FROM

NAME & TITLE	CHRIS RYER, DIRECTOR
AGENCY NAME & ADDRESS	DEPARTMENT OF PLANNING 8TH FLOOR, 417 EAST FAYETTE STREET
SUBJECT	CITY COUNCIL BILL #20-0505/ BUILDING, FIRE, AND RELATED CODES – 2020 EDITION

CITY of BALTIMORE

MEMO

DATE:

TO

The Honorable President and
Members of the City Council
City Hall, Room 400
100 North Holliday Street

April 15, 2020

The Department of Planning is in receipt of City Council Bill #20-0505, which is for the purpose of adopting a revised Building, Fire, and Related Codes Article, comprising the Maryland Building Performance Standards (effective March 25, 2019), the International Building Code (2018 Edition), the National Electrical Code (2017 Edition), the International Fuel Gas Code (2018 Edition), the International Mechanical Code (2018 Edition), the International Plumbing Code (2018 Edition), the International Property Maintenance Code (2018 Edition), the International Fire Code (2018 Edition), the International Energy Conservation Code (2018 Edition), the International Residential Code for One- and Two-Family Dwellings (2018 Edition), the International Green Conservation Code (2012 Edition), and the International Swimming Pool and Spa Code (2018 Edition), all as supplemented, amended, or otherwise modified by this Ordinance; providing for the effect, construction, and effective date of these new standards and codes; conforming, correcting, and clarifying certain language; providing for a special effective date; and generally relating to the adoption of new building, fire, property maintenance, electrical, plumbing, mechanical, and related codes for Baltimore City.

The Department of Planning recommends amendment and approval of City Council Bill #20-0505, with the following amendments:

- Fourteen edits that serve to streamline the code (without altering the intent) have been submitted to Legislative Reference. The edits remove details about the building code related to flood hazard areas and instead refer to the Floodplain Management Code, as is the case in a large number of other sections of the building code.
- Amendment text will be shared prior to the hearing date, but the suggested changes are tracked at the of this memo.

If you have any questions, please contact Ms. Lisa McNeilly, Division Chief, Office of Sustainability at 410-396-8360.

CR/lm

cc: Mr. Nicholas Blendy, Mayor's Office
Mr. Matthew Stegman, Mayor's Office
Ms. Nina Themelis, Mayor's Office
The Honorable Edward Reisinger, Council Rep. to Planning Commission
Mr. Colin Tarbert, BDC
Mr. Derek Baumgardner, BMZA
Mr. Geoffrey Veale, Zoning Administration
Mr. Bob Pipik, DHCD
Ms. Elena DiPietro, Law Dept.

Mr. Francis Burnszynski, PABC
Mr. Liam Davis, DOT
Ms. Natawna Austin, Council Services
Mr. Dominic McAlily, Council Services

Suggested Amendments to CB#20-0505

1. Page 12

PART II. INTERNATIONAL BUILDING CODE
Chapter 1 Scope and Administration
Section 104 Duties and Powers of Building Official

104.2 Applications and permits. *{As in IBC}*
104.2.1 Determination of substantially improved or substantially damaged existing structures in flood hazard areas.
For applications for reconstruction, rehabilitation, addition, or other improvement of an existing structure in a flood hazard area, the Building Official must examine the construction documents and prepare findings with regard to whether the structure has sustained "substantial damage"and whether the proposed improvement is a "substantial improvement", as these terms are defined in and calculated under the Floodplain Management Code. The Building Official must submit these findings to the Floodplain Manager for a determination of "substantial improvement". Applications determined by the Floodplain Manager to constitute a "substantial improvement" require full compliance with the requirements of the Floodplain Management Code.~~For applications for reconstruction, rehabilitation, repair, alteration, addition, or other improvement of existing structures located in flood hazard areas, the Building Official shall determine if the proposed work constitutes "substantial improvement" or repair of "substantial damage", as defined in the Floodplain Management Code. If the Building Official determines that the proposed work does constitute "substantial improvement" or repair of "substantial damage", the Building Official shall require the structure to meet the requirements of the Floodplain Management Code.~~

2. Page 70

PART II. INTERNATIONAL BUILDING CODE
Chapter 2 Definitions; Rules of Construction
Section 202 Definitions

202.2.24 Existing construction. *{Not Adopted}*
202.2.25 Existing structure (in Regulated Flood Hazard Areas). "Existing structure" means any structure for which the building permit was issued before March 15, 1978, and the actual start of construction was within 180 days of the permit date, as defined in the Floodplain Management Code.~~.~~

3. Page 84

PART II. INTERNATIONAL BUILDING CODE
Chapter 8 Interior Finishes
SECTION 802 GENERAL

802.4 [801.5] Applicability. For structures in a flood hazard area, interior finishes, trim, and decorative materials below the flood elevation should comply with the requirements of ~~required by~~ the Floodplain Management Code

17 ~~must consist of flood-damage-resistant materials~~.

4. Page 88

PART II. INTERNATIONAL BUILDING CODE
Chapter 12 Interior Environment
SECTION [1203] 1202 VENTILATION

13 **1202.4.4 FLOOD HAZARD AREAS.** [5]. For structures in a flood hazard area, the openings
14 for under-floor ventilation ~~are deemed to meet the flood opening requirements of ASCE~~
15 ~~24, if the ventilation openings are~~ should be designed and installed in accordance with
~~ASCE 24.~~the Floodplain Management Code.

5. Page 89

PART II. INTERNATIONAL BUILDING CODE
Chapter 14 Exterior Walls
Section 1402 [1403] Performance Requirements

27 **1402.6 [1403.6] Flood resistance.** For structures in a flood hazard area, exterior walls
28 extending below the flood elevation should comply with the requirements of ~~required by~~ the
Floodplain Management Code ~~must be~~
29 ~~constructed with flood-damage-resistant materials~~.
30 ~~**1402.7 [1403.7] Flood resistance for coastal high-hazard areas and coastal A zones.** For~~
31 ~~structures in a coastal high-hazard area or coastal A zone, electrical, plumbing, and~~
32 ~~mechanical system components may not be mounted on or penetrate through exterior walls~~
33 ~~that are designed to break away under flood loads.~~

6. Page 93

PART II. INTERNATIONAL BUILDING CODE
Chapter 16 Structural Design
Section 1603 Construction Documents

1603.1.7 Flood design data. For structures located in whole or in part in a flood hazard
14 area, the documentation pertaining to design, if required by the Floodplain Management
15 Code, must be included, and the following information, referenced to the datum on the
16 City's Flood Insurance Rate Map (FIRM), must be shown, regardless of whether flood
17 loads govern the design of the structure:
18 1. In flood hazard areas not subject to high-velocity wave action, the elevation of the
19 proposed lowest floor, including the basement.
20 2. In flood hazard areas not subject to high-velocity wave action, the elevation to
21 which any nonresidential building will be dry floodproofed.
22 3. In flood hazard areas subject to high-velocity wave action, the proposed elevation
23 of the bottom of the lowest horizontal structural member of the lowest floor,
24 including the basement.
4. Any other documentation required by the Flood Management Code.

7. Page 97

PART II. INTERNATIONAL BUILDING CODE
Chapter 18 Soils and Foundations
Section 1804 Excavation, Grading, and Fill

1804.5 Grading and fill in flood hazard areas. In flood hazard areas, grading or fill may not be approved:

1. unless ~~the fill is placed, compacted, and sloped to minimize shifting, slumping, and erosion during the rise and fall of floodwaters and, as applicable, wave action;~~
2. ~~in floodways, unless it has been demonstrated through hydrologic and hydraulic analyses, prepared by a licensed professional engineer in accordance with the requirements of the Federal Emergency Management Agency and the Maryland Department of the Environment, that the proposed grading or fill will not result in any increase in flood levels during the occurrence of the design flood;~~
3. ~~in flood hazard areas subject to high-velocity wave action, unless the fill is conducted or placed to avoid diversion of water and waves toward any structure; or~~
4. ~~where design flood elevations are specified but floodways have not been designated, unless it has been demonstrated that the cumulative effect of the proposed encroachment, when combined with all other existing and anticipated encroachments, will not increase the design flood elevation at any point~~it meets the requirements of the Floodplain Management Code.

8. Page 97

PART II. INTERNATIONAL BUILDING CODE
Chapter 18 Soils and Foundations
Section 1805 Dampproofing and Waterproofing

1805.1.2.1 Flood hazard areas. For structures in a flood hazard area, the finished ground level of an under-floor space, such as a crawl space, must ~~be equal to or higher than the outside finished ground level on at least 1 side.~~meet the requirements of the Floodplain Management Code.

~~1 **Exception:** Under-floor spaces of Group R-3 buildings that meet the requirements of the City's Floodplain Management Code and ASCE 24.~~

9. Page 170

PART V. INTERNATIONAL MECHANICAL CODE
Chapter 3 General Regulations
Sections 301 General

301.16.1 High-velocity wave action. In a flood hazard area subject to high-velocity wave action, mechanical systems and equipment ~~may not be mounted on or penetrate walls intended to break away under flood loads~~meet the requirements of the Floodplain Management Code.

10. Page 173

PART V. INTERNATIONAL MECHANICAL CODE
Chapter 6 Duct Systems
Section 602 Plenums

602.4 Flood hazard areas. For structures in a flood hazard area, plenum spaces must be located above the elevation required by the Floodplain Management Code for electric, plumbing, and mechanical systems and their attendant components and equipment or designed and constructed to prevent water from entering or accumulating within the plenum spaces during floods up to that elevation, if allowed by the requirements of the Floodplain Management Code.

11. Page 173

PART V. INTERNATIONAL MECHANICAL CODE
Chapter 6 Duct Systems
Sections 603 Duct Construction and Installation

603.13 Flood hazard areas. For structures in a flood hazard area, ducts must be located above the elevation required by the Floodplain Management Code for electric, plumbing, and mechanical systems and their attendant components and equipment or designed and constructed to prevent water from entering or accumulating within the ducts during floods up to that elevation, if allowed by the requirements of the Floodplain Management Code.

12. Page 175

PART V. INTERNATIONAL MECHANICAL CODE
Chapter 12 Hydronic Piping
Section 1206 Piping Installation

1206.9.1 Flood hazard areas. Piping located in a flood hazard area must be capable of resisting hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, ~~during the occurrence of flooding to the design flood elevation~~as required by the Floodplain Management Code.

13. Page 175

PART V. INTERNATIONAL MECHANICAL CODE
Chapter 13 Fuel Oil Piping and Storage
Section 1305 Fuel Oil System Installation

1305.2.1 Flood hazard areas. All fuel oil pipe, equipment, and appliances located in a flood hazard area must be located above the elevation required by the Floodplain Management Code for electric, plumbing, and mechanical systems and their attendant components and equipment or capable of resisting hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy and meet all other requirements of the Floodplain Management Code~~, during the occurrence of flooding up to that elevation~~.

14. Page 273

PART X. INTERNATIONAL RESIDENTIAL CODE
Chapter 22 Special Piping and Storage Systems
Section 2201 Oil Tanks

2201.6 Flood-resistant installation. In flood hazard areas, tanks must be installed at or above the elevation required by the Floodplain Management Code or ~~anchored to prevent flotation, collapse, or lateral movement under flooding conditions~~as otherwise allowed by the Floodplain Management Code.