

May 15, 2026

Dr. Tyler Walker  
Hallsville R-IV School District  
421 MO-124 E  
Hallsville, MO 65255

RE: Hallsville High School Wall Separation Observation

Dear Dr. Walker:

A site observation was performed on 5/4/2026 at the Hallsville R-IV District High School. Klingner walked the site to take photos of the current conditions of the exterior classroom wall adjacent to the detached greenhouse.

The following existing conditions were noted, as shown in the attached photos:

- Loose mortar or cracking within the bed joints of the veneer, located approximately (9) courses, on center
- Cracking and separation between the window steel lintels and the brick veneer
- Gaps between multiple perpendicular interior walls and the exterior wall (gaps have grown since caulking was applied)
- Relative movement between the floors and the exterior wall

The final photo attached depicts the direction of the relative movement between the perpendicular interior walls and the exterior wall. By the direction of the dimples in the caulk, it can be seen that since the caulk was last applied, the perpendicular interior wall has moved upward relative to the exterior wall.

Based on the lack of vertical cracks in the exterior of either the veneer or the cast-in-place foundation wall, the exterior wall appears to be at-rest. Therefore, based on the movement seen at the interior joints, it appears that the movement noticed is the result of slab heave/soil expansion below the interior slab. This is supported by the drainage conditions noticed on site, at this location. The geotechnical reports for the R-IV District's sites have suggested that a layer of low volume change (LVC) material be placed below the slabs. If one such later was not placed below the slab at these classrooms, it is possible for the stagnant moisture to infiltrate the layer of soil below the interior slabs, and cause any soil layers that are susceptible to expansion to therefore heave when saturated.

Based on the site conditions noted, it is our suggestion to install a drainage system that will mitigate any moisture accumulation around the noted exterior wall.

After the installation of the drainage system, there are two likely scenarios. The first is that the saturated soil layer below the slab will shrink due to a loss of moisture. This could cause the interior walls and slab to return to their initial conditions, resting directly against the exterior wall. The second is that the interior walls and slab will remain in their current positions, and no additional relative movement will be noticed.

Recommendations for the District:

It is our suggestion to document the size of the gaps now, before the drainage system has been installed, so that future relative movement can be measured against the current conditions. If future movement causes the gaps to grow, after the installation of the drainage system, then a full structural investigation is suggestion to determine the unknown cause of the movement.

Please note that it is also our suggestion to tuckpoint the veneer and apply a rust inhibitor to the horizontal bed reinforcement within the veneer. The gaps and cracks within the veneer bed joints are potentially the cause of water infiltration within the classrooms, and if the mortar is not tuckpointed, continued water infiltration may create future issues.

As always, if you have any questions please do not hesitate to contact us.

Sincerely,

KLINGNER & ASSOCIATES, P.C.

A handwritten signature in blue ink, appearing to read 'M Bridges', is written over a light blue circular stamp.

Matthew Bridges, PE  
Columbia Regional Manger