5
A1

Neighbors on Oxford and Prentiss Sts.

July 27, 2011
Cambridge City Hall
795 Massachusetts Avenue
Cambridge, MA 02139

2011 JUL 27 A 10: 35

Dear Mayor Maher and Members of the City Council:

Enclosed please find a Petition from Neighbors on Oxford and Prentiss to amend the City of Cambridge Zoning Ordinance by amending section 5.24 Yards for Zoning District C-1 by adding 5.24.(4).

We look forward to reviewing this proposal with the Ordinance Committee and the City Council in the month ahead.

Thank you for your thoughtful consideration of this important proposal.

Very truly yours,

Matthew Bagedonow
118 Oxford St.
Representative of Neighbors on Oxford and Prentiss Sts.

Neighbors on Oxford and Prentiss Sts.
Petition to Amend Zoning Bylaws

A2

The undersigned residents of Cambridge, hereby petition the Cambridge City Council as follows:

To see if the City Council will vote to amend the Zoning Ordinance for Residence District C-1 by adding To Section 5.24.4 Paragraph (4) as follows:

For Residence Zoning District C-1, in no case shall side yards be less than 7'- 6". This shall apply to any plane or projection from the plane of the building.

Matthew Bagedonow
118 Oxford Street

Christine Palamidessi
118 Oxford Street

Jim Lontzenhiser
62 Prentiss St.

Peter James
62 Prentiss St.

Cristina Catt
62 Prentiss

Dane Walther
116 Oxford St

Ann Carhart

Ann Carhart
119 Oxford #2

Cynthia B Taft
15A Traymore St.
Cambridge, MA 02140

John Gabrielli
114 Oxford St
Cambridge, MA 02140

Theodore Peck
3 Traymore St.

Ryan Doyon
63 Prentiss St.
#2
Cambridge, MA 02140

Julie Flanagan
10 Traymore St 02140

A3

Neighbors on Oxford and Prentiss Sts.
Petition to Amend Zoning Bylaws

Noelle Liveri
116 Oxford Street

Sharon Carlisle
64 Prentiss St.

Dick Hannon
119 Oxford St.

Christine Hannon
119 Oxford St.

Ruby Bagedonow
118 Oxford Street

Diana Lynch
63 Prentiss St. Unit 3

Alicia Dayon
63 Prentiss St Apt 2

Benjamin Sackett
63 Prentiss St., Unit 3

Seymour A. Danbey
12 Traymore St.

B

CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT

BRIAN MURPHY
Assistant City Manager for Community Development

SUSAN GLAZER
Deputy Director for Community Development

To: Planning Board

From: CDD Staff

Date: September 9, 2011 *(corrected 09/14/11)*

Re: Bagedenow, et al. Zoning Petition – Required Side Yards in Residence C-1

Yard Setback Requirements

There are requirements for front, rear, and side yards (often referred to as "setbacks") in all residential zoning districts. The yard requirement defines a minimum distance between a lot line and a building on that lot within which the area must be unobstructed and open to the sky. The general standards for yards are set forth in Section 5.24 of the Zoning Ordinance (attached as an appendix to this memo).

In the Residence A-1, A-2, and B Districts, the minimum yard requirements are described numerically.

District	Minimum Front Yard Setback	Minimum Side Yard Setback	Minimum Rear Yard Setback
Residence A-1	25′	15′ *both sides must sum to 35′*	25′ *with additional conditions*
Residence A-2	20′	10′ *both sides must sum to 25′*	25′ *with additional conditions*
Residence B	15′	7.5′ *both sides must sum to 20′*	25′ *with additional conditions*

In the Residence C "family" of districts (with the exception of Residence C-3B), the minimum setbacks are determined by a formula that depends on the height of the building ("H") and the length of the building parallel to the corresponding front, side, or rear lot line ("L"). The formula takes the following form:

Required setback = (H + L) ÷ *[denominator]*

The denominator is a number that varies from 4 to 7, depending on the district and the type of setback (front, side, rear). *If a building is 40′ in height or less, the denominator may be increased by two (refer to Subsection 5.24.4(1)).*

Where a building is proposed to have varying height levels or outer wall planes that are oriented at varying distances from the lot lines, there is a formula that specifies how to average those varying figures in order to apply the required setback formula (refer to Subsections 5.24.4 (2) and (3)).

In most districts, there is also a numerical minimum for the front and rear yard setbacks. There is only a numerical minimum for side yards in the Residence C District. The requirements are summarized on the following page.

344 Broadway
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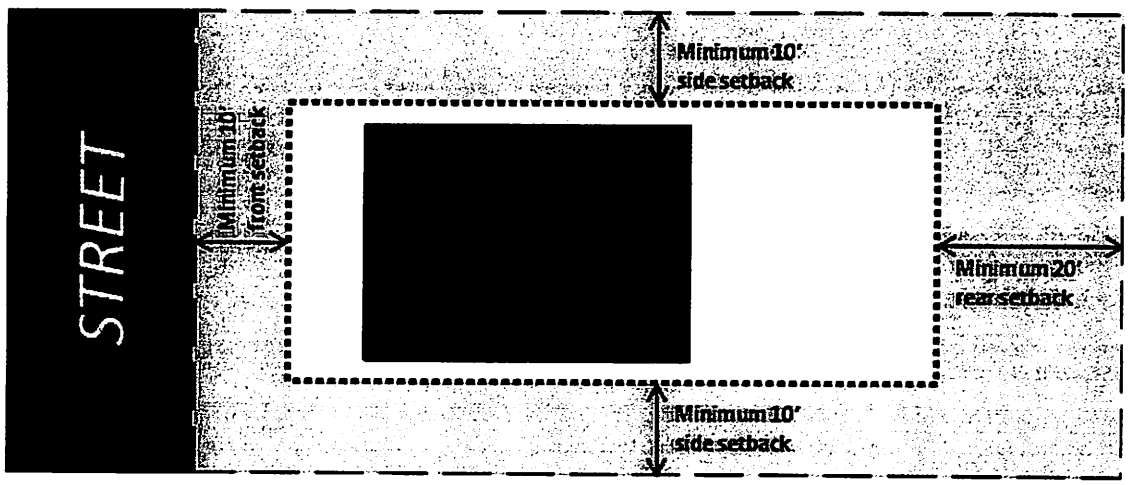
District	Minimum Front Yard Setback	Minimum Side Yard Setback	Minimum Rear Yard Setback
Residence C	(H + L) ÷ 4 *minimum 10'*	(H + L) ÷ 5 *minimum 7.5', sum to 15'*	(H + L) ÷ 4 *minimum 20'*
Residence C-1	(H + L) ÷ 4 *minimum 10'*	(H + L) ÷ 5	(H + L) ÷ 4 *minimum 20'*
Residence C-1A	10'	(H + L) ÷ 7	(H + L) ÷ 5
Residence C-2	(H + L) ÷ 4 *minimum 10'*	(H + L) ÷ 5	(H + L) ÷ 4 *minimum 20'*
Residence C-2A	(H + L) ÷ 5 *minimum 5'*	(H + L) ÷ 6	(H + L) ÷ 5 *minimum 20'*
Residence C-2B	(H + L) ÷ 4 *minimum 10'*	(H + L) ÷ 5	(H + L) ÷ 4 *minimum 20'*
Residence C-3	(H + L) ÷ 5 *minimum 5'*	(H + L) ÷ 6	(H + L) ÷ 5 *minimum 20'*
Residence C-3A	(H + L) ÷ 5 *minimum 5'*	(H + L) ÷ 6	(H + L) ÷ 5 *minimum 20'*
Residence C-3B	10'	no minimum	no minimum

NOTE: The above table is a summary of the requirements in Section 5.31. Some regulations are further modified by footnotes to the Table of Dimensional Requirements.

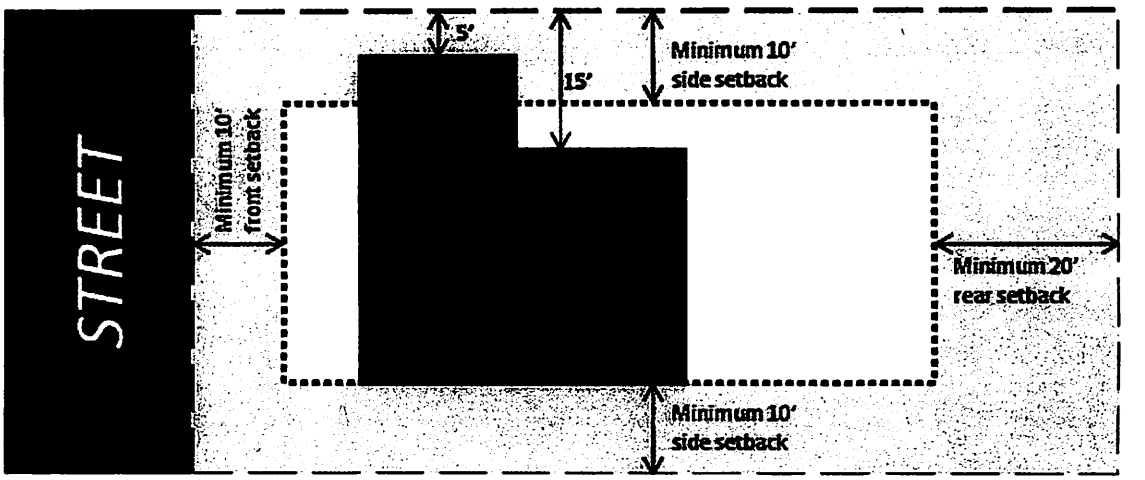
Example in Residence C-1

As a simplified example, take an empty 50' by 100' lot in the Residence C-1 District and suppose a developer proposes a building that is 35' tall (three stories), 25' wide and 35' deep. The required side yard setback would be (35' + 35') ÷ 7 = 10' (*note that the denominator is increased by two because the building is less than 40' in height*). By formula, the front and rear yard setbacks would be (35' + 25') ÷ 6 = 10', but the minimum front yard setback of 10' and rear yard setback of 20' would apply.



However, because of the regulations pertaining to varying roof lines and building planes, there is the potential for buildings to be closer to the side lot line as long as the requirement is met by the average across all setbacks. In the front and rear yards, although the formula may vary based on averages, no part of any building can be closer than the numerical minimum (10' and 20', respectively).

A simplified version of this concept is illustrated in the diagram below by adding a "garage" to the side of the proposed building. Since the depth of the garage is only half the depth of the building, the average between the 5′ and 15′ setbacks is 10′, which meets the formula requirement:



Bagedenow, et al. Petition

The petition would first establish a 7.5′ minimum required side yard for any part of a building in the Residence C-1 district. This would be similar to the minimum requirement that currently exists in the Residence B and Residence C districts. It would effectively prevent cases such as those above, in which a small portion of a building could be built very close to the lot line.

The petition would also apply the side yard requirement to "any plane or projection" from the building. This would mean that for side yards in the Residence C-1 district only, the provisions of Subsection 5.24.2 would not apply:

> ***5.24.2*** *Projecting eaves, chimneys, bay windows, balconies, open fire escapes and like projections which do not project more than three and one half (3 1/2) feet and which are part of a building not more than thirty-five (35) feet in height, and unenclosed steps, unroofed porches and the like which do not project more than ten (10) feet beyond the line of the foundation wall and which are not over four (4) feet above the average level of the adjoining ground, may extend beyond the minimum yard regulations otherwise provided for the district in which the structure is built.*

Analysis

Residence C-1 is the most common residential zoning designation in Cambridge: It covers most residential portions of East Cambridge, Wellington-Harrington, Mid-Cambridge and Riverside and substantial portions of Agassiz, Neighborhood Nine and Strawberry Hill. The attached large map highlights C-1 districts across the city.

The C-1 designation is applied to districts with a well-established neighborhood character, which usually includes a mix of detached single-family, duplex and multifamily housing along with townhouses, apartments and condominiums on larger lots. The "three-decker" detached

residential building is often viewed as the stereotype of development in the C-1 districts, and the zoning regulations in C-1 are calibrated to allow that style of development on typical lots.

Data for Existing Buildings

It is very difficult to collect aggregate data on existing side yard setbacks in the Residence C-1 districts in order to determine the impact of the proposed regulations on existing lots. This is due to the size of the area impacted (over 5,000 lots), as well as the fact that side lot lines and side yards can be difficult to identify even on a single lot – especially if that lot is irregularly shaped, as many lots are – and therefore it is infeasible to accurately identify and measure side lot lines and side yards across a large set of lots. However, some data were collected to provide a sense of the existing conditions as they pertain to the proposed zoning change.

First, all of the lots in the C-1 districts were analyzed to determine how many existing buildings are within 7.5 feet of *any* lot line – front, side or rear. This analysis included "main buildings," which would include most residential structures, as well as "outbuildings," which might include garages or sheds. Since the minimum front and rear setback requirements in Residence C-1 are both greater than 7.5 feet, it can be assumed that any building within 7.5 feet of the lot line would violate either the existing or the proposed requirements. As shown in the table below, the vast majority of buildings violate the 7.5-foot minimum on some side of the lot.

	Main Buildings	Outbuildings
Total in C-1 districts (whole or part)	5,503	1,069
Number within 7.5 feet of a lot line	4,930	1,018
Percentage within 7.5 feet of a lot line	89.6 %	95.2 %

SOURCE: Cambridge GIS. ALL FIGURES APPROXIMATE.

In order to present an analysis looking at existing side yards only, a sample block was selected in the Mid-Cambridge neighborhood and analyzed to determine how a 7.5-foot side yard setback requirement would impact existing buildings. (The choice of this block was due to its variety of building types and its overall conventionally-shaped lots.) The results of this analysis are shown on the smaller attached map. Similarly, it appears that the vast majority of buildings would be impacted by a 7.5-foot side yard setback. In other neighborhoods such as East Cambridge – in which traditional housing development includes very small side yard setbacks – the effect is more dramatic.

The major limitation of this analysis is that most buildings in the C-1 district were built before the current Zoning Ordinance was in place. Therefore, it stands to reason that many existing buildings would already be in violation of the existing formula setback requirements, and would continue to be legally non-conforming structures under the proposed zoning.

Conclusion

The greatest impact of the proposed zoning change would be on new buildings or additions to existing buildings constructed within 7.5 feet of a side lot line while still conforming to the formula setback requirement. In these cases, it may be appropriate to establish some minimum required setback

distance to assure that neighbors are not unreasonably impacted by development that would otherwise be allowed to occur very close to an abutting property. However, existing buildings might also be impacted in cases where alterations are made to a previously conforming exterior wall, such as adding or moving windows or reconstructing exterior siding or insulation, if that wall violates the 7.5-foot minimum.

An additional consideration is whether it is appropriate to prohibit all projecting elements from the required side yard setback, where such projections are otherwise allowed within other setbacks and in other districts. It can potentially create confusion for property owners and neighbors alike when a general requirement is not applied in a consistent way throughout the Zoning Ordinance. Additionally, this proposal may conflict with some of the Sustainable Design and Development provisions recently enacted in Article 22.000, which include provisions for design features intended to improve exterior insulation and reduce solar heat gain. In many cases these design features project from the exterior of buildings.

Appendix: General Zoning Regulations on Yards (Article 5.000)

5.24 Yards

5.24.1 Every part of a required yard shall be open to the sky and unobstructed. Awnings, arbors, fences, flagpoles, recreational and laundry drying equipment and similar objects shall not be considered obstructions when located within a required yard. Open or lattice enclosed fire escapes for emergency use only are permitted to encroach on yard areas.

5.24.2 Projecting eaves, chimneys, bay windows, balconies, open fire escapes and like projections which do not project more than three and one half (3 1/2) feet and which are part of a building not more than thirty-five (35) feet in height, and unenclosed steps, unroofed porches and the like which do not project more than ten (10) feet beyond the line of the foundation wall and which are not over four (4) feet above the average level of the adjoining ground, may extend beyond the minimum yard regulations otherwise provided for the district in which the structure is built.

5.24.3 On lots abutting streets on more than one side, the front yard requirements of each of the abutting streets shall apply regardless of designated front lot lines. Any remaining sides shall be subject to side yard requirements.

5.24.4 Measurements for minimum yards which are determined by formula shall be made in the following manner:

(1) "H" is the height of the building. "L" is the length of the wall measured parallel to the corresponding lot or street line. The front yard is measured from the street line, or building line where such has been established, except where otherwise indicated herein. For buildings of forty (40) feet or less in height the denominator in the yard formulas in the Tables in Section 5.30 may be increased by two subject to the minimum yard requirements set forth in footnotes a, b and c of Tables 5-1 and 5-2.

(2) Where a building consists of various roof levels an average height, or "H", may be used in the required yard formula. Average height is determined by adding the products of the height of each roof level facing the given lot line, (H1, H2, etc.) times the length of each roof level (L1, L2, etc.) and dividing the sum by the sum of the length of the levels (L1, L2, etc.) (see formula below)

$$\text{AVERAGE HEIGHT} = \frac{(H1 \times L1) + (H2 \times L2)}{L1 + L2}$$

(3) Where a building presents a variety of vertical planes to any given lot or street line, no plane shall be closer to the street or building line or lot line than permitted by the application to such plane of the appropriate formula in the tables of dimensional requirements in Section 5.30. For all planes set forward of the setback line required by said tables for the building if it were constructed in a single vertical plane, other planes must be set behind the setback line so calculated. The result shall be that the sum of the products of the setback required for each plane times the facing area of each plane respectively shall be at least as great as the product of the setback required by the appropriate table for the building if it were constructed in a single vertical plane times the facing area of the building if viewed as a single plane. (see illustration below):

The product of (setback1 x facing area1) + (setback2 x facing area2)

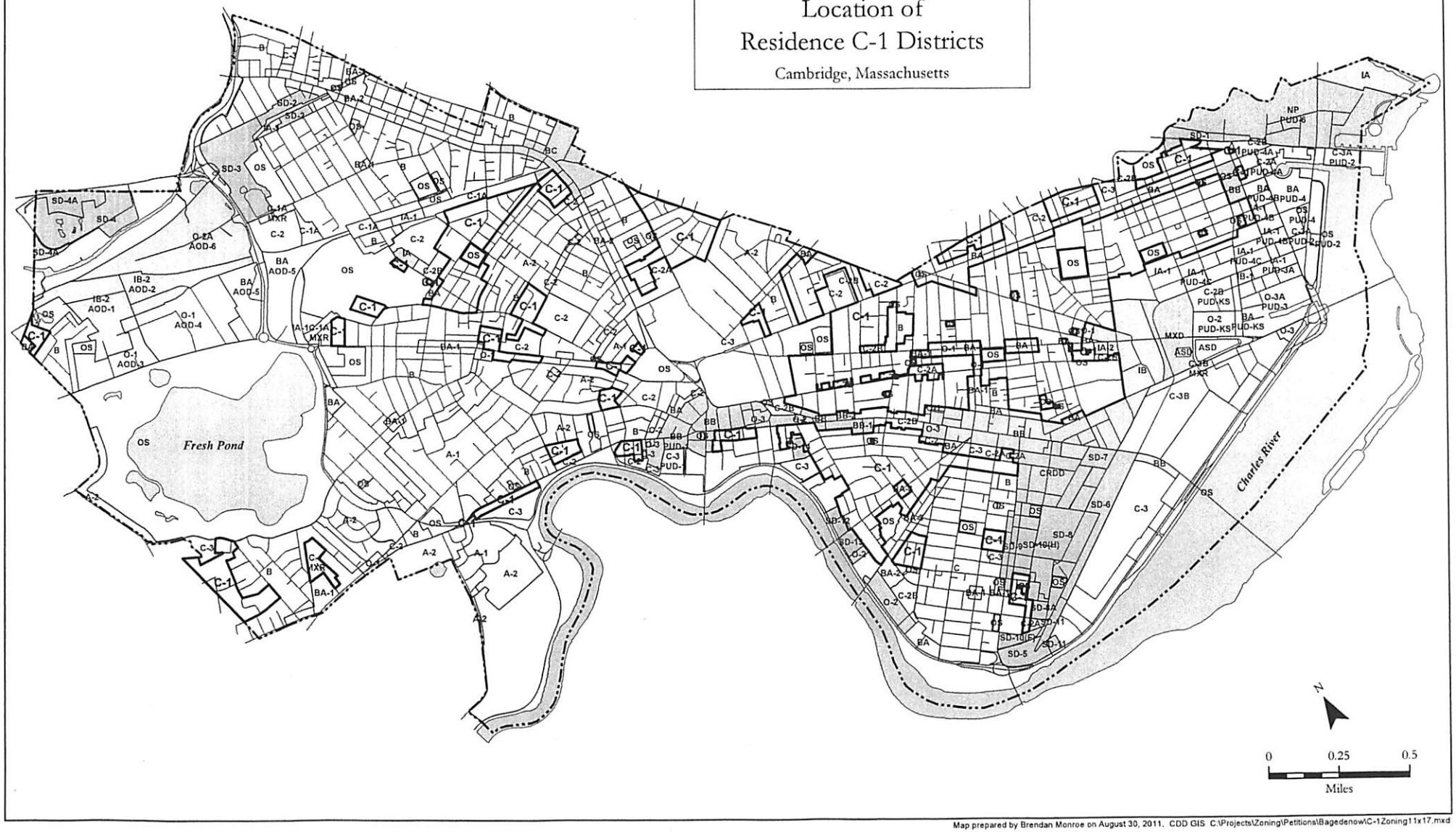
MUST EQUAL OR EXCEED the product of (single plane setback) x (single plane facing area)

Map prepared by Brendan Monroe on September 7, 2011. CDD GIS C:\Projects\Zoning\Petitions\Bagedenow\TestBlock2.mxd

Bagedenow, et al. Petition

Location of Residence C-1 Districts

Cambridge, Massachusetts



Map prepared by Brendan Monroe on August 30, 2011. CDD GIS C:\Projects\Zoning\Petitions\Bagedenow\C-1Zoning11x17.mxd