

## **Citizens for A Safe Learning Environment (CASLE)**

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**For Immediate Release**

**Halifax - Major progress in the field of Healthy School Design and Construction is being made this week as Halifax West High School opens its doors to students for the first time.**

Halifax West High School marks a huge step in progress toward new school design. How often in the past have we heard of a new or renovated school opening to serious health complaints from fresh building materials? And how often have we heard about school occupants struggling with indoor air quality-related health problems due to old buildings that were built without much foresight? "This is a new school built on time and below budget, while breaking new ground in the field of healthy school design and construction," says Karen Robinson, President of CASLE, and chair of the Department of Education's Healthy School Construction Committee that guided the healthy school mandate for this project. "The benefits to student and staff health and learning will not stop at the doors of this school."

"The NS Department of Education's plan to "raise the bar" from the health perspectives so as to benefit the occupants of all future new schools and major renovations in this province is to be commended". says Debbie Hum, Vice President of CASLE, also serving on the Healthy School Construction Committee, and recent recipient of the Queen's Jubilee Medal, "The short and long term benefits from building and maintaining schools with high quality indoor environments have huge cost saving value to individuals and to society as a whole by helping to preserve the health of staff and to ensure that our schools produce healthy and well-trained graduates. Demonstrating that healthy schools don't have to cost more to build is an important contribution toward others following suit."

"I believe that real progress, huge progress, has been made here toward overcoming health-related problems in new schools." adds Robinson, "Many in the national/international field of healthy buildings/schools gave freely of their time and information to ensure that this committee and project had access to the most current information available on product selection, design specialties and construction methods, and so far reaction is that we have a significant accomplishment here."

A few examples of progress made through the building of this school:

1. The ventilation system exceeds industry guidelines and the building readiness evaluation used residential rather than industry standards for indoor air quality.
2. Selection of less toxic, low-particle building materials and equipment, including glues, caulks, cleaning materials and finishes. (example: The desk supplier, Ven Rez, developed a new lower-emission finish for desks and furniture.) After completion there was an extensive offgassing "flush-out" period of several weeks, with the building, furniture and equipment offgassing and ventilation on 24 hours.
3. The gym floor was finished months early, and using less-toxic products. This is the first time this has been achieved in NS (possibly in Canada.) (Across the continent, new or refinished gymnasium

floors routinely cause health symptoms in students and staff. Usually, a gymnasium is left unfinished until just before school starts because it is a large space perfect for storing materials during construction.)

4. No fossil fuels used on site, except a few bunsen burners. A water heat pump system provides heat and air conditioning. (Leaks from combustion equipment cause many problems in existing schools.)

5. The Healthy School Construction Committee developed guidelines for use in this and other new schools and major renovations. The guide *Healthy School Design and Construction*, and the draft *Building Readiness Guidelines* are available on the following website: [www.chebucto.ns.ca/Education/CASLE](http://www.chebucto.ns.ca/Education/CASLE)

Roughly 90% of the recommendations in these documents were used on Halifax West High School and are planned for use in future schools.

**Strong benefits from the SST (School Steering Team) concept:** Part of the success of this school can be attributed to the Department of Education's clear recognition of the value added by involving community members and skilled organizations in a project School Steering Team. Serving on the Halifax West SST were community members, school staff and administration, representatives from the board and city and provincial departments, and others who, along with their deep personal commitment to create the best school possible for children, brought many ideas, skills and hours of strong contribution. They not only helped to ensure that the particular needs of the school community were well served within the budget, but they brought ideas and skill sets that might otherwise not have been available to the process. The Halifax West High School Feeder School Group, and its chair, Jane Davies, and the Halifax West School Advisory Council's chair Gary O'Hara, are outstanding examples of such community contributors. The project never lost sight of the real reason for working so hard - the students.

The NS Department of Transportation and Public Works and Rideau Construction handled the project and actual construction, along with many subcontractors who can be identified if needed.

CASLE is an eight year old information-based registered charity that works to ensure that our province's schools are safe and healthy places for children and staffs. Much has already been accomplished, but there is still much work to do to have the products used in our schools, the practices for operation and maintenance and the condition of the school buildings be the best possible.

January 6, 2003, Draft list of 50...

A partial list of Healthy School accomplishments on the new Halifax West High School:

1. no oil fired heating system. Heating & cooling using water heatpump system. No fossil fuels used on site, except a few bunsen burners.
2. gym floor finished months early. This is the first time this has been achieved in NS (possibly in Canada.) (Even if our choice of a water based finish wasn't used, a lower emission oil based one was used and sealed below a compatible water based layer. This seems better than what has been used in other schools, plus the item is still on the table with the DRM.)
3. new low-emission finishes for desks & furniture from Ven-Rez. (We hope they will promote these new desks and finishes as a feature from now on.)
4. Ventilation system exceeds ASHRAE Guidelines. Goal: Cleaner air indoors than outdoors (once the offgassing is complete) Huge filter system,
5. much effort went into such things as orientation of air intakes.
6. extensive pre-occupancy testing and evaluation using residential rather than industry standards for indoor air quality.
7. huge effort to product selection for health - including concrete additives, foundation form-release products, glues, caulks, wall & floor finishes. Window trim used no glues and was finished off site and then installed. (However, a paint containing teflon, which when burned apparently produces one of the most toxic chemicals known to man, would not have been a preference for the healthy school agenda.)
8. No Pressure Treated Wood (PTW) anywhere it could come in contact with skin. Also, care in disposal of PTW sawdust.
9. Ductwork was not only required to be delivered varsol/oil free and stored clean on site, but ducts were well sealed daily during construction to keep dirt out, and the system was left off until final cleanup finished.
10. The Chem lab has a special ventilation system for use with bunsen burners and in case of chemical spills.
11. There are no plastic garbage cans throughout, and the kitchen equipment is mostly stainless steel. (However, recycle bins and cafeteria tables are plastic.)
12. New locker design has them off the floor to prevent build-up of mold-producing dirt under them.
  
13. Special entryway mat system to clean off boots & shoes.
14. openable windows, screens, and all classrooms have windows except drama (stage area).
15. clear glazing in windows.
16. huge attention to multiple site design issues & drainage.
17. easy access for maintenance and cleaning. In this school, maintenance was given priority
18. sealing of all cut edges of MDF cabinetry.
- 19 no carpeting, plus minimal use of fabrics & other porous materials.
20. gym floor is easy on the eyes - no visual "noise".
- 21 ventilated halls
- 22 heavy ceiling tiles that minimize particle abrasion
23. whiteboards & electronic boards plus low-emission cork boards.
24. controls for EMF exposure from computers in the pod computer rooms. (the other classrooms with rows of computers don't rank as well)
25. No indoor plants or water fountains.
26. An extensive offgassing "flush-out" period of several weeks, with cabinets open, furniture and equipment offgassing with ventilation on 24 hours.
27. innovative plan developed for completing, finishing & offgassing a fast-tracked school: Divided into quadrants & finished one at a time with independent furnaces to dry surfaces for early finish application. Contractor responsible for relative humidity for early finishing.

28. training of building operators. Training of the maintenance personnel was video taped for future use, for example, for refreshment sessions or if there is staff turnover.
29. Archive of design drawings & operations information in three locations (Department, board, and school)
30. no cabinets under sinks. (Leak & mold issue)
31. Copy rooms isolated & with separate ventilation.
32. great care was taken in handling and removal of toxic substances during construction, including solvents and PTW sawdust.
33. No pesticides were used during landscaping.
34. An extensive radon system was installed, including mechanical exhaust of foundation.
35. Care taken not to allow sawdust or garbage to fall between walls or into block walls.
36. The on-site inspector and construction heads were trained in healthy school construction issues. They in turn explained the goals to workers.
37. lead and plastic-free water coolers.
38. No open-flame heaters were used during construction. Oil-fired furnaces outside the building piped in heat.
39. plastic "tents" over the concrete during winter construction of foundation.
40. A special inspection was added to ensure no debris was left above the T-bars.
41. Wet or damaged or unspecified materials were turned away.
42. least toxic cleaning materials were used.
43. No gyproc in washrooms or below washrooms.
44. stairs & doors rather than ladders and hatches for maintenance/mechanical areas.
45. rational analysis of safety aspects of building entrance for those arriving by various means.
46. Parking lots downwind (prevailing winds) and 50 ft from building.
47. Wiring and electrical areas located to minimize EMF exposure to occupants.
48. Internal communication system for those working alone in the building.
49. well designed garbage recycling system, including a recycling room with floor drain for hosing down.
50. The project demonstrated that it is not more expensive to build a healthy school. It came in UNDER budget.

Even more achievements could be listed, and subcategories of many of the items. A huge amount was accomplished here in building a healthier school. HSCC made its way despite being a new addition to the process people are accustomed to. Yes we didn't achieve everything, but then, we didn't really expect to. The cabinetry wasn't what we asked for, and we got vinyl room dividers & blinds and plastic recycle bins & cafeteria tables, but it is an accomplishment to have them in the school and offgassing for over a month. We didn't get the inspector role we wanted, but we were able to provide training. The edges of ceiling tiles were not sealed, and we didn't get continuous cove floors, but attention was given to excellent installation of baseboards and to clean-up above T-bars. We could have used major, ongoing input from byDesign to make decisions easier throughout. Yes, with a fast-tracked school it is difficult to get everything, such as the equipment & rubber mats in the exercise room, early enough to finish offgassing. But what was done was truly an accomplishment for all who worked so hard. HSCC is already helping with the DRM for the next schools. Those who built this school know more about this approach now and will likely use what they learned in future schools. So the positive legacy is continuing.

We clearly notice that this school is offgassing less than other new schools we have visited - even those that were already in use. For this alone, the builders and designers of this school have achieved a lot.

- Healthy Schools Construction Committee (HSCC)