

CRIGLERSVILLE SCHOOL BUILDING

I. Facility Description

The Criglersville elementary School is a two story brick masonry building originally constructed in 1946 - 1948. The facility has not been used as a school for approximately 10 years. In recent years, the facility was used as a community center with small library and table games on a limited basis. The facility has been closed for the past 5 years. There have been recent reports in regards to the facility done completed in 2002; the site and adjacent structures as recent as 2010. The exterior masonry is general in fair condition; the windows are single pane, steel type with fixed and operable units and are original to the building. The building and site pose numerous challenges to re-use or change in use of the structure.

II. Facility Size

17,855 square feet on approx. 5.7 acres (inclusive of 3 lots) on County Route 670 in Criglersville.

III. Improvements / Renovations

Early in the construction of the school there was a wood framed entry that was destroyed in a fire and not rebuilt. Since then, there have been no documented renovations besides interior finishes have been completed.



IV. Condition

A. Code and Safety

1. ADA / Accessibility

The existing structure does not have an accessible access point, nor are the toilets accessible. There is no elevator; therefore the second story classrooms are not accessible, nor is access to the stage. Interior and exterior door hardware is non-compliant and there is no interior compliant signage or accessible drinking fountains.

2. Site

The parking area is relatively flat, but handicap spots are not allocated. The car, bus and service vehicle traffic is not separated, but future use of the facility may would be used to determine a proposed new traffic pattern if necessary. The building is located approximately 28" below the flood plain. Past flooding has created problems with water damage to both the foundation and boiler room areas as well as the steam tunnel located below the first floor elevation. There may also be an increased potential for settlement of the foundation walls due to water table located at or above footing level.

3. Building

The building in most recent use did not require a sprinkler system, but future use may require one. In addition, the building is served by well, so a holding tank and fire pump would be required if a sprinkler system is necessary. There is numerous exterior and interior safety and code concerns with the present condition of the facility. Each of the code items are associated with future use and would need to be evaluated at time of proposed project. From a safety standpoint, the building has remained vacant for several years; therefore, it is likely that most systems are not operational and do not meet current codes. In addition, other safety hazards were found during the assessment such as moisture and pest penetrations to the interior of the facility. Several window panes were broken or missing, interior finishes were beyond repair and there is suspect asbestos containing materials throughout the facility due to the age of the structure.

B. Site Infrastructure

1. Site Work

The facility cannot be safely opened without addressing the flood plain issue or the fact that the existing well and septic systems lie below the flood plain and are subject to environmental and other State of Virginia codes. Much of this information is documented in the recent studies and letters received by the County of Madison.

2. Site Structures

Old play ground equipment – Several pieces of old playground equipment exist onsite and pose a potential hazard to children playing on it. The equipment should be removed as soon as possible.

3. Site Utilities

As documented in recent report and in this assessment, the site utilizes affected by the flood plain issue are well water and septic. The septic system is a single concrete tank and distribution boxes with a subsurface drain field located below the paved parking lot. In the 2002 report it is estimated that the water table is above the drain field in violation of the Virginia Department of health Sewage Handling and Disposal regulations. In addition the well and septic tank are approximately 41 feet apart, where state regulations require a minimum separation of 50 feet according to the report. Electric is provided overhead to the facility.

C. Primary Systems

1. Foundation and Substructure

The existing foundation is indicated and observed to be reinforced concrete, typical spread footings. The structure has been affected over the years due to flooding and areas of the foundation have spalling and loose concrete exposing the aggregate to further damage and moisture penetration

2. Structural System

The structure is a combination of masonry bearing exterior walls with some interior masonry bearing walls with bar joist for the second floor and roof framing. Depth of the bar joist varies due to location and additional loading with a different use and updated code, may require additional structural changes.

3. Exterior Wall Systems

The exterior wall system is brick with bearing masonry back-up in fair condition. There are large areas where re-pointing is necessary on the exterior brick to control additional moisture penetration. There are some noticeable cracks and settlement conditions which should be addressed. This was not indicated in the 2002 report, so there have been some increased changes to the masonry of the facility. Due to the age of the structure, some cracking is to be expected. There is evidence of water penetration in the face brick at roof level or bottom of the parapet of the roof indicating further moisture penetration into the exterior wall. At the rear of the facility, there are visible areas of roof tar dripping and running down the face of the brick, the item is only an mentioned for appearance and not a structural or integrity issue of the brick.

4. Roof System

The roof has minimal slope from front to back, creating poor drainage. The original roof was a composite roof over precast (porex) slab. The original built-roof system, in order to protect and extend its original lifespan, was covered with sprayed polyurethane foam during the past 10 - 15 years. The foam is in various stages of deteriorating condition, exposing the building to water leakage. There are signs of moisture penetration on the interior indicative that the system is failing and in need of replacement. Gutters and downspouts are aluminum but often empty onto grade or below grade into former collection boots that have filled with sediment. Such water may then be running down foundation water walls and affect the foundation system or moisture penetration into the steam pipe trenches below the first floor slab.

D. Secondary Systems

1. Ceiling System

The original ceiling system is metal lathe and plaster, but has since been covered by suspended acoustical ceiling system. All ceilings are in failing condition due to age and exposure to moisture. In the main multi-purpose room, there is evidence of failure of the original plaster system that has fallen through the suspended system to the floor below. There also may have been another ceiling system adhered to the original plaster as evidence by the visible adhesive. The adhesive in this age of a facility is usually non-friable asbestos and would be part of a larger abatement project if the facility is renovated.

2. Floor Covering System

The existing floor finishes of vinyl asbestos tile and ceramic tile are still in place today, with some classroom area having carpet. All floor finishes are in need of replacement, due to cracking, life expectancy and moisture penetration. If the facility is renovated, there would be additional abatement with the vinyl floor tile.

3. Interior Wall and Partition Systems

Interior partitions are painted plaster over masonry or painted masonry and show signs of severe moisture penetration. The finish paint in many areas is peeling or failing due to such moisture penetration and lack of humidity control. It may also be assumed that the majority of finish paints are lead based.

4. Specialties

The classrooms contain the original chalk boards that were typically mounted with asbestos containing mastics. The majority of the boards are in fair to good condition.

E. Service Systems

1. Heating, Ventilating, and Air Conditioning

The building is heated with a two pipe hot water system with convectors located in the building spaces. There is no mechanical ventilation provided for outdoor air. Hot water is generated by a boiler installed in 1964. Air conditioning is by window style units and is sporadic throughout the building. The systems have been de-energized for approximately 10 years and are in poor condition. The systems are beyond their average service life. Replacement of the entire system is recommended immediately if the building is to be opened again.

2. Plumbing System

The plumbing systems in general are in poor condition due to abandonment and age. The well and septic system were reported to be in poor condition as well. Piping was not observed, but is anticipated to be in poor condition as well. The systems are beyond their average service life. Replacement of the entire system is recommended immediately if the building is to be opened again.

3. Electrical Service

The existing distribution systems are a mixture of original equipment and newer equipment installed during the last renovation project (at least 10 years ago). These

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systems have been abandoned for approximately 10 years and an entire replacement is recommended.

4. Electrical Devices
Due to the age and non use of the existing building systems and infrastructure a complete replacement would be required if the County chose to open it in any capacity.
5. Conveying Systems - none
6. Other Systems - The remaining kitchen does not meet today's codes and is not operational.

V. Facility Condition Index

- The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

FCI RATINGS		
1	0	General Maintenance
2	10	Minor
3	50	Moderate
4	75	Major
5	100	Replace

CRIGLERSVILLE SCHOOL BUILDING					
No.	Component / System	Percent of total	Rating (1 - 5)	Rating %	Adj %
1	Roofing	4.9%	5	1	4.90%
2	Exterior Walls	5.4%	3	0.5	2.70%
3	Exterior Windows	2.4%	5	1	2.40%
4	Exterior - Doors	0.6%	5	1	0.60%
5	Interior Floors	7.6%	5	1	7.60%
6	Interior Walls	4.0%	3	0.5	2.00%
7	Interior Ceilings	5.4%	5	1	5.40%
8	Interior - Other	3.3%	4	0.75	2.48%
9	HVAC	20.7%	5	1	20.70%
10	Electrical Lighting	10.0%	5	1	10.00%
11	Electrical Distrib.	1.3%	5	1	1.30%
12	Electrical Other	0.5%	5	1	0.50%
13	Plumbing	5.5%	5	1	5.50%
14	Fire / Life Safety	2.3%	5	1	2.30%
15	Specialties	0.8%	5	1	0.80%
16	Structural	19.3%	2	0.1	1.93%
17	Technology	3.5%	5	1	3.50%
18	Accessibility	2.5%	4	0.75	1.88%
					76.48%

VI. Recommendations

The majority of the site, including the existing building, well and sanitary drainfield are contained within the 100 year floodplain of the Robinson River. If the site were to be used, the drainfield would need to be relocated outside of the floodplain. The building, being located within a 100 year floodplain, does not qualify for FEMA flood insurance which presents a sizable risk in terms of investing money into building upgrades and renovations.

If the Criglersville site is to be utilized for future use, a floodplain study should be completed to verify FEMA current floodplain information is accurate. If the current FEMA information is determined to be accurate, any new structure would need to be raised above the floodplain elevation, which would necessitate an alteration study to insure that the water surface of the Robinson River during a flood would not raise by more than one foot on the adjoining properties.

A new structure could possibly be built out of the floodplain. However the site is narrow and setbacks from adjoining properties could be problematic. A new structure would likely require additional land for a drainfield located out of the floodplain.

The existing well is also located within the floodplain. Per a letter from the Madison County Health Department, the well casing would need to be raised above floodplain elevation for any future use. Additionally, the Virginia Department of Health will most likely require some type of water treatment prior to approving future potable water usage on the site.

The utilization of the current building, due to the issues discussed herein regarding the floodplain, is not considered a viable option. The utilization of the current site to house a future facility is a possibility, however is limited due to the floodplain issues as described herein.