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January 8, 2018

Carl Posewitz
Paradigm Architecture
125 ½ East Main
Missoula, MT.

Re: Gym Parapet Wall Collapse
Linderman School
Polson, MT.

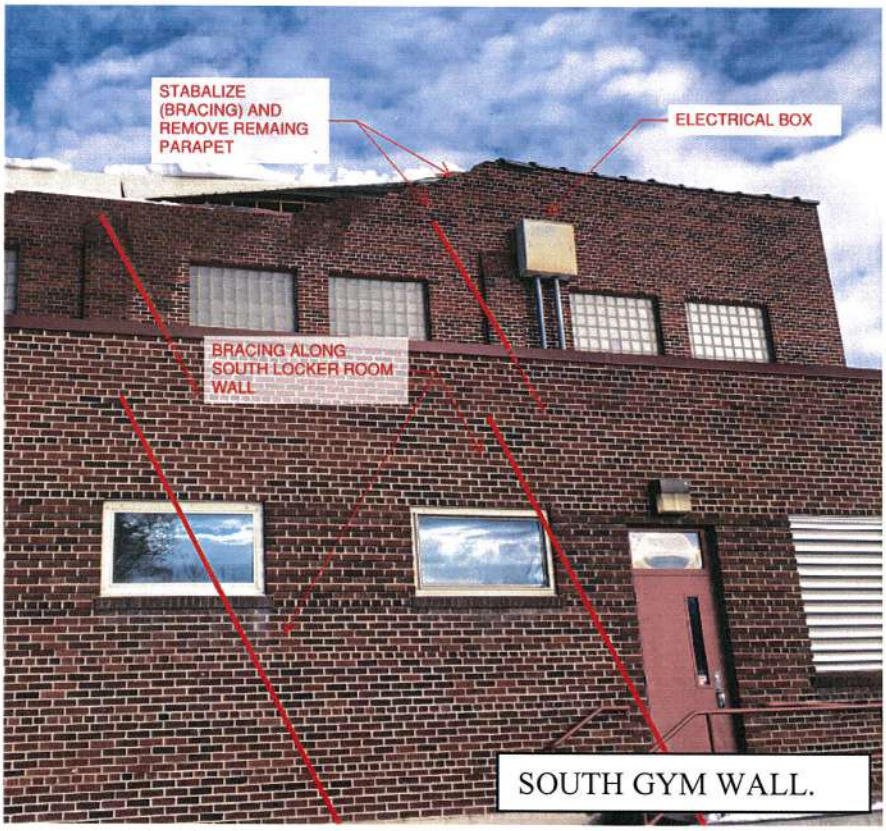
Carl:

At your request, we have conducted a follow-up investigation for the collapse of the south parapet gym wall and locker room roof that occurred since our previous site visit on Tuesday, January 2nd. Chris Schlegel (PE) and Mark Bradford (PE) met on-site with the Superintendent (Rex Weltz), the Maintenance Director (Dan Giles), and Paul Bishop (Paradigm Architects) to inspect the damage and determine steps required to stabilize the structure. The majority of the south gym parapet (~3'-0" tall) had peeled off of the gym wall and landed on the south locker room lower roof below causing the lower roof to collapse (in conjunction with additional sliding snow). A section of parapet is still remaining along the east and west end bays for the gym. The locker room roof framing consists of wood trusses at 16" o/c with 2x6 top chords, 2x diagonal members, and 2x10 bottom chords. The framing spans N/S and is supported by the interior gym brick wall and exterior locker room brick wall.

The gym roof consists of 2x12 rafters at 16" o/c spanning east/west and supported atop timber trusses approximately 21'-7" (6 bays). The trusses are supported on concrete columns which are partially inset into the brick walls on the north and side of the gym walls. A 6'-0" level was placed (along top section of column) on each of the concrete columns located on the south side of the gym. These columns were consistently +/- ½" out of plumb (outward, south). A 4'-0" level was placed at the top of the south gym wall between the columns which indicated the brick wall was out of plumb +/- ½" along the 2 middle bays only. The columns and wall on the north side were all plumb when measured at the same upper location. The exterior brick wall on the southside of the locker room was +/-1" out-of-plumb (outward, south) along the entire wall based on a 4'-0" level measured approximately 2/3 up the wall.

DCI recommends the following to stabilize the south gym walls upon which further investigation and recommendations may be provided:

1. Isolate gym parking lot on all exposed sides with chain link fence to keep pedestrians safely away from the building. The gym was currently taped off along the parking lot and the fence was being delivered while we were on-site.
2. Hand remove snow on north parapet.
3. Install diagonal braces along the south locker room brick wall for stabilization.
4. Brace/stabilize the east parapet above the electrical box (currently peeling off) so that the parapet may be safely removed and the electrical box preserved from potential damage.
5. Install diagonal braces along the gym wall to the south locker room wall to stabilize the south gym wall.
6. Demo locker room roof and determine extent of damage on south gym and locker room walls once debris is removed.



Once the south walls are stabilized and the lower roof collapse is demoed, further investigation is required to determine the extent of the damage. Based on the damage, further recommendations will be made for final stabilization of the existing building.

DCI recommends the stabilization effort described above occur as soon as possible to avoid the potential for further collapse.

Sincerely,
DCI ENGINEERS

Mark Bradford, PE

Chris Schlegel, PE
Principal