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November 17, 2011

Mr. James Scully  
Superintendent of Schools  
City of Haverhill  
4 Summer Street  
Haverhill, Massachusetts 01830

**Subject: Hunking School Preliminary Review**

Dear Mr. Scully:

AECOM has performed a preliminary structural assessment on October 5 and 6, 2011 at the City owned Hunking Middle School. Recent cracking of the floor system and masonry walls reported by Tom Geary, City of Haverhill Facilities Manager, prompted the City to request this inspection. A previous snow load assessment and observations of the timber framed roof system was performed by AECOM February 4, 2011 in response to the heavy snowfall.

On October 6, 2011, Bob Hajjar, PE and Bill Blue, PE of AECOM, with the assistance of Tom Geary, Haverhill Schools Facilities Manager, visited the Hunking School to observe the condition of the ground floor of the school. A letter was prepared to present the preliminary findings of this initial site inspection. (Attached). The recommendation was made to the City to vacate the north wing adjacent to the gymnasium due to the structural deficiencies. The South wing was safe not affected by these structural deficiencies.

AECOM has performed an additional preliminary inspection with mechanical, plumbing, electrical, and asbestos professionals to determine the condition of the building systems. The Hunking School was constructed in the late 1950s and the lifespan of the mechanical systems has been reached and failure has occurred in many locations. The structural deficiencies have caused collapse of many of the heating, ventilation, and drainage systems. The reconstruction of the floor system in the vacated north wing could require full replacement of steamlines, plumbing systems, roof drainage, ventilation system, and electrical trunklines. These systems are antiquated in their design and replacement would require redesign to meet current codes.

The building crawl spaces are all contaminated with asbestos from the steam line insulation and must be remediated to allow entry into this confined space by anyone unless strict asbestos containment protocol is followed. The removal cost of the asbestos contaminated materials and soil will be substantial and will be required at some point in the school reconstruction or demolition. The ventilation systems must be reconfigured in the entire school to provide a negative pressure in the crawl spaces to keep contaminants from entering the classrooms above.

The electrical trunkline and junction boxes in the crawl space has fallen to the earth floor. This main electrical feed is very dangerous and must be deactivated to allow the system to be inspected and either replaced (safest option) or repaired. This line feeds the entire school including the open areas.

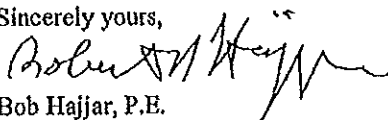
Roof framing is composed of glue laminated beams supporting tongue and groove planking. The three spans of the system are comprised of a center span with cantilever ends supporting pin

connected main spans for the classrooms. This connection is very unconventional and proper saddle connections were later developed. The use of cantilever center spans has also been discontinued under the current building code. See the attached letter concerning the high snow loads of 2011 that prompted the removal of two to four feet of snow from the entire roof system due to limited reserve capacity and unknown material properties.

Due to the multitude of serious deficiencies with the structural, mechanical, electrical, and asbestos issues with the Hunking School, AECOM recommends that all structural and MEP issues be evaluated to determine the cost to perform repairs or reconstruction of the affected areas of the school to allow short term (3 years ) reoccupancy of the North Wing to unify the six grade students with the rest of the school. Long term occupancy of this school building is not recommended due to the continued deterioration of the floor and roof system beyond the extensive disrepair currently present.

Please contact me if you have any questions.

Sincerely yours,



Bob Hajjar, P.E.  
Project Manager