

# C.T. Male Report 1/10/2007

## Fire Station Facility Evaluation

### 1.0 EXECUTIVE SUMMARY

The building is not in compliance with the Building Code of New York State, the Fire Code, and the Property Maintenance Code of New York State<sup>1</sup>

Asbestos in building?<sup>2</sup>

Lead (paint) in building?<sup>2</sup>

Testing should be done prior to any renovations<sup>2</sup>

Location is adequate<sup>3</sup>

Intended service life of many building components surpassed and may be technically infeasible to meet all of the requirements of the building codes intended for an essential facility<sup>3</sup>

Insufficient:<sup>4</sup>

- bunk room space
- washroom
- storage
- office spaces
- apparatus bays

Calls expected to increase (including simultaneous runs)<sup>4</sup>

“Good faith effort” through documentation & demonstration = protection from lawsuits<sup>5</sup>

### 2.0 INTRODUCTION

#### 2.0 Background

#### 2.1 As-Found Building Information

#### 2.2 Site Assessment

#### 2.3 Code Compliance

Certain code violations may not be “grandfathered” (Life Safety Code)<sup>6</sup>

“An existing building, or portion thereof, which does not comply with the requirements of the code for new construction shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently”<sup>7</sup>

“For any proposed work, the building owner shall cause the existing building to be investigated and evaluated in accordance with the provisions of the Code. This evaluation shall be comprised of three categories: fire safety, means of egress, and general safety.”<sup>8</sup>

#### 2.4 Fire Protection Analysis Recommendations

## Fire Protection Analysis Recommendations<sup>9</sup>

1. Apparatus should each have their own bay with proper drainage & room for maintenance
2. Station should be sprinklered with smoke/heat detection
3. Watch desk & communication area should be immediately adjacent to the apparatus bays with a clear view of the bays and ramp
4. Station should have sufficient office space for
  - a. Chief
  - b. District Secretary
  - c. Commissioners
  - d. Station Officer
  - e. Other personnel as needed
5. Bunk room, wash room, kitchen facilities should be able to accommodate 16 personnel. The bunk room should be in close proximity to the apparatus, and all living areas should be on the main floor of the building
6. Bunk room should have additional room for living and study areas
7. Areas adjacent to the apparatus should have sufficient room for storage of turnout gear, hose, spare equipment, gear cleaning
8. One additional bay reserved for apparatus repair & tool storage
9. Room adjacent to the apparatus bay for small tool repair, SCBA refilling
  - a. Fully enclosed fragmentation filling station should be provided
10. There should be enough bays to house all department owned vehicles
11. Building should be properly secured to prevent unauthorized entry & Emergency generator should be sized to power all areas and functions within the building
12. Properly sized room should be dedicated solely for training and other related activities
13. Physical fitness room should be provided within the main building
14. Building should be designed to accommodate 16 personnel at all times

## **2.5 New York State Fire District Guideline**

### **3.0 ARCHITECTURAL EVALUATION**

#### **3.0 Property Maintenance**

#### **3.1 Occupancy Classification**

Structure is classified as a mixed use occupancy<sup>10</sup>

Each fire area shall comply with the code based on the use of that space<sup>10</sup>

Numerous code violations listed<sup>10 11 12</sup>

#### **3.2 Type of Construction**

#### **3.3 Fire Barriers**

#### **3.4 Exterior Property Areas**

#### **3.5 Exterior Structure**

Remote controllers for overhead doors should be capable of opening, closing, and stopping the doors.<sup>13</sup>

#### **3.6 Interior Structure**

#### **3.7 Miscellaneous Combustible Materials Storage**

#### **3.8 Occupancy Limitations**

50 sq ft per person required for every bedroom occupied by more than one person<sup>14</sup>  
70 sq ft per person for single occupancy<sup>14</sup>  
Existing bunk room is 207 sq ft<sup>14</sup>  
At least one water closet and lavatory shall be located on the same story as the bedroom<sup>14</sup>

### **3.9 Means of Egress**

### **3.10 Accessibility Requirements**

The ADA impacts the Fire District in two main areas:<sup>15</sup>

1. The labor area
2. public accommodation area

“Various codes and regulations allow “Firefighter” (able-bodied) use only in areas to be exempt from access codes. These areas can be showers, living quarters, exercise rooms, and ready rooms...”<sup>15</sup>

“Administrative and community areas, however, need to meet the accessibility requirements by making the workplace readily accessible and useable by people with disabilities”<sup>15</sup>

There are a number of factors that allow the District to “not comply” with ADA.<sup>16</sup>

### **3.11 Fire Protection**

Sprinkler system may be required if bunk room size is increased<sup>17</sup>

### **3.12 Rehabilitation**

### **3.13 Repairs**

### **3.14 Renovations**

### **3.15 Alterations**

### **3.16 Additions**

### **3.17 Energy Conservation**

## **4.0 STRUCTURAL EVALUATION**

### **4.0 General**

Numerous code violations listed<sup>10 11 12</sup>

### **4.1 Importance Factors**

### **4.2 Existing Structures**

### **4.3 Visual Evaluation of Existing Building**

### **4.4 Alterations**

### **4.5 Additions to an Existing Structure**

### **4.6 Structural Tests and Inspections**

### **4.7 Seismic Design Requirements**

### **4.8 Suspended Ceilings**

### **4.9 Partitions**

### **4.10 Mechanical and Electrical Component Design**

## **5.0 MECHANICAL EVALUATION**

Numerous code violations listed<sup>10 11 12</sup>

## **5.1 Plumbing Systems**

Gas line runs through men's bathroom<sup>18</sup>

## **5.2 HVAC Systems**

No fire suppression system in the 2<sup>nd</sup> floor kitchen<sup>19</sup>

## **5.3 Rehabilitation of Existing Structures**

## **6.0 ELECTRICAL EVALUATION**

### **6.0 General**

### **6.1 Service**

### **6.2 Distribution**

### **6.3 Generator**

Generator unable to supply all of the building equipment making the building unusable as a shelter, especially in the summer months, because the HVAC equipment is not supplied by emergency power<sup>20</sup>

### **6.4 Electrical Facilities**

### **6.5 Lighting**

Emergency lights are inadequate or non-existent throughout the building especially in the public areas<sup>21</sup>

### **6.6 Fire Alarm System**

### **6.7 Rehabilitation of Existing Structures**

## **APPENDIX A – Existing Building Condition Drawings**

**First Floor Plan**

**Basement Level Plan**

**Second Floor Plan**

**Accessory Building Plans**

**Site Plan**

## **APPENDIX B – Digital Photographs**

## **APPENDIX C – BC-Table 1604.5**

## **APPENDIX D – BCNYS Technical Bulletins**

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- <sup>1</sup> Executive Summary – 1
  - <sup>2</sup> Executive Summary – 1
  - <sup>3</sup> Executive Summary – 1
  - <sup>4</sup> Executive Summary – 2
  - <sup>5</sup> Executive Summary – 3
  - <sup>6</sup> Introduction – 4; 2.3 Code Compliance
  - <sup>7</sup> Introduction – 5; 2.3 Code Compliance
  - <sup>8</sup> Introduction – 5; 2.3 Code Compliance
  - <sup>9</sup> Introduction – 5; 2.4 Fire Protection Analysis Recommendations
  - <sup>10</sup> Architectural Evaluation – 1; 3.1 Occupancy Classification
  - <sup>11</sup> Structural Evaluation
  - <sup>12</sup> Mechanical Evaluation
  - <sup>13</sup> Architectural Evaluation – 10; 3.5.6 Overhead Doors
  - <sup>14</sup> Architectural Evaluation – 13; 3.8.3 Area for Sleeping Purposes
  - <sup>15</sup> Architectural Evaluation – 15; 3.10 Accessibility Requirements
  - <sup>16</sup> Architectural Evaluation – 15-17; 3.10 Accessibility Requirements
  - <sup>17</sup> Architectural Evaluation – 18; 3.11 Fire Protection
  - <sup>18</sup> Mechanical Evaluation – 3; 5.1.4 Domestic Water Service
  - <sup>19</sup> Mechanical Evaluation – 6; 5.2.3 Kitchen
  - <sup>20</sup> Electrical Evaluation – 2; 6.3 Generator
  - <sup>21</sup> Electrical Evaluation – 5-6; 6.5.2 Emergency Egress