

2004:B19

**MEMORANDUM TO:** Directors of Education

**FROM:** Kevin Kobus  
Assistant Deputy Minister  
Business and Finance Division

**DATE:** October 1, 2004

**SUBJECT:** Advisory: Potential Failure of "SJ" type Open Web Steel Joists in School Buildings

---

It has been brought to the attention of the Ministry of Education that a potential hazard exists concerning the failure of "SJ" type open web steel joists in school buildings as a result of long-term water exposure.

According to the New York State Education Department, Facilities Planning website, on August 1, 2004, a section of roof collapsed into a classroom at the Taft Elementary School in Washingtonville, New York. Fortunately, no one was in the room and there were no injuries.

A structural engineer determined that the structural steel bar joists collapsed as a result of long-term water exposure. The 1960 building utilized a bar joist with a "U" shaped channel for the top chord, as opposed to open steel angles used in modern joists. This channel allowed water to sit on top of the bar joist and cause rust deterioration. These joists, known as type "SJ", were manufactured between 1900 and the late 1950s, and possibly later than 1960. Apparently, the failure of the roof occurred in a classroom with a plaster ceiling that showed no signs of a moisture problem. For more information concerning the New York State advisory, you may visit the New York State Education Department website at: <http://www.emsc.nysed.gov/facplan>

I am confident that each board has its own processes to routinely inspect facilities to ensure structural integrity. Nevertheless, due to the sudden and catastrophic nature of the roof failure at Taft Elementary School, school boards are urged to determine the condition of "SJ" steel joists in school buildings, should they exist.

Any work undertaken by your board in the context of this advisory may be funded using your board's Pupil Accommodation Grants.

If you have any questions regarding this advisory, please contact Steven Mitchell at (416) 325-2015 (e-mail: [steven.Mitchell@edu.gov.on.ca](mailto:steven.Mitchell@edu.gov.on.ca) ).

***Original signed by***

Kevin Kobus  
Assistant Deputy Minister  
Business and Finance Division

cc: Senior Business Officials  
Senior Plant Officials