



**BUILDING CODE COMMISSION**

**IN THE MATTER OF** Subsection 24 (1) of the Building Code Act, 1992.

**AND IN THE MATTER OF** Sentence 3.4.2.5.(2) of Regulation 403, as amended by O. Reg. 22/98, 102/98, 122/98, 152/99, 278/99, 593/99, 597/99, 205/00 and 283/01 (the "Ontario Building Code").

**AND IN THE MATTER OF** an application by Mr. Mario Pecile, Project Manager, Magna-MI Developments Inc., Aurora, Ontario, for the resolution of a dispute with Mr. Mani Navabi, Director of Building Standards, City of Vaughan, Ontario, to determine whether the proposed main aisles in a Group F, Division 2 industrial building, which include several direction changes, lead through doors in interior partitions, and which lead to the exit doors located at 60 metre intervals around the perimeter of the building, provide sufficiency of compliance with Sentence 3.4.2.5.(2) of the Ontario Building Code at Splitcraft/STT Technologies, 800 Tesma Way, Vaughan, Ontario.

**APPLICANT** Mr. Mario Pecile, Project Manager,  
Magna-MI Developments Inc.  
Aurora, Ontario

**RESPONDENT** Mr. Mani Navabi  
Director of Building Standards  
City of Vaughan

**PANEL** Mr. Len King, Chair-Designate  
Mr. Fred Barkhouse  
Mr. John Guthrie

**PLACE** Toronto, Ontario

**DATE OF HEARING** September 27<sup>th</sup>, 2001

**DATE OF RULING** September 27<sup>th</sup>, 2001

**APPEARANCES** Mr. Randal Brown, President  
Randal Brown & Associates  
**Agent for the Applicant**

Mr. Mani Navabi,  
Director of Building Standards  
City of Vaughan  
**The Respondent**

## **RULING**

### **1. The Applicant**

Mr. Mario Pecile, Project Manager, Magna-MI Developments Inc., Aurora Ontario, has applied for a building permit under the Building Code Act, 1992 and is proposing an expansion of the industrial plant known as Splitcraft/STT Technologies, 800 Tesma Way, Vaughan, Ontario.

### **2. Description of Construction**

The Applicant is proposing the expansion of its existing Splitcraft/STT Technologies facility in Vaughan. The building is one storey in building height and, when completed, will have an area of 17,187.5 m<sup>2</sup> including the northern, southern and eastern expansions. The structure is comprised of noncombustible construction and is equipped with a sprinkler system, a fire alarm system and a standpipe and hose system.

The existing building is currently subdivided into several areas by partitions, creating rooms of varying sizes. With the additions, the two east-west exit corridors in the existing building will be eliminated and replaced by two continuous east-west partitions. The partitions will subdivide the western portion of the final building into three sections, with access to each section through egress doors in the partitions. The southern addition will be separated from the western addition and from the existing building by continuous east-west running partitions.

As a result of the increase in building area and the configuration of the expanded structure, it is no longer possible to achieve the 45 m travel distance to an exit, as outlined in the OBC. Exit doors, therefore, have been located, at minimum, every 60 m around the perimeter of the facility. This is in accordance the Building Code requirements where the 45 m travel distance cannot be achieved. The construction in dispute, however, specifically involves the layout of the main aisles that lead to these required exits. The aisles that are provided to link the perimeter exit doors on opposite sides of the building incorporate several direction changes and, where an aisle crosses a partition, double swinging egress doors have been provided.

In light of the aisle design, and to facilitate the evacuation of the building in an emergency, the Applicant is proposing a number of added measures. There will be extra aisles and perimeter doors, in excess of OBC requirements, incorporated into the design of the facility. In addition, the main aisles will be identified by yellow floor markings throughout the building and arrows will be utilized where a slight change in direction occurs. It is also proposed that exit signs will be located approximately 2.74 m (9 ft) above the finished floor over the egress doors that lead through partitions.

### **3. Dispute**

The issue at dispute between the Applicant and Respondent is whether the design of the main aisles leading to the required exits located at 60 m around the perimeter of the building, provides sufficiency of compliance with Sentence 3.4.2.5.(2) of the Ontario Building Code.

Sentence 3.4.2.5.(2) provides relief from Sentence 3.4.2.5.(1). Sentence 3.4.2.5.(1) would require a maximum travel distance of 45 m from a floor area to an exit in this instance. Sentence 3.4.2.5.(2) provides that Sentence (1) need not apply if exits are placed at 60 m intervals along the perimeter of the building provided that each main aisle leads directly to an exit.

In this instance, exit doors are proposed to be placed, at minimum, 60 m around the perimeter of the building, with additional exits also incorporated into the design of the facility. The dispute in respect to this provision of the Code centres around whether the main aisles can be considered to lead “directly” to a required exit. As mentioned above, the main aisles includes several direction changes and travel through double swinging egress doors between partitions.

#### 4. Provisions of the Ontario Building Code

##### Sentence 3.4.2.5.(2) Location of Exits

(2) Except for a *high hazard industrial occupancy*, Sentence (1) need not apply if *exits* are placed along the perimeter of the *floor area* and are not more than 60 m (196 ft 10 in) apart, measured along the perimeter, provided each main aisle in the *floor area* leads directly to an *exit*.

#### 5. Applicant’s Position

The Applicant’s Agent provided a brief history of this dispute, advising that he had been working for some time to achieve a consensus on this issue with municipal officials. He submitted that the Building Code doesn’t cover every situation that may occur and, in his considerable experience, the concept of aisles that deviate from a straight line design has never before been an issue. He provided the Commission with several examples of buildings where similar aisle patterns can be found. These buildings encompassed varied uses and occupancies. The Agent submitted that, in almost all cases the aisles do not provide a straight line approach to the exit.

The Agent continued by submitting that, in a real life setting one would find many areas in a building separated by partitions. For example, office areas would be separated from production areas. Main aisles only need to occur every 60 m throughout the facility. In his opinion, the open space concept, with the grid line aisle pattern anticipated by the municipality, doesn’t work out in the field. In this regard, the Agent submitted that the Applicant has already made many concessions in an attempt to achieve a visual openness for the facility. They have proposed the deletion of several overhead doors and have agreed to add glass to several of the partition doors. He submitted, however, that in some areas this approach would not be desirable. Splitcraft is a manufacturer of automotive parts and portions of the facility are quite noisy given the nature of the operation.

The Agent submitted that all areas of the building have access to two means of egress. In some cases there are additional aisles provided in excess of the OBC requirements. The aisles in this facility exceed the minimum 1,100 mm width requirement and will be clearly identified with floor markings and arrows to indicate any change in direction. He further advised that the facility was clean and bright with a high roof deck. This feature should alleviate any concern with respect to smoke obscuring the floor markings. In addition, the Applicant advised that there will be additional exit signs located above partition and exit doors. He further outlined that, as part of the Fire Safety Plan, visitors must be signed in and escorted by an employee at all times.

The Applicant’s Agent brought a Building Action Newsletter, published by the Housing Development and Buildings Branch of the Ministry of Municipal Affairs and Housing, dated August 1989, to the Commission’s attention. This newsletter offered discussion about the use of partitions and essentially suggested that, where partitions are used, as is the case here, there must be openings to facilitate the path of travel. There is no mention of any requirement for an open floor area. The Agent submitted that, in the proposed design, doorway openings have been provided in the partitions to facilitate a continuous path of travel to the required exits.

In summation, the Agent stated that, despite some change in direction, the facility provides an open view along wide main aisles and guidance to the exits will be provided by the additional measures being proposed in this building. He stated that partitions are not prohibited by the Code and with the additional egress aisles, exits and compensating measures to be provided, in his opinion, sufficiency of compliance is achieved in this instance.

## **6. Respondent's Position**

The Respondent submitted that, from his point of view, the dispute is relatively simple. The problem here results from an extension of the original building whereby the 45 m travel distance would have initially been applied. As a result of the additions, a 45 m travel distance is no longer possible and the Applicant must turn to the alternative offered in Sentence 3.4.2.5.(2). This exception states that, if the 45 m distance cannot be achieved, exit doors must be located every 60 m around the perimeter of the facility. When this occurs, main aisles must lead “directly” to an exit. He further stated that, while the OBC does not define “directly” the dictionary definition suggests that it means a straight line - not crooked.

In this regard, the Respondent submitted, the Code anticipates a grid like main aisle pattern to the exits around the perimeter with internal aisles leading to the main aisles. He suggested that, if this interpretation is not used then aisles that do not lead “directly” to exits would be created, plus, the 45 m travel distance would be exceeded. This application would meet neither provision outlined in the Code. He noted that, in this proposal, some aisles require several direction changes and, therefore, do not meet the intent of the OBC.

He further submitted that the presence of partitions is another complication that is not specifically addressed in the Code. In his opinion, passing through a partition does not provide a “direct” path of travel to an exit. In addition, the presence of partitions could complicate the recognition of smoke or fire in other areas of the building.

In summation, the Respondent stated that with a greater number of buildings being expanded beyond a level where the maximum travel distance can be obtained, this provision of the Code is being used more often. He understands the complications involved in this area but maintains that, in his opinion, the proposal before the Commission does not comply with the Building Code.

## **7. Commission Ruling**

It is the decision of the Building Code Commission that the proposed main aisles, which include several direction changes and lead through doors in the interior partitions, and which lead to the exit doors located at 60 metre intervals around the perimeter of the building, do not provide sufficiency of compliance with Sentence 3.4.2.5.(2) of the Ontario Building Code at Splitcraft/STT Technologies, 800 Tesma Way, Vaughan, Ontario.

## **8. Reasons**

- i) The main aisle pattern proposed cannot be considered to lead directly to the exits as is required by Sentence 3.4.2.5.(2) of the Building Code.
- ii) The measures proposed to compensate for the direction changes and partitions fail to provide sufficiency of compliance for the direct line of travel anticipated by the Code.

Dated at Toronto this **27th** day in the month of **September** in the year **2001** for application number **2001-51**.

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Mr. Len King, Chair-Designate

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Mr. Fred Barkhouse

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Mr. John Guthrie