</b>																				
K.1 No Food Service (Kitchen) Assessment Completed																				
<b>SUBTOTAL FOOD SERVICE</b>				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>HAZARDOUS MATERIALS (Hazardous Materials (HAZMAT) Assessment)</b>																				
HM.1 Not Applicable																				
<b>SUBTOTAL HAZARDOUS MATERIALS</b>				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL ESTIMATED PROJECT COSTS PER CATEGORY</b>					\$ -	\$ 3,074	\$ 110,490	\$ 27,264	\$ 23,164	\$ 75,092	\$ 7,306	\$ -	\$ -	\$ 294,048	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**TOTAL ESTIMATED DEFERRED MAINTENANCE COSTS - YEARS 2024 THRU 2026 (USED TO CALCULATE FCI)**      \$ 113,564

# SECTION FIVE

## *Facility Condition Index*



## FACILITY CONDITION INDEX (AS OF APRIL 2024)

### Overview

A Facility Condition Index (FCI) is utilized to objectively measure and evaluate the current condition of a school or building in order to make one of two types of comparisons on the condition of that one building with:

- Other buildings within the same school division; or
- Against the same building at another point in time in the past.

The FCI provides a measure of the deferred maintenance costs for a building typically developed from the completion of a comprehensive Facility Condition Assessment (FCA).

### Purpose

An FCI calculation provides an Owner with the means for comprehensively evaluating and defining the appropriate distribution of available funding to each school or building within a portfolio based on needs. The primary value of an FCI calculation for a school division, can be identified as:

- To assist in prioritizing resource allocation decisions amongst the schools or buildings within a school division, particularly with limited budgets that are not adequate to address the deferred maintenance in all the schools or buildings.
- To determine the annual reinvestment to prevent further accumulation of deferred maintenance.
- To assist in tracking continual deterioration of a single or multiple school(s) or building(s) despite efforts made to reduce the deferred maintenance items.
- A mechanism to monitor changing conditions over time.
- A means to demonstrate the level of effort, due diligence and responsible stewardship to various stakeholders.

Some limitations of the Facility Condition Index (FCI) as a measure, are listed below:

- It is often used as a snapshot in time to compare assets or as an index which quantifies the adequacy of appropriated/budgeted funds over a longer period of time.
- The standard FCI formula does not include a weighting system to prioritize the importance of each deferred maintenance item associated with each system or each deferred maintenance item within the school or building.
- The FCI does not comprise operational maintenance costs.

## Formula

The FCI formula can be summarized as the ratio of all the Deferred Maintenance costs divided into the Current Replacement Cost for the school or building.

$$\text{Facility Condition Index (FCI) Value} = \frac{\text{Total Deferred Maintenance Costs}}{\text{Total Current School/Building Replacement Cost}}$$

### Definitions:

Total Deferred Maintenance Costs represents the total dollar value of deferred maintenance deficiencies identified in “Poor and Very Poor” condition within the comprehensive facilities condition assessment completed for the school/building and its integral building systems and equipment. Deferred Maintenance can be defined as unperformed maintenance, repairs and/or replacement of equipment or systems due to a lack of resources or a perceived low priority and deferral of the activity resulting in a progressive deterioration of the school/building condition or performance. The Total Deferred Maintenance Costs for each school/building are identified within the Deferred Maintenance Schedule (Section 4) of this report.

Total Current School/Building Replacement Cost represents the total dollar value to replace the school/building with the cost of replacement defined as the requirement to duplicate the external building envelope and internal building systems and components along with site enhancements to provide the same level of functionality based upon current local construction costs (i.e. labor and material costs). The Total Current School/Building Replacement Cost is calculated by multiplying the current school/building size in square feet by the current cost per square foot for new building construction for schools/buildings of similar type and size based on figures obtained from Downey & Scott and the Virginia Department of Education (VDOE) for new construction.

## Condition Measure

The measure of the condition of a school(s) or building(s) is typically organized into a five-tiered condition ranking scale, as follows:

Condition Ranking	FCI Rating	Condition Description
Excellent	0.0 – 5.0%	Only normal scheduled maintenance is required.
Good	5.1 – 10.0%	Minimal minor repairs needed; School/Building functions as designed.
Fair	10.1 – 25.0%	Minor and major repairs needed; Some functional challenges.
Poor	25.1 – 50.0%	Major repairs needed; Regular operational and functional challenges; Does not meet all building codes.
Very Poor	>50.0%	Significant major repairs or replacement needed to restore function; Systems unsafe.



## Calculation

Total Deferred Maintenance Costs = \$ 113,564

Represents the total dollar value of deferred maintenance deficiencies identified within the Deferred Maintenance Schedule (Section 4) of this report as "Total Hard Construction Costs".

Total Current School/Building Replacement Cost = \$ 1,087,500

Represents the total dollar value to replace the school/building calculated by multiplying the current school/building size in square feet (4,350 SF) by the current cost per square foot for new construction of a similar school/building (\$250 SF).

### Maintenance Building - Facility Condition Index (FCI)

$$10.44\% = \frac{\$ 113,564}{\$ 1,087,500}$$

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## FACILITY CONDITION INDEX (AS OF DECEMBER 2024)

### Overview

A Facility Condition Index (FCI) is utilized to objectively measure and evaluate the current condition of a school or building in order to make one of two types of comparisons on the condition of that one building with:

- Other buildings within the same school division; or
- Against the same building at another point in time in the past.

The FCI provides a measure of the deferred maintenance costs for a building typically developed from the completion of a comprehensive Facility Condition Assessment (FCA).

### Purpose

An FCI calculation provides an Owner with the means for comprehensively evaluating and defining the appropriate distribution of available funding to each school or building within a portfolio based on needs. The primary value of an FCI calculation for a school division, can be identified as:

- To assist in prioritizing resource allocation decisions amongst the schools or buildings within a school division, particularly with limited budgets that are not adequate to address the deferred maintenance in all the schools or buildings.
- To determine the annual reinvestment to prevent further accumulation of deferred maintenance.
- To assist in tracking continual deterioration of a single or multiple school(s) or building(s) despite efforts made to reduce the deferred maintenance items.
- A mechanism to monitor changing conditions over time.
- A means to demonstrate the level of effort, due diligence and responsible stewardship to various stakeholders.

Some limitations of the Facility Condition Index (FCI) as a measure, are listed below:

- It is often used as a snapshot in time to compare assets or as an index which quantifies the adequacy of appropriated/budgeted funds over a longer period of time.
- The standard FCI formula does not include a weighting system to prioritize the importance of each deferred maintenance item associated with each system or each deferred maintenance item within the school or building.
- The FCI does not comprise operational maintenance costs.

## Formula

The FCI formula can be summarized as the ratio of all the Deferred Maintenance costs divided into the Current Replacement Cost for the school or building.

$$\text{Facility Condition Index (FCI) Value} = \frac{\text{Total Deferred Maintenance Costs}}{\text{Total Current School/Building Replacement Cost}}$$

### Definitions:

Total Deferred Maintenance Costs represents the total dollar value of deferred maintenance deficiencies identified in “Poor and Very Poor” condition within the comprehensive facilities condition assessment completed for the school/building and its integral building systems and equipment. Deferred Maintenance can be defined as unperformed maintenance, repairs and/or replacement of equipment or systems due to a lack of resources or a perceived low priority and deferral of the activity resulting in a progressive deterioration of the school/building condition or performance. The Total Deferred Maintenance Costs for each school/building are identified within the Deferred Maintenance Schedule (Section 4) of this report.

Total Current School/Building Replacement Cost represents the total dollar value to replace the school/building with the cost of replacement defined as the requirement to duplicate the external building envelope and internal building systems and components along with site enhancements to provide the same level of functionality based upon current local construction costs (i.e. labor and material costs). The Total Current School/Building Replacement Cost is calculated by multiplying the current school/building size in square feet by the current cost per square foot for new building construction for schools/buildings of similar type and size based on figures obtained from Downey & Scott and the Virginia Department of Education (VDOE) for new construction.

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Poor	25.1 – 50.0%	Major repairs needed; Regular operational and functional challenges; Does not meet all building codes.
Very Poor	>50.0%	Significant major repairs or replacement needed to restore function; Systems unsafe.

## Calculation

Total Deferred Maintenance Costs = \$ 113,564

Represents the total dollar value of deferred maintenance deficiencies identified within the Deferred Maintenance Schedule (Section 4) of this report as "Total Hard Construction Costs".

Total Current School/Building Replacement Cost = \$ 1,087,500

Represents the total dollar value to replace the school/building calculated by multiplying the current school/building size in square feet (4,350 SF) by the current cost per square foot for new construction of a similar school/building (\$250 SF).

**Maintenance Building - Facility Condition Index (FCI)**  
***(Amended – Reflects Deferred Maintenance Items Completed by the McClure Company)***

$$10.44\% = \frac{\$ 113,564}{\$ 1,087,500}$$

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