**2.21.17 – 160 CUMBERLAND AVENUE CODE REVIEW SUMMARY- INCLUDES REFERENCE TO IBC 2009, IEBC 2009, NFPA 2009**

**RENOVATION OF EXISTING SINGLE APARTMENT IN EXISTING SIX UNIT BUILDING**

**IBC- 2009- Relevant sections;**

**The existing building use is defined as R-2 Apartment .**

**Per table 503 the Type V / R-2 structure can have 7,000 s.f. per floor and be 2 stories while remaining unsprinklered. WE ARE SPRINKLED AND DO NOT EXCEED THE S.F.**

**The rehabbed structure is sprinkled, Type V / per table 601. No rating required for building elements including framing, all bearing walls, floor construction and roof construction.**

**IEBC- 2009- Relevant sections;**

**405.1 Level 3 alterations apply where the work area exceeds 50% of the aggregate area of the building. LEVEL 3 PROJECT**

**405.2 APPLICATION- Level 3 alterations shall comply with the provisions of chapters 6,7 for Level 1 and 2 alterations, respectively as well as the provisions of chapter 8. LEVEL 3 PROJECT**

**607.1 Minimum Energy Requirements- Level 1 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the IECC or IRC. The elements shall conform to these codes as they relate to new construction only. THE PROJECT IS EXISTING, MINIMAL NEW CONSTRUCTION INVOLVING ONE APARTMENT OF SIX.**

**The existing structure is un-sprinkled, Type V A per table 601. One hour rated components include framing, all bearing walls, floor construction and roof construction.**

**Fire Department checklist- please refer to plan for travel distance, smoke detectors, CO2 detectors, alarm panel**

1. Owner- **Gregory Kontos**

 2. Architect- **Whipple Callender Architects, PO Box 1276 Portland, Maine 04101 (775-2696)**

3. Proposed use- **Existing apartment reno**

 4. Square footage of structure- **2,700 s.f. gross s.f. per floor**

 5. Elevation of all structures**- existing 8’-6” floor to floor**

6. Proposed fire protection of all structures- **Rated Construction**

 7. Hydrant Locations- **Cumberland Ave**

 8. Water main sizes and locations- **On Cumberland, main size unknown.**

 9. Access to any Fire Department Connections-**NA**

10. Access to all structures (2 sides Min.)- **Clear access to 3 sides**

11. A code summary shall be included referencing NFPA and all fire department technical standards-

**NFPA 101-2009 – Chapter 31: Existing Apartment Buildings (In this case, a single unit).**

**31.1 General Requirements**

**31.1.1.1 The requirements of this chapter shall apply to existing buildings or portions thereof currently occupied as apartment occupancies. In addition, the building shall meet the requirements of one of the following options :**

1. **Option One, Buildings without fire suppression or detection systems.**
2. **Option Two, Buildings provided with a complete approved automatic fire detection and notification system in accordance with 31.3.4.4. HAVE SELECTED OPTION #2**
3. **Option Three, Buildings provided with approved automatic sprinkler protection in selected areas, as described in accordance with 31.3.5.9.**
4. **Option Four, Buildings protected throughout by an approved automatic sprinkler system. WE**

**31.2 Means of Egress Requirements**

**31.2.1.2 Means of escape within a dwelling unit shall comply with the provisions of Section 24.2 for one and two family dwellings. NA- NO INTERIOR STAIRS**

**31.2.2.3.1 Stairs complying with 7.2.2 shall be permitted. 7.2.2 permits existing stairs with width of 36” and an 8” riser with 9” min. tread. EXISTING INTERIOR EGRESS STAIRS COMPLY**

**31.2.4 Number of Exits**

**31.2.4.3 A single exit shall be permitted in buildings where the total number of stories does not exceed four, provided all the following conditions are met: NA- WE HAVE 2 MEANS OF EGRESS**

1. **The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 31.3.5**
2. **2. The exit stairway does not serve more than ½ of a story below the level of exit discharge.**
3. **The travel diastance from the entrance door to any dwelling unit to an exit does not exceed 35 feet.**
4. **The exit stairway is completely enclosed or separated from the rest of the building by barriers having a minimum 1 hour fire resistance rating.**
5. **All openings between the exit stairway enclosure and the rest of the building are protected by self closing doors having a minimum 1 hr. fire resistance rating.**
6. **All corridors serving as access to the exits have a min. ½ hr. fire resistance rating.**
7. **Horizontal and vertical separation having a min. ½ hr. fire resistance rating is provided between dwelling units. WE MEET THE ABOVE CONDITIONS.**

**7.3 Capacity of Means of Egress**

**7.3.4.2.1 In existing buildings, the width of exit access shall be permitted to be not less than 28” EXIT ACCESS WILL TYPICALLY BE IN EXCESS OF 28”.**

**31.2.9 Emergency lights shall be provided in buildings 4 or more stories in height or with more than 12 dwelling units, unless each unit has a direct exit to the outside of the building at grade level- WE ARE NOT REQUIRED TO HAVE EMERGENCY LIGHTS AS WE ARE 3 STORIES, LESS THAN 12 DWELLING UNITS.**

**31.2 Means of Egress Components**

**31.2.1.2 Means of escape within a dwelling unit shall comply with the provisions of Section 24.2 for one and two family dwellings. NA- NO INTERIOR STAIRS**

**31.2.2.1.3 In non- highrise buildings using Option 2, exit stair doors shall be permitted to be 1 ¾” thick solid- bonded wood –core doors that are self closing, self latching and in wood frames not less than ¾” thick. WE WILL PROVIDE DOORS AS REQUIRED**

**31.2.2.2 Doors**

**31.2.2.2.2.1 No door in any means of egress shall be locked against egress when the building is occupied. EGRESS DOORS WILL ALWAYS BE OPERABLE FROM INSIDE THE APARTMENT.**

**31.2.2.3 Stairs**

**31.2.2.3.1 Stairs complying with 7.2.2 shall be permitted. 7.2.2 permits existing stairs with width of 36” and an 8” riser with 9” min. tread. EXISTING EGRESS STAIRS COMPLY w/ 8” RISER AND 9 1/2” TREAD**

**31.2.5 Arrangement of Means of Egress**

**31.2.5.1 Access to all required means of egress shall be in accordance with Section 7.5**

**31.2.5.3.1 No common path of travel shall exceed 35’ in buildings not protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 31.3.5. Travel within a dwelling unit shall not be included when calculating common path of travel. OK- STIRS ARE ACCESSED DIRECTLY FRO THE APARTMENT**

**31.2.6.1 Travel distance within a dwelling unit to a corridor door shall not exceed the following limits: (2) for buildings using Option 2 or 4 , 125 feet. OUR MAXIMUM TRAVEL DISTANCE IS APPROXIMATELY 40’.**

**31.2.9 Emergency lights shall be provided in buildings 4 or more stories in height or with more than 12 dwelling units, unless each unit has a direct exit to the outside of the building at grade level- WE ARE NOT REQUIRED TO HAVE EMERGENCY LIGHTS AS WE ARE 2 STORIES, LESS THAN 12 DWELLING UNITS.**

**31.3.2.1.1 Boiler rooms, Laundry and storage areas require 1 hr. rated separation.- WE WILL PROVIDE 1 HR. SEPARATION AT BOILER ROOM, LAUNDRY AND STORAGE AREAS.**

**31.3.4.1 Detection, Alarm and Communication Systems**

**31.3.4.1.1 A fire alarm system shall not be required where each dwelling unit is separated from other contiguous units by fire barriers having a minimum ½ hour fire resistance rating and where each dwelling unit has either its own independent exit or its own independent stairway or ramp discharging at the finished ground level. WE COMPLY WITH THIS REQUIREMENT- NO FIRE ALARM REQUIRED**

**31.3.4.2 Initiation**

**31.3.4.2.2 Initiation of the required fire alarm system by manual means shall not be required in buildings 4 or fewer stories in height, containing not more than 16 dwelling units and protected throughout by an approved, supervised sprinkler system installed in accordance with 31.3.5.3 THE ALARM SYSTEM SHALL NOT HAVE MANUAL PULL STATIONS**

**31.3.4.3 Notification**

**31.3.4.2.1 Occupant Notification shall be provided automatically in accordance with Section 9.6.2 and the flowing shall also apply:**

1. **Visible signals shall be installed in units for the visually impaired. HORNS AND STROBES WILL BE INSTALLED AT BEDROOMS AND LIVING AREAS TYPICALLY**
2. **Positive alarm system in accordance with 9.6.3.4 shall be permitted.**
3. **Existing approved signals shall be permitted. NA- NO EXISTING SIGNALS**

**31.3.4.3.3 Annunciation shall not be required in buildings TWO or fewer stories in height and not having more than 50 rooms. NO ANNUNCIATOR PANEL WILL BE INSTALLED**

**31.3.4.4.2 Automatic smoke detection shall be installed as follows:**

1. **Smoke detectors shall be installed in all common areas and work spaces outside the living unit such as exit stairs, egress corridors, lobbies, storage rooms, equipment rooms, and other tenantless spaces in environments that are suitable for proper smoke detector operation.**
2. **Heat detectors shall be located within each room of the living unit.**

**WE PLAN ON INSTALLING HARD WIRED SMOKE DETECTORS AND CO2 DETECTORS AS REQUIRED.**

**31.3.4.5 Smoke Alarms**

**31.3.4.5.2 Smoke alarms shall be required outside every bedroom per 9.6.2.10 and 31.3.5.4 . SMOKE DETECTORS WILL BE LOCATED OUTSIDE BEDROOMS AND ALL LEVELS INCLUDING THE BASEMENT**

**31.3.2.1.1 Hazardous Area Protection**