October 8, 2025

Dr. Daniel Kluver
Wheeler Central Schools
600 West Randolph Street
Bartlett, NE 68622

RE: Wheeler Central Schools - Structural Assessment

Background

We were contacted by Jacob Sertich of Wilkins ADP to conduct a structural assessment of the existing facilities. We visited the facility on September 16, 2025. The original building drawings for the 1955 High School building were viewed while on site. Photographs were taken.

Structural Observation / Assessment

The facility consists of four buildings. The original gym, built in 1950, the high school, built in 1955, the elementary school, and the new gymnasium building. Our assessment was focused primarily on the 1950 gym and the 1955 high school buildings. We walked through the new gym but did not enter or survey the elementary building.

1950 Gymnasium Building

The original gym building is a wood framed quonset building.with a 2' to 3' tall concrete foundation wall above grade. At the north end of the building is a raised stage platform with a storage room below it, which originally housed the boilers for the school. At the south end is an addition that houses an entry vestibule and restrooms. The rest of the gym building, other than the stage floor, is slab on grade.

In general, the 1950's building appears to be structurally sound. The roof structure is primarily hidden by a ceiling, but there are not any visible signs of destress or deterioration of that system. The stage floor is exposed to view and is constructed with 2x10 joists that frame front to back of the stage. The stage floor appears to be performing well structurally.

The original wood siding has been skinned with a vinyl siding. In the north east corner of the building, the vinyl siding has failed and the original wood siding is exposed. The lowest section of siding and the wood sill in this location appears to deteriorating due to the exposure to the elements. We recommend that the bottom 2' of the wood siding be removed in this location in order to view the condition of the studs and framing below it. Any rot or deterioration discovered should be repaired. Wood siding, or plywood should be added back and the wall reclad with vinyl siding to match.

Originally, there was a door at the back of the stage with a concrete stair down to grade elevation. There is also a brick chimney in this location which also bears on the concrete stair structure. The door has been removed and the door opening has been sided over. The concrete stair is settling and falling away from the building. We recommend that the chimney be removed as well as the concrete stair itself.

Although the concrete base has many vertical cracks around the perimeter, it appears to be structurally sound. The cracks appear to be shrinkage cracks, which have likely worsened over

time as water has penetrated the cracks and likely been worked by freeze-thaw. We recommend that the more significant cracks be epoxy injected and the concrete wall be coated with a concrete coating such as Sikadur 22 Lo Mod, or a similar surface coating.

A link was added which connects the gym building to the high school building. At this joint, it is evident from the inside of the gym that this roofing joint has failed in the past or is currently leaking. There have been discussions about over-framing the link roof to improve the drainage at that joint. Due to the shape of the quonset building, the taller the roof is at the link, the further the link roof structure must cantilever off the first link column. Therefore, structuring a pitched roof would be difficult. It is my opinion that a watertight joint could be attained at this location by removing some siding, installing tapered insulation on this end of the link roof (to provide positive drainage away from this joint), installing flashing behind the siding and reinstalling the siding. If a sloped roof for the link is the desire of the board, we can design a structural solution which can accomplish this.

1955 High School Building

The 1955 building consists of steel beams and columns which have been infilled by masonry walls on the inside and a metal panel wall system at the exterior. The masonry infill, all though does not appear to be part of the gravity load bearing system, is likely functioning as shear walls for the building and providing its lateral stability. According to the drawings, a large 8" tall by 2'-0 wide metal pan rib system was to be installed as the roof deck. In the boiler room and above the ceilings in other locations, it is apparent that this system was not used. Instead, additional steel beams were added at approximately 8'-0 oc and a structure was added at 2'-0 oc to span the 8'. With the current insulation in place, we were unable to determine what this structure is. A reroofing project is expected later this fall. I suggest that the roof structure be more fully investigated at that time.

The main structure of the 1950 high school building appears to be in good condition. There is minimal cracking in the CMU walls and the structural steel frame is a robust system that appears to be functioning well. The roof has leaked and is currently leaking in some locations (primarily the music room). However, as mentioned, a reroofing project is scheduled for later this year. We do recommend that the roof substrate be fully exposed and any deteriorated materials replaced during this reroof. If larger scale deterioration is encountered, we recommend that the school engages an architect or engineer to address the situation.

New Gymnasium Building

The new gym building is made up of two pre-engineered metal buildings (PEMB). The gymnasium building and the cafeteria/classroom building. The gymnasium building has a high barrel vault roof, while the cafeteria/classroom building is a low slope roof. Both buildings appear to be Behlen S-span buildings. S-Span buildings do not utilize frames, purlins and girts as is typical with PEMB structures, but rather consists of roof panels and ceiling panels, with diagonals in the attic that make up the roof truss. This roof structure then bolts to the wall panel which acts as the structural columns.

Both PEMB structures at the gym building appear to be functioning well.

Elementary Building

We did not enter or fully assess the condition of the elementary building. However, it appears to be a wood framed building with a metal panel roof and siding.

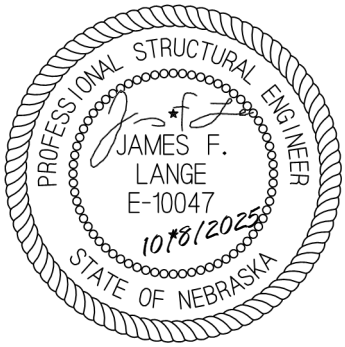
Conclusion

It is our opinion that the four buildings are generally structurally sound and performing well. The 1950 gym building is the least robust of the buildings and does require some maintenance to maintain its structural integrity. The primary concern on the high school building is the condition of the roof, which is scheduled to be replaced. The following is a list of actions we recommend allowing these building to continue to function for the school:

1. Repair the siding at the northeast corner of the 1950 gym building. While doing this remove the original siding to expose any deteriorated wood and replace/rebuild as is necessary.
2. Remove the existing chimney and stair at the backside of the 1950gym building.
3. Coat the concrete foundation of the 1950 gym building with a surface applied epoxy such as . Make sure to properly prepare the existing surface by removing all loose paint.
4. Properly flash the roof joint between the link and the 1950 gym.
5. Expose and replace any deteriorated roof substrate while performing your reroof at the high school building.

Respectfully,
Lange Structural Group LLC

James F. Lange SE
Principal

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