

## Decorative Materials in School Corridors

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Article 2.3.1.3. of the current edition of the BC Fire Code requires that decorative materials on walls and ceilings shall have a flame spread rating not greater than that required for the interior finish of the space in which they are located. This is a change from previous fire code editions which allowed combustible material to be attached to the walls and ceilings in school corridors.

In response to concerns raised that all student artwork may have to be removed from school corridor walls in order to comply with the flame spread rating, the Fire Commissioner formed a task force of educators, parents, trustees, and fire service representatives to review the intent of this code provision and to suggest ways and means that the intent of the code requirements can be satisfied without creating a hazard while allowing for the expression of creativity.

### Flame Spread Rating

In most buildings the property of the interior finish that is regulated is the flame spread rating. Apart from the interior furnishings, the interior finish is the component that most enhances the spread of fire, particularly if it has a high flame spread rating. It is important to reduce the rate at which fire could spread by controlling the characteristics of the finish materials, particularly on walls and ceilings.

The BC Building Code requires the interior wall finish of corridors serving classrooms to have a flame spread rating not more than 75. A flame spread rating of 150 is allowed if the building is protected by an automatic sprinkler system.

The flame spread rating for wall finishes is determined by the Steiner Tunnel test which measures the distance flame travels along the test specimen over a timed period when exposed to a controlled flame from a gas burner. All measurements are relative to asbestos cement board, which is arbitrarily assigned a

0 rating, and red oak flooring, which is arbitrarily assigned a rating of 100.

For example, gypsum wall board has a flame spread rating of 25 while unfinished fir plywood has a rating of 150.

### Equivalencies and Alternatives

The fire code applies to all existing buildings whether they are recently occupied or 100 year heritage buildings. Although the fire code references the most recent building code, not all buildings were constructed to that standard. Therefore provisions must be made in the fire code to accept existing features and arrangements while still maintaining an acceptable level of safety.

Alternatives to the requirements in the fire code are permitted if the authority having jurisdiction is satisfied that the alternatives provide an acceptable level of fire and life safety that is equivalent to the level of performance required by the codes.

This requirement is intended as a means for the authority having jurisdiction to accept an arrangement, such as an existing building, or fire protection system, that is not exactly identical to that required by the fire code, but that is considered to provide an equivalent level of fire and life safety due to its specific qualities. It is the intent of the fire code that an equivalent level of safety be achieved rather than necessarily achieving strict conformance to the referenced provisions in the building code.

The fire code states that the owner or the owner's authorized agent is responsible for carrying out the provisions of the code. However, the owner is expected to communicate with the authority having jurisdiction, who is in a position to assess the relative significance of variances from the code requirements.

## **Fire Emergency Planning**

Section 2.8 of the BC Fire Code requires that schools develop fire emergency procedures. The development of a Fire Safety Plan, prepared in cooperation with the fire department, and the holding of fire drills at least 3 times in each of the fall and spring school terms, form part of the fire emergency procedures. One of the elements to be included in the Fire Safety Plan is the control of fire hazards in the building.

## **What is Acceptable in School Corridors?**

A safe environment which also allows for creativity can be maintained if certain conditions are met to minimize the fire hazard and if the schools comply with the fire code requirement for fire emergency planning which includes the preparation of a fire safety plan and the holding of fire drills.

The intent of the building code in restricting the flame spread in corridors is to prevent the unimpeded spread of fire along a corridor surface, to enable safe exiting from the building, and to restrict the ability of fire to progress from a classroom into a corridor, as well as from a corridor into the classroom. The purpose of the fire code is to ensure that the building is used and maintained as that originally intended by the building code.

To satisfy the intent of the fire code, in maintaining safe passage in the corridors during a fire emergency, it is permissible to attach small quantities of combustible material such as teaching aids, notices, and student artwork within designated display areas in school corridors under the following arrangements:

### **General Provisions**

Combustible material may only be displayed in areas designated for that purpose.

The location for the placement of combustible material in school corridors shall be established through cooperation between the school district or school and local fire officials.

Combustible material may not exceed 20% of the total wall area for each wall.

When possible, decorative material is to be attached at each corner of the paper to enable it to lie flat against the wall

Combustible material may not be attached to the ceilings in corridors.

Stairwells and exits must be kept clear of obstructions at all times. Combustible material may not be displayed in stairwells and exits.

## **Areas Designated for the Displaying of Combustible Material**

The locations for the displaying of combustible material shall be:

- minimum 1 m from classroom and exit doors
- minimum 0.5 m below ceiling level and 0.5 m above floor level
- minimum 0.5 m from safety equipment, such as fire alarm pull stations, fire extinguisher or fire hose cabinets, fire detectors, automatic sprinklers, emergency lighting, and exit signs.

Display areas may not exceed 5 m in length.

Display areas are to be separated from each other by a minimum of 1 m clearance.

### **Corridor Width**

Combustible material may not be displayed in corridors less than 1.8 m in width.

Corridors 1.8 m and 2.1 m in width may have combustible material displayed on one wall only.

Corridors greater than 2.1 m in width may have combustible material displayed on both walls.

### **Classroom Doors**

Combustible material is not to be attached to the corridor side of the classroom door.

For those classrooms served by one door, combustible material is not to be attached on the classroom side of the door.

For those classrooms served by two doors, combustible material may be attached to the classroom side of one door only.

### **Exemptions**

Enclosed trophy and display cases, and glass-faced framed pictures / posters / notice boards are exempt from these requirements.

There is no restriction on the amount and location of fire retardant paper / material on corridor walls, other than the clearance from safety equipment.

## **Implementation**

The following schedule for compliance to the fire code is suggested:

### **Upon notification of these guideline requirements:**

- The amount of combustible material on school corridor walls is restricted to 20% of the wall area.

### **September 1999:**

- The combustible restrictions on classroom doors to be completed.
- The display areas to be identified and the criteria followed.
- Existing permanently-mounted display boards not located within the display areas may remain in place until September 2000.

### **September 2000:**

- All permanently-mounted display boards to be relocated in compliance with the guideline criteria.

## **Calculating Wall Area**

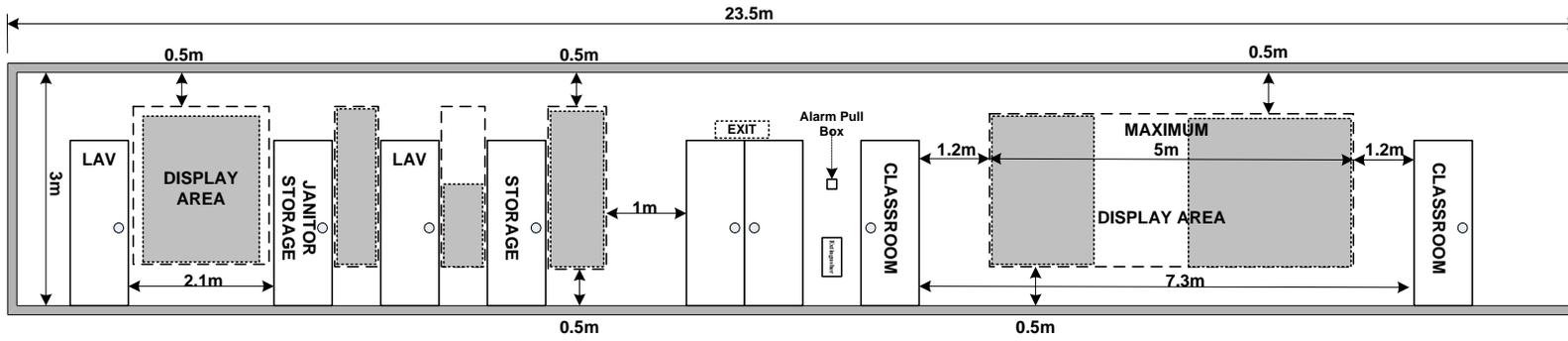
When calculating the wall area, to determine the maximum permitted combustible material for that wall, the boundaries for each wall surface must be identified. However, because of unusual corridor configurations it is not always possible or practical to use corners as the demarcations for each wall surface. In such cases, natural or prominent breaks in the wall surfaces could be used to define individual wall surfaces would be exit doors, stairs, or function areas such as foyers or open areas in the corridor system.

For example, the area of the walls surrounding a function area could be considered when determining the amount of combustible material to be displayed in that area.

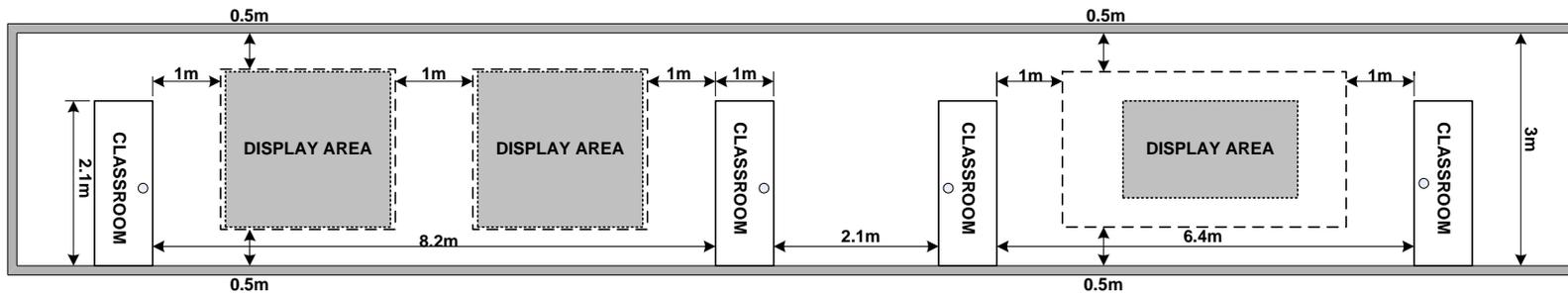
The calculations apply to each wall corridor surface. They are no cumulative. The surface areas of opposing corridor walls cannot be combined to determine the permissible amount of combustible material for a single wall.

It is suggested that school authorities in consultation with fire officials, include within their Fire Safety Plan the locations of the display areas for combustible material.

**EXAMPLES OF  
DISPLAY AREAS IN  
SCHOOL CORRIDORS**



**WALL AREA = 71 SQUARE METER  
SHADED AREA EQUALS 20%**



**NOT TO SCALE**