

20.70 FLOOD PLAIN OVERLAY DISTRICT

20.71 *Purpose.* It is the purpose of this Section 20.70 to protect the health, safety, and general welfare, to protect human life and property from the hazards of periodic flooding, to preserve the natural flood control characteristics, and the flood storage capacity of the flood plain, to preserve and maintain the ground water recharge areas within the flood plain, and to provide a mechanism for a comprehensive review of development in the Flood Plain Overlay District and the design and location of flood water retention systems and their relationship to other surrounding development.

20.72 *Establishment and Scope.* There is hereby established a Flood Plain Overlay District which shall be governed by the regulations specified in this Section 20.70. The Flood Plain Overlay District includes all special flood hazard areas designated as Zone A, and AE-A1-30 on the Middlesex County Cambridge Flood Insurance Rate Maps (FIRMs), and the Flood Plain Boundary and Floodway Map, dated July 5, 1982, or any amendment thereto, on file with the City Clerk, Superintendent of Buildings, Community Development Department, and issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program. The map panels of the Middlesex County FIRMs that are wholly or partially within the City of Cambridge are panel numbers 25017C0418E, 25017C0419E, 25017C0438E, 25017C0557E, 25017C0576E, 25017C0577E dated June 4, 2010. The exact boundaries of the District are defined by the special flood hazard area, which is the area subject to flooding by the 1% annual chance flood, also known as the "100-year flood" or "base flood, (Special Flood Hazard area) shown on the FIRMs and further defined by the Middlesex County Flood Insurance Study (FIS) report dated June 4, 2010. The FIRM and FIS reports These maps as well as the accompanying Cambridge Flood Insurance Study dated January 5, 1982, or any amendment thereto are incorporated herein by reference and are on file with the City Clerk, Superintendent of Buildings Inspectional Services Department, Department of Public Works, and Community Development Department and Conservation Commission.

20.73 *Applicability.* No structure or building shall be erected, constructed, expanded, substantially improved, or moved and no earth or other materials shall be dumped, filled, excavated, transferred or otherwise altered in the Flood Plain Overlay District unless a special permit is granted by the Planning Board.

20.73.1 A special permit shall not be required for any activity detailed in 20.73 above on individual lots containing one, two, or three family dwellings in existence as of July 5, 1982 or for the demolition of an existing structure. Nevertheless all other requirements of this Section 20.70 (and especially those criterion detailed in Subsection 20.75) shall be met as applicable.

20.74 *Procedure.* Application for a special permit shall be made on a form prescribed by the Board. In addition to the information required for the submittal, the applicant shall also present the following:

1. A detailed landscape plan drawn to a scale of one inch equals twenty (20) feet showing the elevation and design of flood water retention systems as required by applicable law;
2. Base flood elevation data, where the base flood elevation is not provided on the FIRM;
3. Certification and supporting documentation by a Massachusetts registered professional engineer demonstrating that such encroachment of the floodway as specified above in Subsection 20.73 shall not result in any increase in flood levels during the occurrence of the 100-year flood; and

A₂

4. Such other technical information as necessary to permit the Planning Board to make the findings required in Section 20.75 below;

5. Description of the status of the proposal, pursuant to the requirements of the Massachusetts Wetlands Protection Act, before the Cambridge Conservation Commission, including any Order of Conditions or Determination of Applicability issued; and

46. Four (4) copies of all application materials.

20.74.1 Upon receipt of the application and development plans, the Planning Board shall transmit copies of the plans to the Conservation Commission and the City Engineer. Within forty-five (45) days of receipt of the plans, the Conservation Commission and the City Engineer shall review said plans and submit their respective reports and recommendations to the Planning Board. The Planning Board shall not render any decision on an application for a special permit for development in the Flood Plain Overlay District until said reports have been received and considered or until the forty-five (45) day period has expired without the receipt of such report, whichever is earlier.

20.74.2 Special Notification Requirements.

Where in the application it is proposed to alter or relocate a watercourse in a riverine situation, the Planning Board shall notify, in addition to those parties-in-interest required to be notified by Chapter 40A, all adjacent communities to the extent not required in Chapter 40A, the NFIP State Coordinator [Massachusetts Department of Conservation and Recreation, 251 Causeway Street, Suite, 600-700, Boston, Massachusetts 02114-2104 (or any successor office)] and the NFIP Program Specialist [Federal Emergency Management Agency, Region 1, 99 High Street, 6th floor, Boston, Massachusetts 02110 (or any successor office)].

20.75 *Criteria.* The Planning Board shall grant a Special Permit for development in the Flood Plain Overlay District if the Board finds that such development has met all of the following criteria in addition to other criteria specified in Section 10.430:

1. No filling or other encroachment shall be allowed in Zone A areas or in the floodway which would impair the ability of these sSpecial fFlood hHazard aAreas to carry and discharge flood waters, except where such activity is fully offset by stream improvements such as, but not limited to, flood water retention systems as allowed by applicable law.

2. Displacement of water retention capacity at one location shall be replaced in equal volume at another location on the same lot, on an abutting lot in the same ownership, on a noncontiguous lot in the same ownership, or in accordance with the following requirements.

3. All flood water retention systems shall be suitably designed and located so as not to cause any nuisance, hazard, or detriment to the occupants of the site or abutters. The Planning Board may require screening, or landscaping of flood water retention systems to create a safe, healthful, and pleasing environment.

4. The proposed use shall comply in all respects with the provision of the underlying zoning district, provisions of the State Building Code, State Inland Wetlands Protection Act, and any other applicable laws.

5. Applicants for development in the Alewife Revitalization-area shall be familiar with the Alewife Urban Design Study Phase II, April 1979, area-specific and general city-wide land use plans and policy objectives (e.g. Concord-Alewife Plan, A Report of the Concord Alewife

Planning Study, November 2005; Toward a Sustainable Future, Cambridge Growth Policy, 1993, Update, 2007; Section 19.30 - Urban Design Objectives of this Zoning Ordinance) and shall demonstrate how their plan meets the spirit and intent of such study documents, particularly ~~“Appendix One, District Development Policies”~~, in conjunction with the requirements of this Section ~~11~~20.70 - Flood Plain Overlay District and Section 20.90 – Alewife Overlay Districts 1-6.

6. The requirement of Section 20.74(3) has been met.

20.76 *Development Regulations for mobile homes.* The following development regulations apply to the placement of mobile homes within sSpecial fFlood hHazard aAreas designated as Zone AE1-30 on the FIRM, in addition to other requirements of this Section 20.70. All mobile homes shall provide that:

- 1. Stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be at or above the base flood level; and
- 2. Adequate surface drainage and access for a hauler are provided.

20.76.1 The placement of mobile homes, except in an existing mobile home park or mobile home subdivision, are prohibited in the floodway.

20.77 *Setback Exemptions.* Any required flood water retention systems or related facilities may be permitted to extend into required yard setbacks if deemed appropriate by the Planning Board.

20.78 *Emergency Repairs.* The special permit required in this Section 20.70 shall not apply to emergency repairs or projects necessary for the protection of the health, safety or welfare of the general public which are to be performed or which are ordered to be performed by a city agency, or the commonwealth, or a political subdivision thereof. In no case shall any filling, dredging, excavating, or otherwise extend beyond the time necessary to abate the emergency.

20.79 Any development activity requiring a special permit from the Planning Board under other provisions of this Zoning Ordinance shall incorporate the requirements of this Section 20.70 within the scope of that special permit and shall not require separate application to the Planning Board.

Stephen H. Kaiser
191 Hamilton St.
Cambridge Mass. 02139

To : City Councillors Sam Seidel and Tim Toomey, Co-Chairs, Ordinance Committee

From : Stephen H. Kaiser

Zoning Amendment 20.70, Flood Plain Overlay District

The proposed zoning overlay district is a modification and updating of the existing Section 20.70, which was adopted in the 1980s after the initial round of FEMA flood studies culminated in the Cambridge Flood Insurance Study of January 1982. The original and proposed Section 20.70 should be found acceptable, subject to the four caveats below :

1. Section 20.72 identifies the special flood hazard areas designated as Zone A and AE on the flood insurance maps or FIRMS. The map panels are specifically identified in the text of Section 20.72. I find the new FEMA mapping to be a notable improvement over existing mapping because of its consistency between one community to another, its improvements over existing mapping in terms of accuracy, it improved delineation of the floodway in Cambridge, and its improved delineation of the floodplain in East Arlington. Section 20.72 refers to the maps as “dated June 4, 2010” while today is April 29. Are we being expected to approve maps that have not even been printed yet? In truth, we expect them to be printed on or shortly after June 4. We have not actually seen them.
2. Section 20.72 makes reference to the Middlesex County Flood Insurance Study or FIS as a report dated June 4, 2010. Again, this is one month in the future and we have not seen the specific document. It is not good procedure to adopt zoning based on a document that no one has seen and has not been prepared yet.
3. The notice for the meeting indicated that the committee proposes to “adopt the revised Map and Study, as required by FEMA.” However, I read Section 20.72 differently. It states that the mapping is being adopted and the study report or FIS is being “incorporated herein by reference” and will be placed on file. It does not use the word “adoption.” I have no objection to adopting the mapping while placing the study report on file and using it for reference. I find the study itself to be a step backwards in flood analysis at Alewife, and therefore would object to any “adoption “ of the modeling and numerical analysis in the FIS.

By good fortune, there is a benefit in the final adoption of a 100-year flood elevation of elevation 7.0 NAVD for mapping purposes. It would be the same elevation selected as if we were reaffirming the flood elevations that FEMA set in 1982. Those earlier flood elevations have proven to give remarkably accurate guidance for the past thirty years of flood evaluation at Alewife. My objections to the analysis in the study report are effectively nullified by this purely mathematical good fortune of how numbers are rounded off. Thus, I can conclude that the new FEMA mapping is equal or better in quality to the previous flood mapping of the 1980s.

The new FEMA mapping is not perfect, but we should not make the error of expected too much from FEMA or other government agencies. An improvement is an improvement.

4. In section 20.75, for both existing and proposed zoning, I see the need to add a seventh and culminating criteria for issuance of a Special permit :

The Board shall make an explicit finding that the proposed action does not increase flooding either upstream or downstream of the applicable floodplain activities identified in Section 20.73.

Sincerely,



Stephen H. Kaiser