

Date: 11/21/2022
Company Name: Schorr Architects, Inc.
Attention: Victoria Newell
230 Bradenton Ave.
Dublin, Ohio 43017

Project Name: Hannah Ashton School Investigation
SMBH Job #: 022-025.014
Re: Structural Assessment

Victoria:

You requested a structural assessment of the Hannah Ashton School in Reynoldsburg, Ohio. You provided us with an architectural assessment performed by your personnel titled Part 1 & Part 2 Ashton Middle School Assessment. We also received a Condition Assessment Report and Façade Restoration Proposal dated May 10, 2022 submitted by Weatherproofing Technologies, Inc. (WTI). Our site visit on Monday November 21, 2022, was for general observations of the condition of the existing structure.

The noted reports established the following:

The Hannah Ashton Middle school is comprised of one, two and three- story buildings that were constructed at various times. The original two-story building was built in 1868 and was known as Union School. The two-story school was later converted to the school gymnasium. A three-story addition wrapped the original building and was constructed in 1925. One- and two-story buildings were added on in the 1950's, 1964 and 1999 based on information provided and the cornerstone plaques. The building area is approximately 83,000 square feet. A key plan of the building is attached.

The Façade Restoration Proposal contains a very detailed description and condition assessment of the façade. That report indicates:

1. The building façade is in overall poor structural and waterproofing condition.
2. Parapet walls have deteriorated and are beginning to lean.
3. Brick mortar joints have cracked, with loose and missing mortar throughout the building façade.
4. Joint sealants have failed.

Their report then recommends that the mortar joints should be repointed on the 1868 and 1925 building. The masonry parapet walls should be rebuilt. The north exterior brick wythe from the third floor to the roof should be rebuilt. Individual areas of missing and cracked brick and heavily deteriorated mortar joints should be replaced and rebuilt. Sections of the stone façade and concrete members should be rebuilt.

I met on Monday, November 21, 2022, at the site with Greg Pollock and Bob Hoyt of Reynoldsburg City Schools. Portions of the roof and floor structures were not visible from below as they were covered up by the plaster ceilings. The descriptions below will note our observations by building area.

1868 Original Two-Story Building

The original school was a two-story brick masonry wall load bearing building. Bob Hoyt indicated that the main entrance came into a corridor with classrooms on either side. The second floor has since been removed and the back of the building expanded to accommodate a two-story space for the gymnasium. The eastern portion of the gymnasium roof is a metal deck on steel joists and steel trusses as girders. The joists and girders bear on the brick masonry walls. There were obvious signs of water infiltration in the northeast corner of the gym but there were **no indications of significant adverse structural defects in the roof or the walls.**

1925 Three-Story Addition

The roof and floor structure were not readily observable due to the plaster ceilings. There were indications of water infiltration at the perimeter walls. The walls in room 302 had spalling plaster due to the water infiltration that worsened at the second floor and the first floor. The water infiltration seemed to be the result of a faulty scupper

and downspout at the roof. See subsequent comments on this location. I did not observe any signs of deflection in the floors or the roofs and there were no indications of significant adverse structural defects.

1950's Additions to the North and East

The roof and floor structure were not readily observable due to the plaster ceilings. I did not observe any signs of deflection in the floors or the roofs and there were no indications of significant adverse structural defects.

1999 One- and Two-Story Addition South of the Original Building

We observed metal deck on steel joists on steel beams and concrete masonry bearing walls in this area of the building. As the newest construction, it seemed to be in the best condition. I did not observe any signs of deflection in the floors or the roofs and there were no indications of significant adverse structural defects.

1964 One-Story Addition

This structure had a tectum roof deck supported on steel joists that were supported on steel beams or concrete masonry walls. There were some indications of water infiltration but no obvious indications of significant adverse structural defects.

Basement Mechanical Spaces

These spaces were in the original building. The floor structure above was a concrete slab on metal lath bearing on cold formed black iron channels. Portions of the floor above in this area appeared to be a concrete structural slab. The walls were comprised of brick masonry, block masonry, stone masonry, and concrete foundation walls. The spaces were generally dry and in good condition and there were no indications of significant adverse structural defects.

We observed the following that we will describe with photographs:



Cracked and damaged flashing at the parapets is allowing moisture to infiltrate the walls



Cracked and damaged joint sealant between the coping stones is allowing water infiltration into the wall



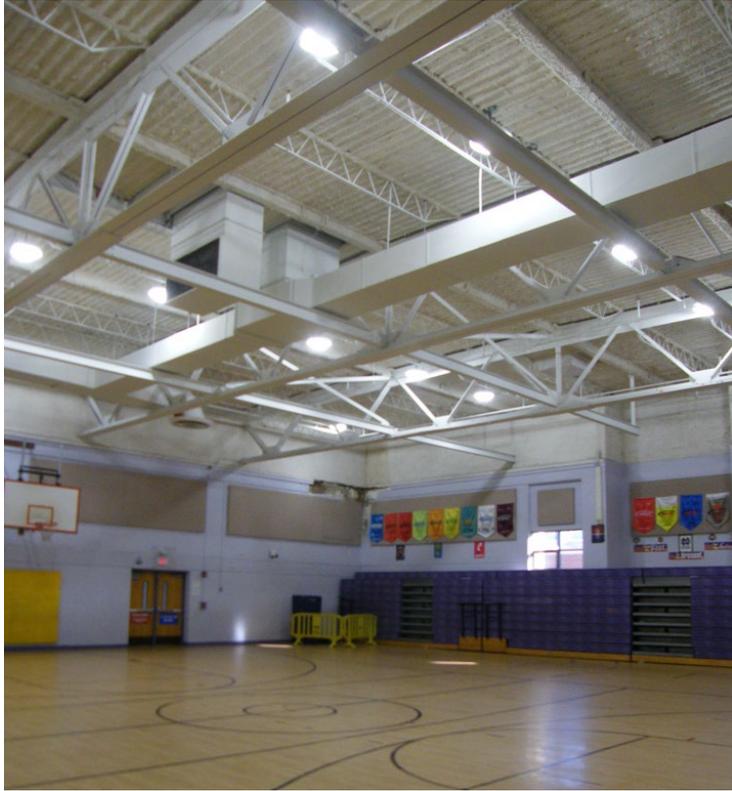
Water infiltration near the north side scupper and downspout



Tectum deck on steel joists on concrete masonry walls. Bob Hoyt noted that the roof on this 1964 building leaked.



Original 1868 building converted to gymnasium space



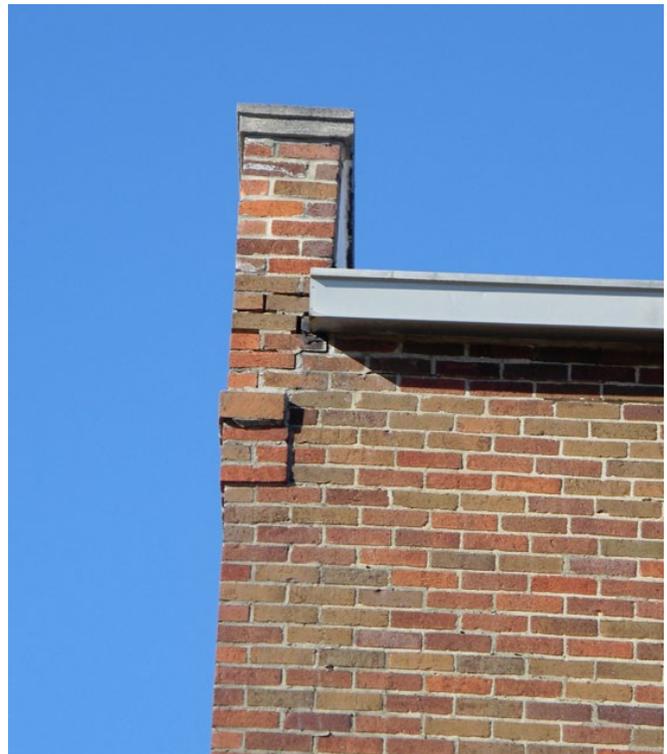
Addition to create the gymnasium with water infiltration at the back corner.



Cracked and missing mortar in the parapet walls allows moisture to enter the building. Displaced brick and stones as here on the northwest corner should be repaired or secured as soon as possible to prevent falling debris.



The faulty scupper and downspout is allowing water to enter the building through the wall at rooms 302 and 202 and below.



Parapets are generally two wythe and three wythe walls with heights less than 24 inches above the roof.



Parapets exhibited signs of cracked, loose and missing mortar. Some parapets leaned slightly inward but seemed to be firmly attached to the walls below. There is moisture infiltration in the parapet walls.



Cracked, loose and missing mortar allows moisture to infiltrate the building.

Structural Conclusions

The WTI report is a comprehensive evaluation of the exterior walls, parapets and façade. The WTI report details many of the localized conditions of the walls around the perimeter of the building. Their report has specific recommendations for repairs with priorities based on the severity of the deterioration. Generally, the WTI report states that the older buildings have more significant deterioration than the newer buildings. While we agree with their recommendations that some areas should be repaired as soon as possible to mitigate safety hazards, we believe that the exterior walls have sufficient capacity to safely continue to support the gravity and lateral loads imposed upon them. One area of note that does need immediate attention is the loose stone at the parapet at the northwest corner of the building as indicated in the photo above.

While many locations of the floor structure or roof structure above were hidden from view because of the plaster ceilings, we did not observe any conditions of significant deflection or areas of severe adverse structural defects. We believe that the roof structures, the floor structures, and the masonry bearing walls have sufficient capacity to safely continue to support the gravity and lateral loads.

We hope that this report gives you the information you need to make informed decisions on the continued use of this building. Please contact us if you have any questions.

Sincerely,



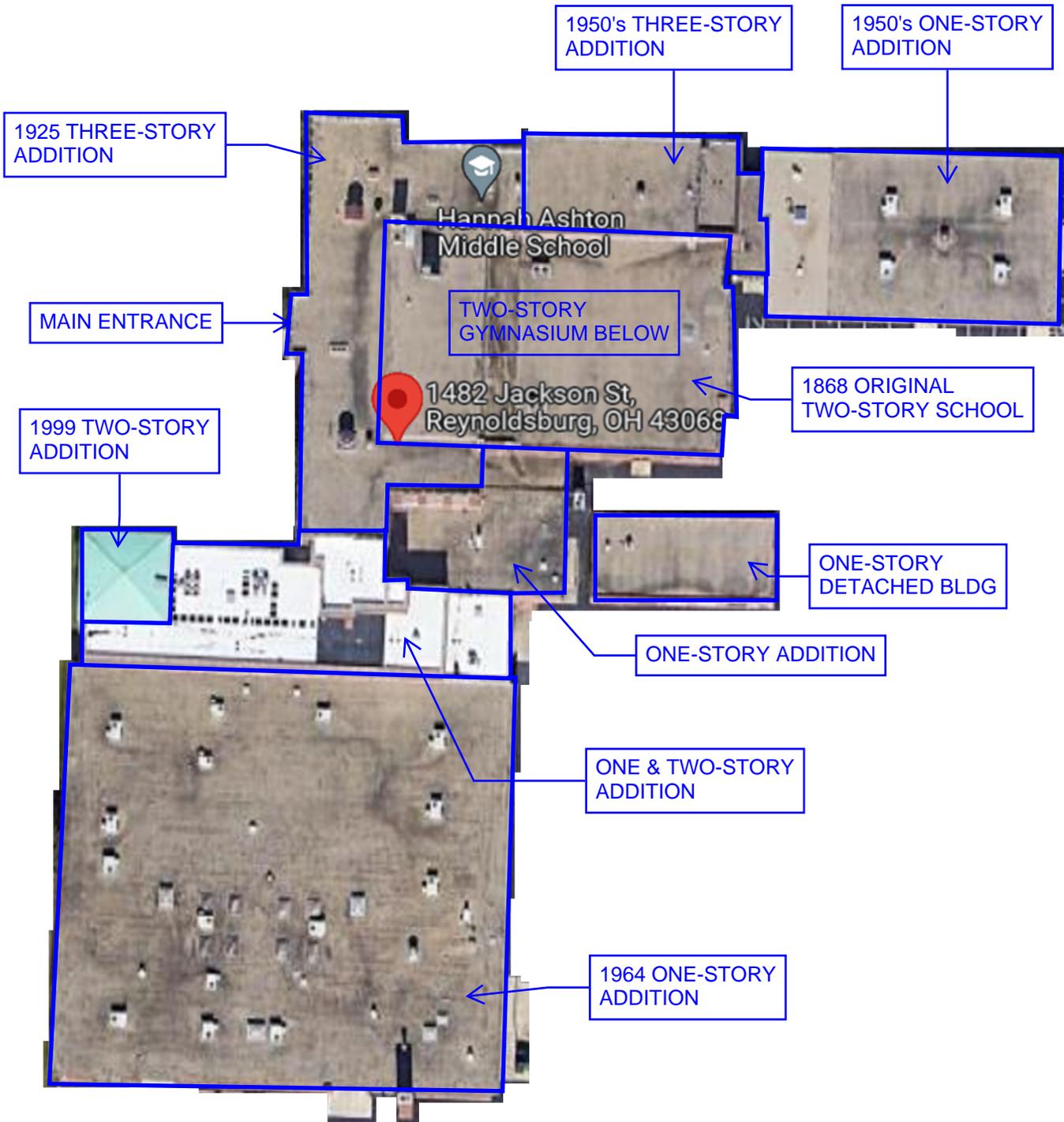
Robert A Baumann, PE, SE
Senior Project Engineer
rbaumann@smbhinc.com

and



Greg Barsch, PE
Director
gbarsch@smbhinc.com





HANNAH ASHTON SCHOOL KEY PLAN

INFORMATION GATHERED ON SITE WITH REYNOLDSBURG SCHOOL PERSONNEL ON NOVEMBER 21, 2022

