

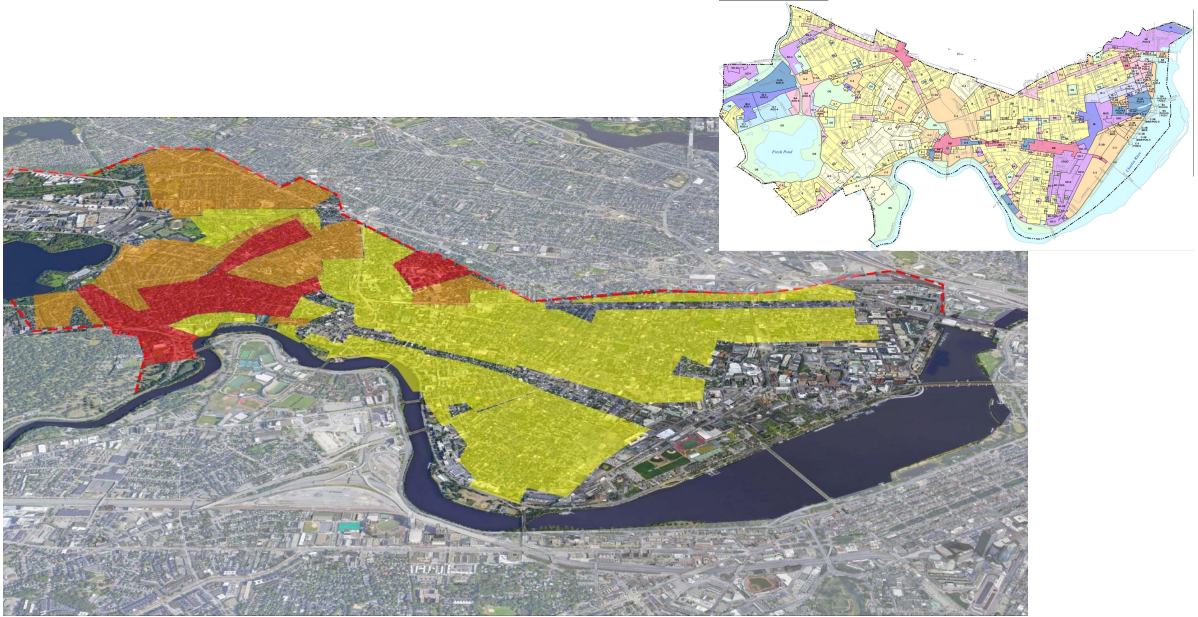
Zoned Out: how zoning laws shape our city



Cambridge residents say they want their city to be diverse, walkable, welcoming, sustainable, vibrant and equitable. Addressing the local effects of the national and regional housing shortage consistently tops surveys of resident concerns. Among the many goals that came out of the Envision Cambridge process was: “Adjust zoning in residential districts to be more compatible with prevailing patterns of development, including building setbacks, maximum heights, open space, parking requirements, and uses”

Zoning plays a huge role in determining what kind of city we have. Let’s look at what zoning is, how it has shaped our city in the past, how it impacts Cambridge today, and how we can use zoning to realize our vision for Cambridge.

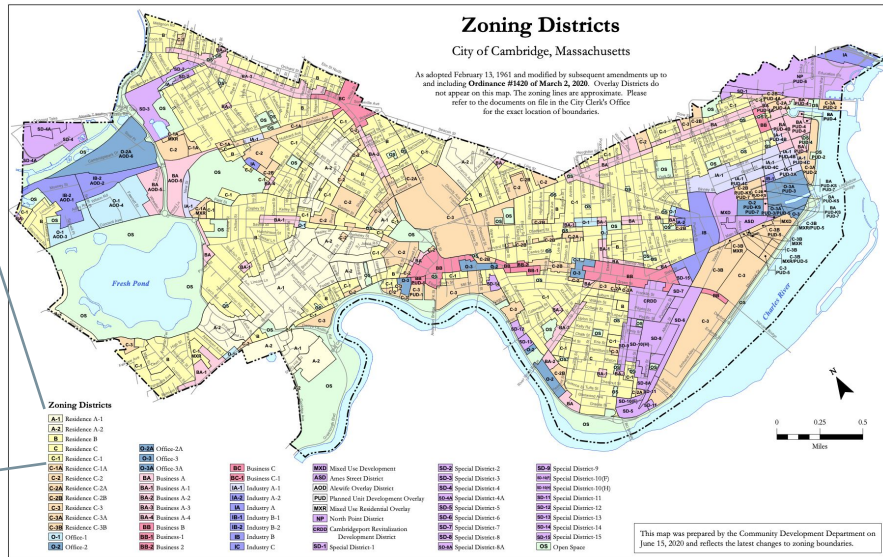
Land use regulations (zoning laws) shape the city



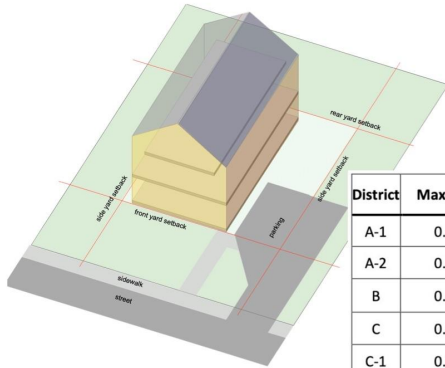
Our zoning system - encoded by the inset map at upper right - has enormous influence over how our city is shaped. Within this mosaic of many zones - residential, commercial, industrial, institutional - the neighborhood residential zones occupy most of the land. In the larger aerial view, the three colors represent the three neighborhood zoning districts: the A zones (red); the B zone (orange) and the C zones (yellow). There are smaller, but much denser residential zones to the east (Cambridge Crossing) and to the west (Alewife).

Zoning Districts subdivide the City

- A-1** Residence A-1
- A-2** Residence A-2
- B** Residence B
- C** Residence C
- C-1** Residence C-1



Dimensional standards control the quantity, size and shape of housing

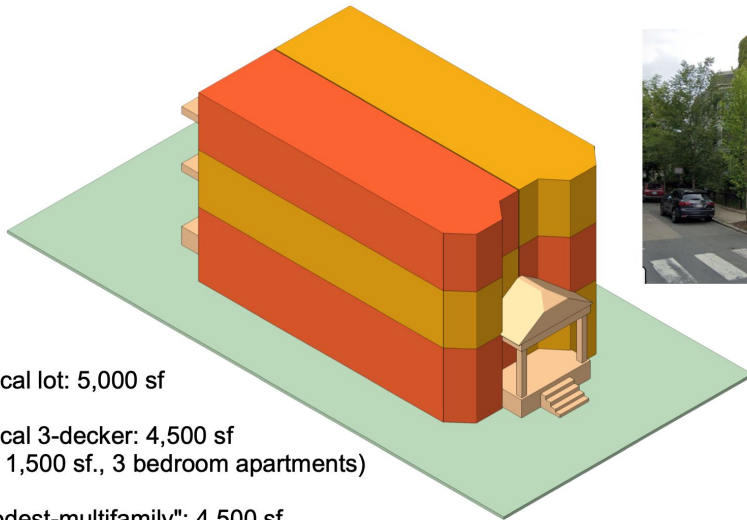


District	Max. FAR	Min. Lot Area/DU	Min. Setback Front Yard	Min. Setback Side Yard	Min. Setback Rear Yard	Max. Height	Min. OS Ratio	Allowed Uses
A-1	0.50	6,000	25	15 sum to 35	25	35	50%	single-family detached dwellings
A-2	0.50	4,500	20	10 sum to 25	25	35	50%	
B	0.50	2,500	15	7.5 sum to 20	25	35	40%	single- and 2-family detached dwellings
C	0.60	1,800	$(H+L) \div 4$ at least 10	$(H+L) \div 5$ ≥ 7.5 , sum ≥ 20	$(H+L) \div 4$ at least 20	35	36%	single- and 2-family detached dwellings townhouse dwellings multifamily dwellings
C-1	0.75	1,500	$(H+L) \div 4$ at least 10	$(H+L) \div 5$ at least 7.5	$(H+L) \div 4$ at least 20	35	30%	
AHO	2.0	n/a	10' -15' or modal	7.5' or 8'	20'	45' 4 stories	30%	

The zoning ordinance is a large and dense legal document that spells out all aspects of development across Cambridge. I'll be focusing on just the 'dimensional standards', which are the core, controlling regulations that determine how much and how big and where you can build on a lot. They vary for each zoning subdistrict.

So the table shows the A, B and C districts, with the five dimensional standards, which vary per district. At the bottom of the table, for comparison, is the Affordable Housing Overlay district, which is city-wide.

Triple decker on a typical lot



typical lot: 5,000 sf

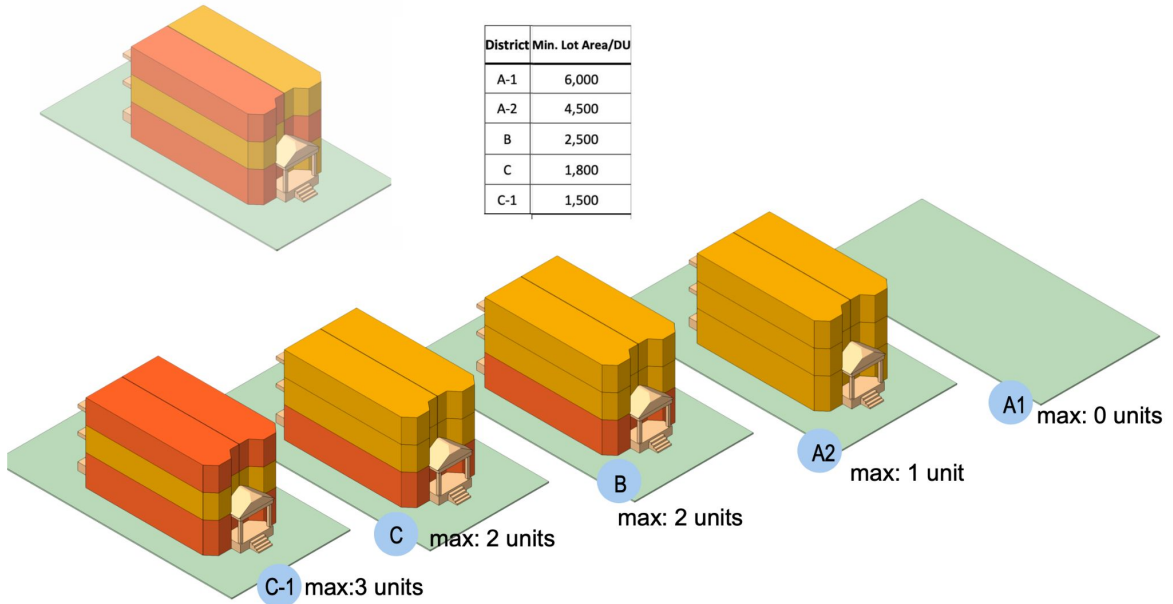
typical 3-decker: 4,500 sf
(3 - 1,500 sf., 3 bedroom apartments)

"modest-multifamily": 4,500 sf
(6 - 750 sf 1 or 2 bedroom apartments)

Here is a typical Cambridge lot of 5000 sf and triple decker. Lot sizes vary all over the city, but a 5,000 sf lot is pretty common in most neighborhoods. What we generically call "Triple deckers" usually have 3 units (one per floor), but can have more units - 6 units is common as well. A new development in Dorchester that has been in the press has 14 microunits in a 4-story "triple decker". Triple deckers are thought of as the basic building block of many Cambridge and Boston region neighborhoods.

Now lets look at how the dimensional standards work in the various sub-districts, and what impact they have on the triple decker.

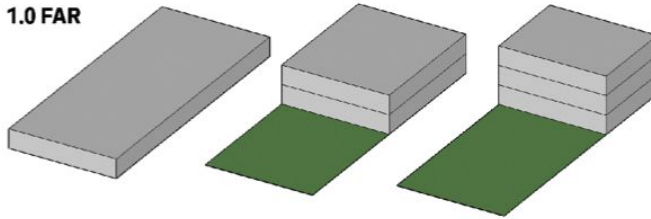
Minimum Lot Area per Dwelling Unit



The most important dimensional standard doesn't get discussed much. The **minimum lot area per dwelling unit** is a limit of how many housing units - (homes, condos, apartments) are allowed by the size of the lot. That's what is referred to as "acre zoning" in suburbs - it restricts the number of units that can be built on a lot. On our 5,000 sf lot, we can only have three units in the C-1 zone, because you need 1,500 sf per unit. In the C zone - which covers much of our neighborhoods and is theoretically 'multi-family' - you can only build 2 units. In A-1 zones, a 5,000 sf lot is "un-buildable".

Floor Area Ratio (FAR)

1.0 FAR

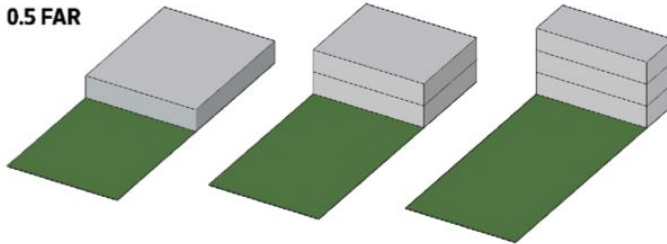


1 story
(100% lot coverage)

2 stories
(50% lot coverage)

3 stories
(33% lot coverage)

0.5 FAR



1 story
(50% lot coverage)

2 stories
(25% lot coverage)

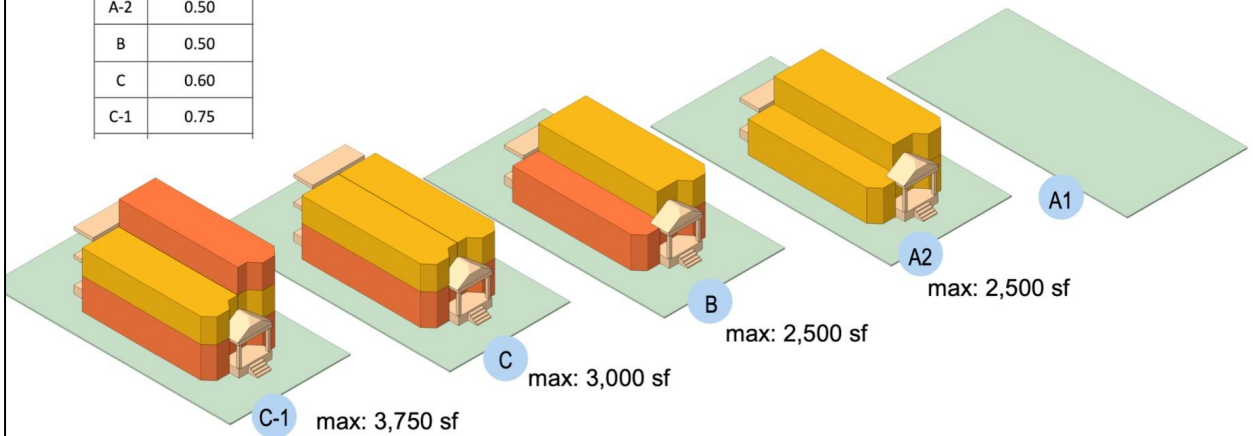
3 stories
(17% lot coverage)

District	Max. FAR
A-1	0.50
A-2	0.50
B	0.50
C	0.60
C-1	0.75

The next standard is Floor Area Ratio, or FAR, and it is a more complicated standard. It determines how much area you can build as a percentage of your lot size. This diagram shows that a FAR of 1 would allow you to cover your lot with one story of housing, or one-half of your lot with two stories, or any other configuration that gives you an equal amount of habitable floor area as the lot size. Our dimensional standards allow for .75 in C-1 zone, but more in C zone and .5 FAR in A and B zones.

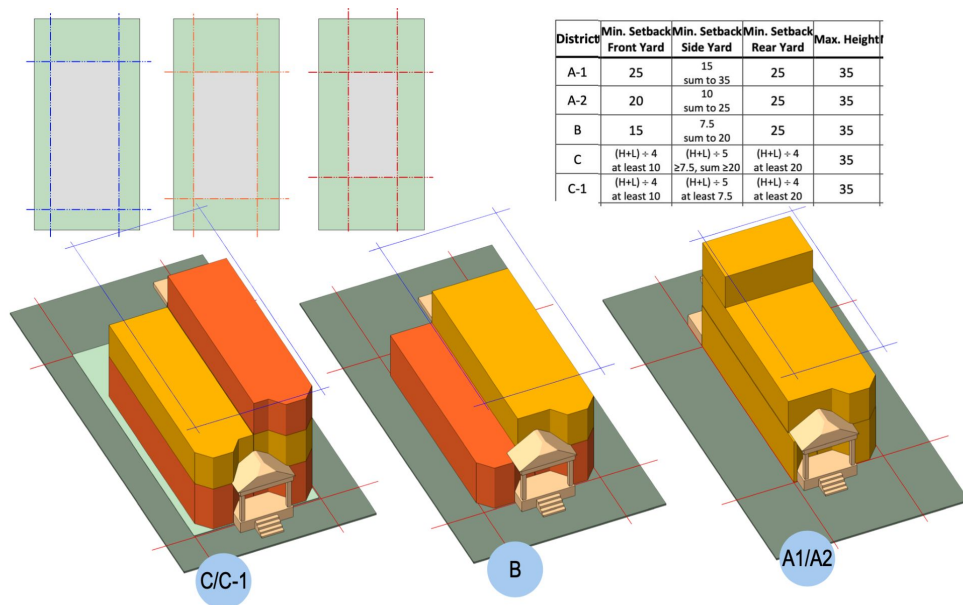
Floor Area Ratio (FAR)

District	Max. FAR
A-1	0.50
A-2	0.50
B	0.50
C	0.60
C-1	0.75



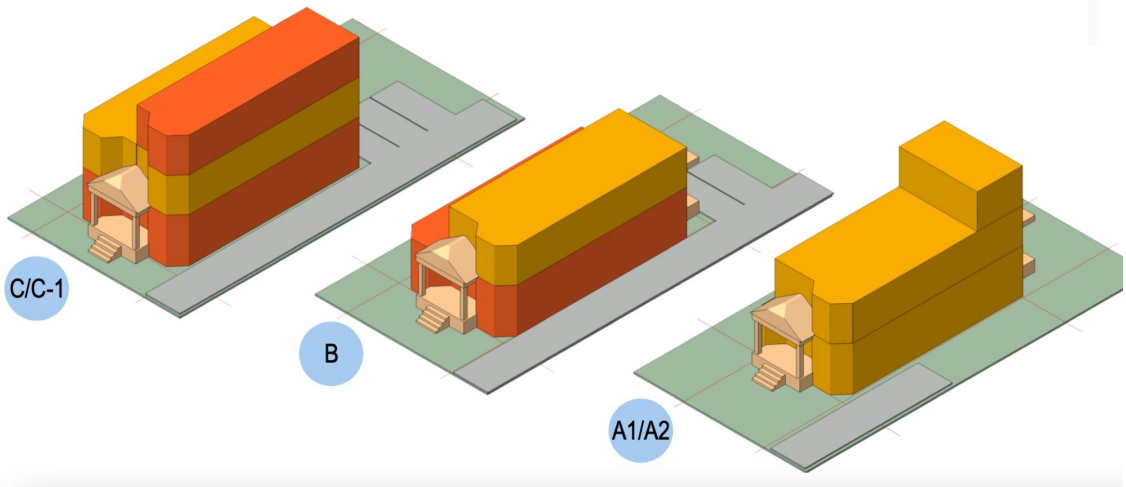
So when we apply the FAR standards to our triple deckers, (on our 5,000 sf lot) here is what happens. In C-1, at FAR .75, the triple decker needs to shrink to a 2-½ decker. In the C zone, at FAR of 0.6, the triple decker shrinks to a double decker. In B and A, at FAR 0.50, the triple decker is a 1.5 decker.

Setbacks and Height



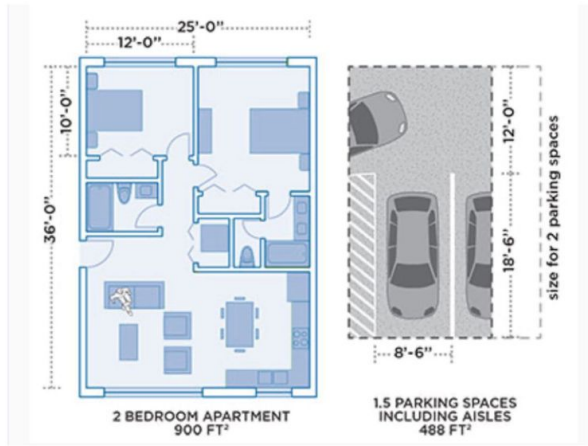
Setbacks determine how much space needs to be left between your lot lines and your house. They are progressively more restrictive as you go from C zones to A zones. You can see that the setbacks constrict build-able area. In the A zone example, the large sideyard setbacks have squeezed the standard width of the triple decker. The height limitation of 35' is the same for all zones, and does not impact the height of a typical three-story home.

Parking



Parking is not actually a dimensional standard. But the city-wide 1 car-per-unit zoning regulation impacts what can be built. Parking must be beyond the front yard setback, and tandem (front to back parking) is not allowed. Parking works together with open space requirements to limit buildable area on a lot. But they work in competition for trees and planting area. You can see that providing three parking spaces for a triple decker really eats in to usable lot area.

Parking



This graphic shows just how much area is required for parking and the necessary maneuvering area that goes with it.

Parking takes up a huge amount of space that could otherwise be used for housing or green space. The question of whether we should drop our parking requirements in residential districts is currently under discussion by the City Council.

Open Space

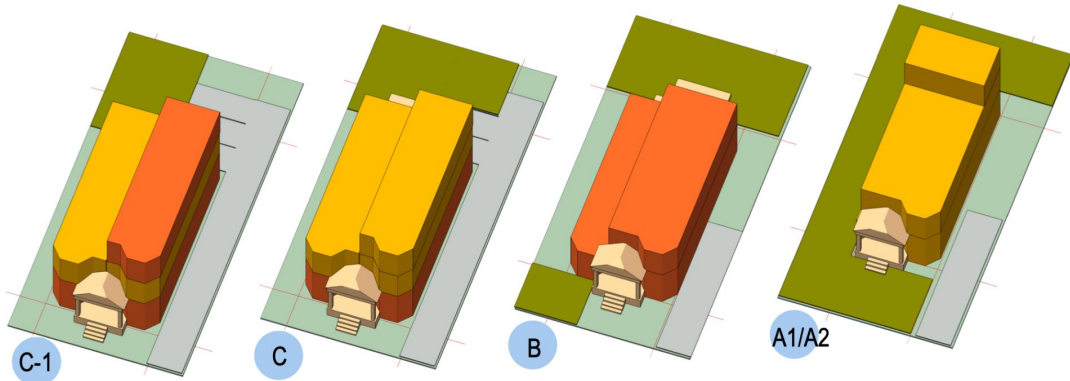


District	Min. OS Ratio
A-1	50%
A-2	50%
B	40%
C	36%
C-1	30%

5.22 Private Open Space.

Section 5.31. An area designated as private open space must have both a width and a length of at least fifteen (15) feet, except for balconies, and may not have a slope greater than ten (10)

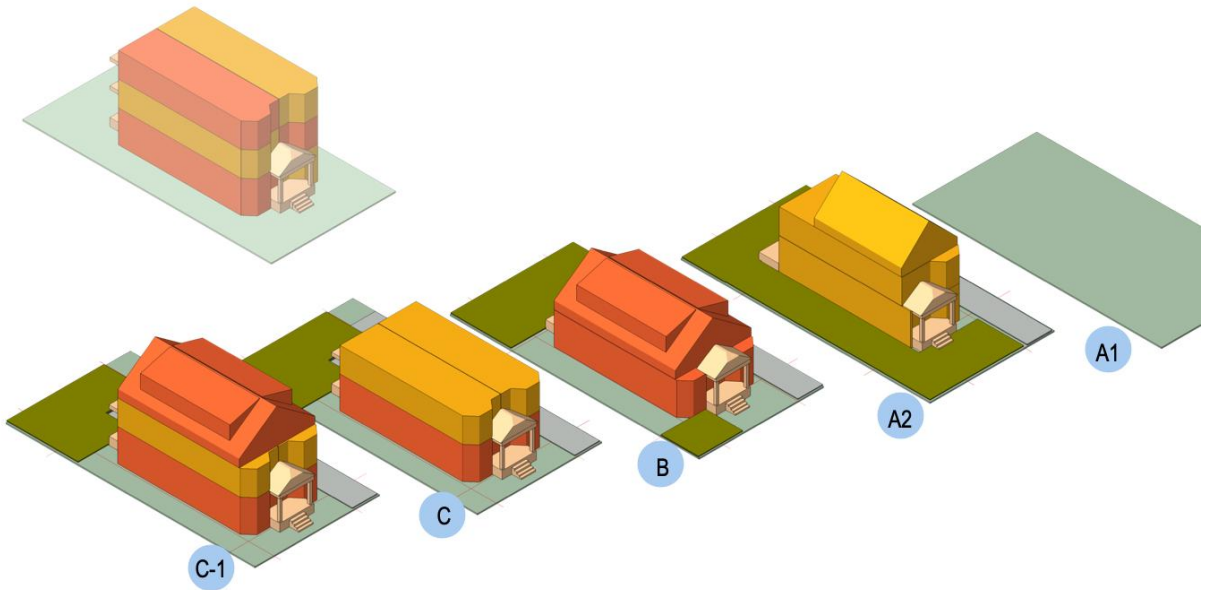
At least fifty (50) percent of the required Private open space in these districts shall meet all of the requirements of Section 5.22.1 above. At least fifty (50) percent of the required Private open space shall meet the definition of Permeable Open Space and shall not be subject to the dimensional limitations of Section 5.22.1 as applied to Private open space.



Open space regulations are really complex . There is a basic percentage of lot that is required to be 'open', and then there is a percentage of that needs to be a minimum dimension of 15' x 15' (indicated by the dark green areas) and another percentage that needs to be permeable (meaning with no hard surface). The B and C zone examples shows how a unit is lost to parking/open space requirements 9C down to 2 units and B down to 1) because there was not enough lot area for the minimum parking and open space.

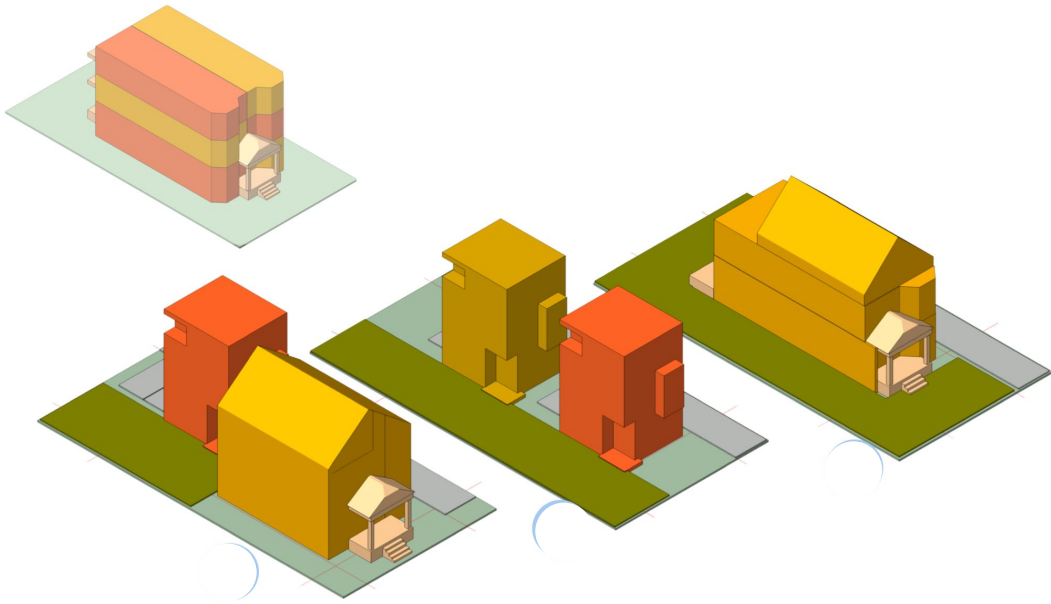
This open space system will hopefully be replaced with the the so-called "Cool Factor" scoring approach, which is a more nuanced system. It is "performance-based", in that it scores the environmental effects of the particular materials and plantings that are used and gives credit for green roofs and facades.

Results



So here is how the triple decker has been affected by dimensional standards and parking across the different zones. We end up with a smaller triple decker in C1, a double decker in C, a single family in B and A2, and an empty lot in A1.

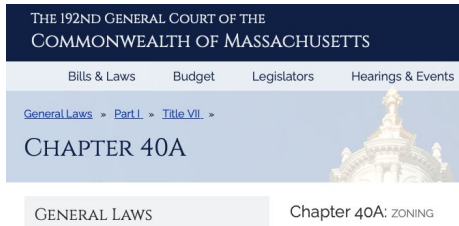
Current trends



And here is what many developers are building in response to zoning requirements. In the first example, existing structures are saved in order to preserve non-conformities. If an older, existing home does not comply with zoning, you are not required to correct those non-conformities when you redevelop the site. That certainly has environmental advantages, but puts constraints on how the site is developed.

In the first and second example, compact 2000sf single family homes are added, to the extent that open space, parking and other dimensional standards can be met. Larger single family homes are always possible- either as new construction or as additions to existing homes.

To build a triple decker, just get a Variance!



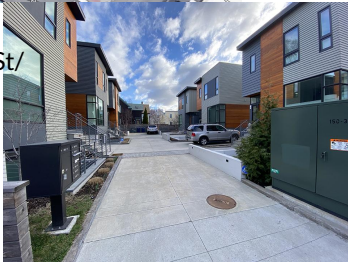
- 10.31 A variance from the specific requirements of this Ordinance, including variances for use, may be authorized by the Board of Zoning Appeal with respect to particular land or structure. Such variance shall be granted only in cases where the Board finds all of the following:
- (a) A literal enforcement of the provisions of this Ordinance would involve a substantial hardship, financial or otherwise to the petitioner or appellant.
 - (b) The hardship is owing to circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structure but not affecting generally the zoning district in which it is located.
 - (c) Desirable relief may be granted without either:
 - (1) Substantial detriment to the public good; or
 - (2) Nullifying or substantially derogating from the intent or purpose of this Ordinance.
- 10.32 In addition to considering the character and use of nearby buildings and land the Board, in determining its finding, shall take into account the number of persons residing or working in such buildings or upon such land, and the present and probable future traffic conditions. The Board shall also take into account the potential

So if we really want that triple decker, we'll need a variance. Zoning variances (and/or special permits) are required for any project that is not in full compliance with the zoning regulations. Most renovation projects require them, because almost all of our housing is already out of compliance. If the request is modest and does not impact neighbors, they are often granted. But for construction of new homes, particularly multi-family homes, variances are difficult to get, and take a long time. The book *Neighborhood Defenders* documents how our participatory land use systems stifle the construction of housing. Decisions are often subjective, depending on oratory skills and opinions of meeting attendees and volunteer Zoning board members. Developers choose to avoid this process and expense by building per the zoning or "as of right".

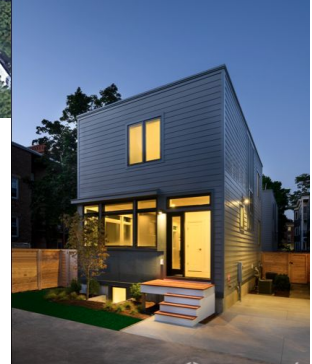
Instead, build to meet zoning.



125 Brookline St/
9 Decatur



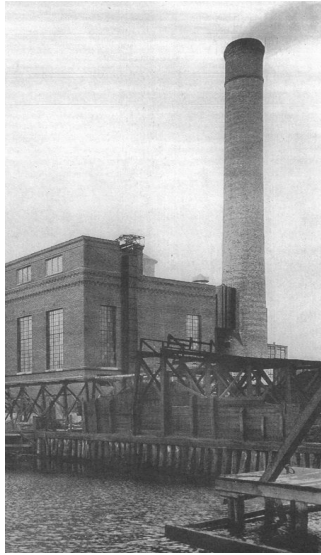
Sennot Park



And this is what is getting built. Mini enclaves of 2,000 sf, \$2m plus, single family homes.

Now let's step back in time a bit and see how we got here. James.....

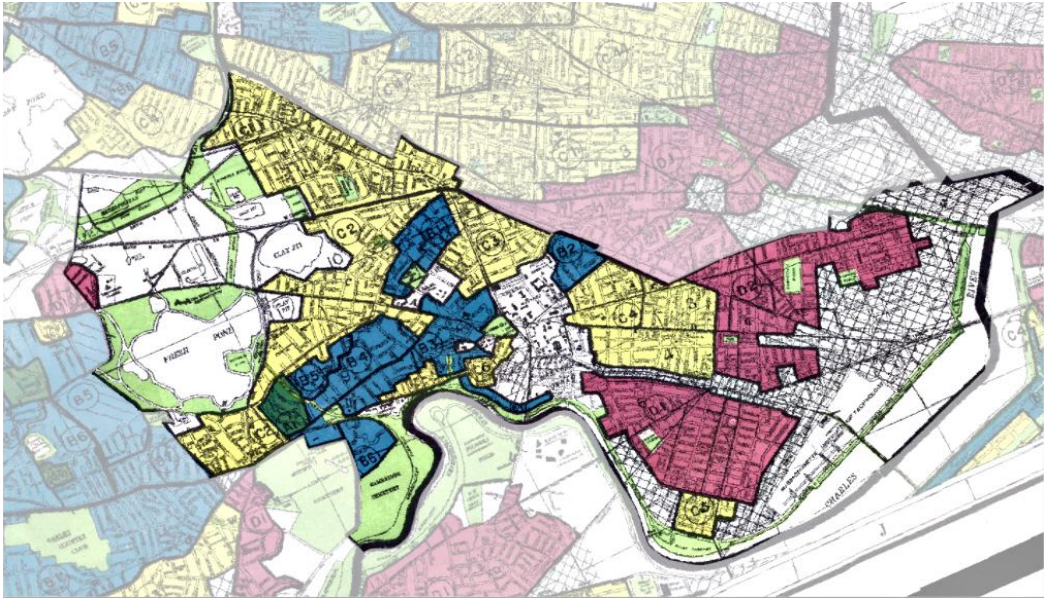
Zoning against “nuisances”



When land use regulation began in the early 1900s, many people considered it controversial because it limited property rights. Proponents argued that it was *necessary* to keep people safe from “nuisances” [*term used in legal documents*] by establishing separate districts for different uses of land. Factories and warehouses were to be kept out of residential districts.

There were many lawsuits on this issue – including a Cambridge case that went to the US Supreme Court – but it became well-established that restrictions on property rights were justifiable on the grounds of public health and safety.

1930s: grading of residential neighborhoods for lending



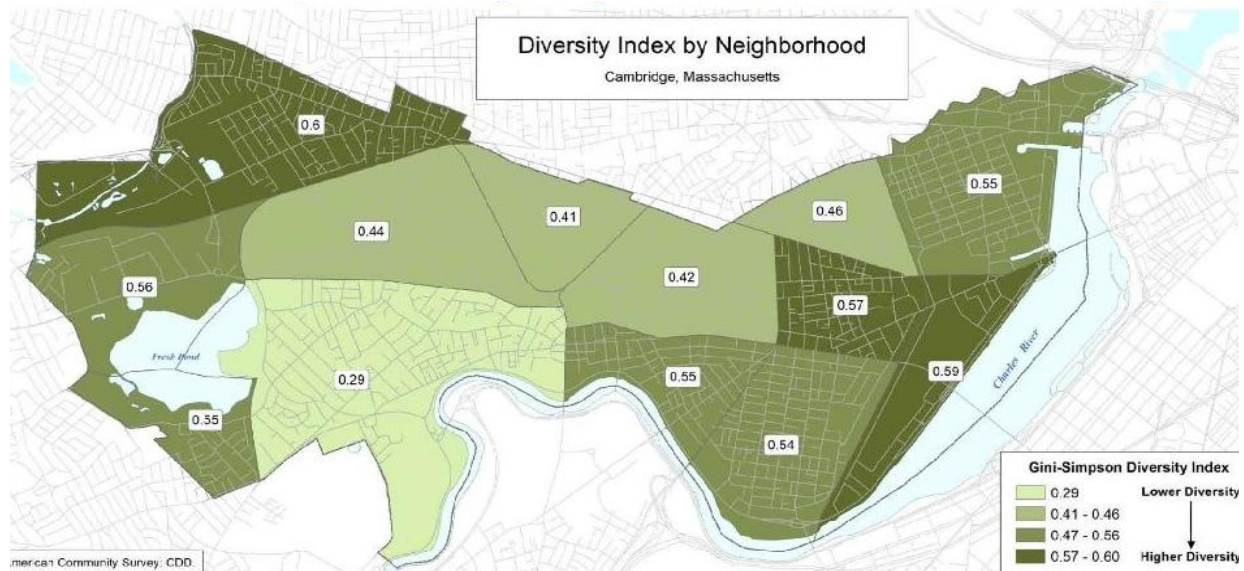
But over time, some homeowners began to seek other kinds of protections – not just from certain land uses or building types. They wanted to *shield themselves from certain categories of people*. At the time, the usual way to do this was by discriminatory restrictions in the property deed that were binding on all future owners of a property.

When courts began to prevent enforcement of these restrictions, homeowners convinced city governments to build barriers into municipal zoning codes, using *economic* exclusion as a substitute for explicit racial or ethnic exclusion. Making housing more expensive became a handy way to exclude residents whose incomes were kept low by their lack of access to education and jobs. These efforts were assisted by the Federal government – through its financial aid programs for residential developers and its financing of homebuyers' loans. This map (late 1930s) shows the color-coded grades that Home Owners Loan Corporation (created by Fed govt) gave to Cambridge neighborhoods. Areas with too many people of color, immigrants were marked red as a warning against

lending/investment there....

<https://www.bostonfairhousing.org/timeline/1948-1968-Unenforceable-Restrictive-Covenants.html>

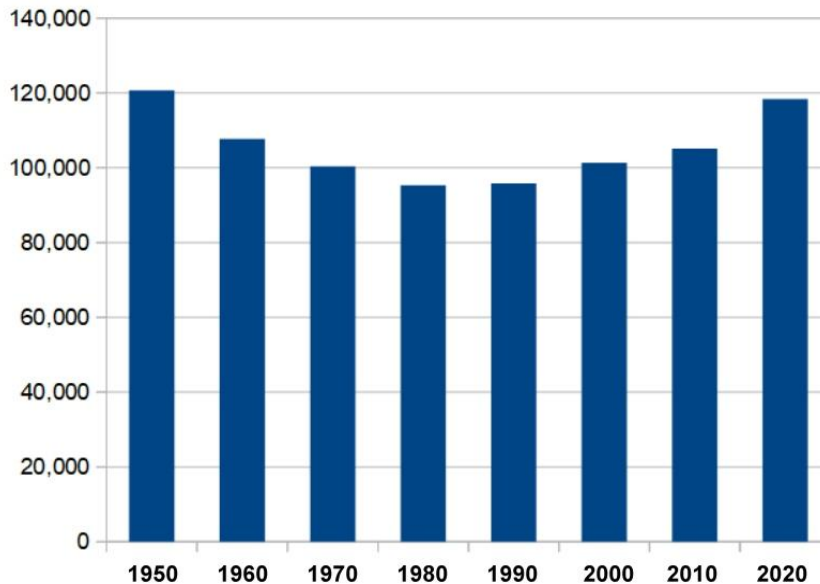
Our zoning laws have shaped today's Cambridge



Some groups of people disfavored then still have lower rates of home-ownership today. This map shows a diversity index by neighborhood, with darker areas indicating greater diversity.

So our past system of zoning for exclusion – zoning that made housing more expensive in some neighborhoods than others – has maintained patterns of segregation established in the last century. Our population and economy are growing – much faster than our housing production. [+30,000 jobs in last 15 years (US Census); would calls >14,000 units; but added only 8,746.] Result: Cambridge is at or near the top of Greater Boston's lists of most expensive places to live. We are contributing to the segregation of the entire region.

Restricted supply + high demand = high housing costs



**Cambridge
population
1950-2020**

Contributing factors:

- **Federal policies favoring suburbs**
- **Private disinvestment through 1970s, followed by sharp growth**

These laws limiting Cambridge's housing supply didn't have as many consequences as recently as a half century ago. In the 1960s and 1970s, many urban residents left for the suburbs, if they could afford to... Cambridge, Boston, other cities suffered from lack of investment and jobs – housing in Cambridge was less in demand, more affordably priced. But as jobs here became more plentiful (because we are near Boston and universities) and people who work here looked for easier commutes with less traffic congestion – our economy thrived, numbers of jobs and their salaries increased...and housing costs soared. Zoning has prevented our housing supply from keeping up with demand.

Zoning limits housing supply; distributed unevenly



mostly A-1 and A-2



mostly B



mostly C-1, some BA

Tightening the zoning rules over time mostly left existing structures alone (until someone wanted to modify them). Now, over 60% of existing Cambridge housing is in buildings not compliant with zoning rules (even ignoring setback requirements). With setbacks included, it's estimated over 80% are in violation of zoning. This effectively puts a cap on the amount of housing we can have in our residential areas – and that cap is less than our current stock of housing in those districts. Zoning preserves and enforces current patterns of economic segregation.

[3 almost-quarter-mile chunks of Cambridge. Middle piece fits just above leftmost piece.]

Zoning's "pressure valves" further limit housing



—A— —B— -----C-----

As our zoning rules have generally become more restrictive – to the point where even small adaptive changes to many existing buildings were no longer allowed. To relieve this (downward) pressure – and make the situation workable to even some extent, a system of variances and special permits has evolved. Act as a "safety valve" to restore some flexibility to our zoning system. But these exceptions – granted by BZA and PB – also add opportunities for extra-legal/unwritten limits on our housing supply: pressure through public hearings, neighborhood demands for approval/veto, lawsuits...and sometimes just a threat of a lawsuit does the job.

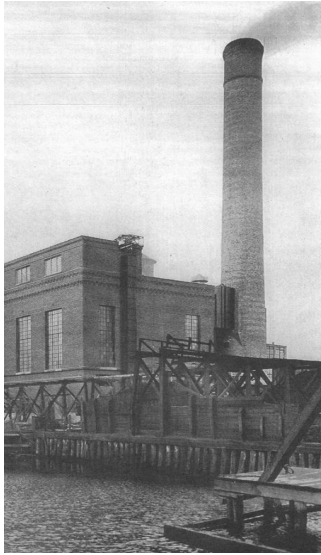
EXAMPLE: For over a century, lots A&B each had 1-family houses built in 1860s. In the late 1980s, lot A added 4 buildings with 6 townhouses. A few years ago, owners of lot B wanted to add just 1 building with 2 units in their large backyard. Lot C already had 20 units (2 buildings from late 1990s).

Proposed 2-unit addition on lot B met setback rules and most other requirements, BUT needed a second driveway which required a special permit from PB. A few abutters from lot C threatened to oppose building because they didn't want to lose open space they enjoyed...*on their*

neighbors' lot. Lot B owners consulted with their attorney and architect...and had a new plan drawn with a relocated building.

In this case, the result was a delay; the 2 units were finished last year. Other cases, though, have resulted in years-long court proceedings. Affordable housing, with a fragile funding structure is especially vulnerable to this sort of pressure.

Zoning against “nuisances”



So in about a century, we've gone from a zoning system that started as a means of protecting residents from neighboring "nuisances" to one that now serves...

Zoning against... too many neighbors?

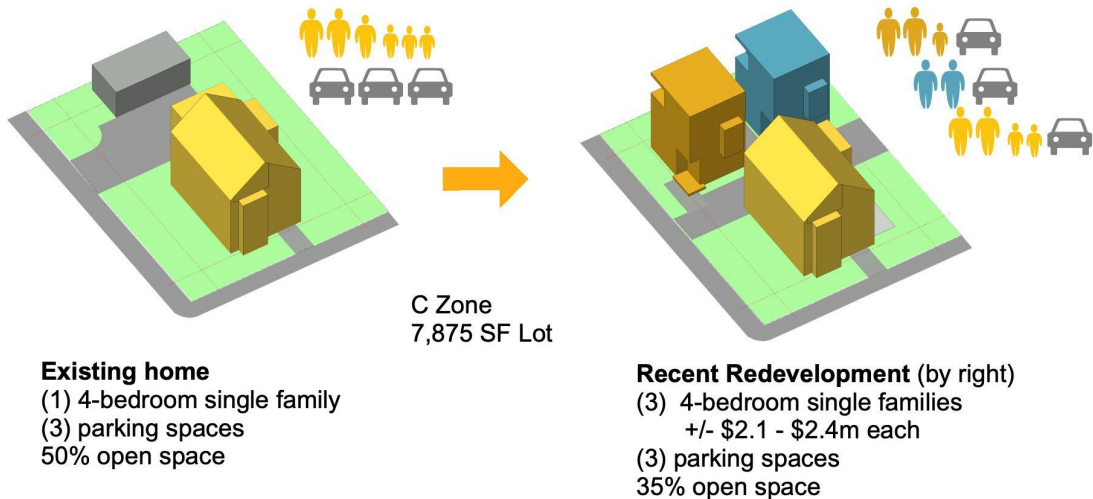


...to protect residents from having too many *other* residents nearby. Over time, many people have come to see density itself as a threat to the well-being of a neighborhood. Protection against the alleged “danger” of too much housing (or, sometimes, too many of the “wrong kind” of neighbors) has become accepted as a legitimate function of zoning, without density opponents having made their case as opponents of nearby factories did in the courts.

It can be difficult to separate the various factors that contribute to our current housing shortage – certainly, rising demand from people who want to live in Cambridge is a major factor – but it’s clear that our zoning laws stand in the way of building more housing (badly needed). Expanding restrictions have spread the harmful effects of our housing shortage from lower- to middle-income households. Our present zoning system is not serving Cambridge well. [over to Bill...specific examples]

Development options

for a 7,900 sf lot

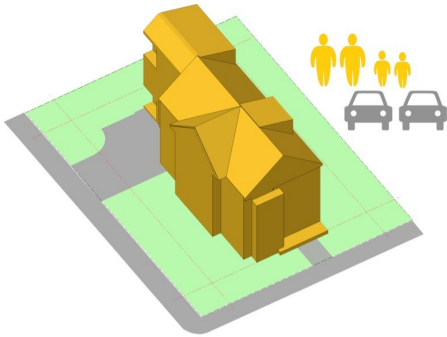


To now come back to our current reality and to see just just how our zoning protects neighborhoods against neighbors:

Here is a common example– On the left, a typical single family home from the 1890s. Lots of yard, lots of parking, a good-sized family home in Cambridgeport, a C zone. A developer bought it and built what you see on the right BY RIGHT (no variance required). Three single family homes that sold for over \$2m each. They fit enough parking and enough open space in to get their permit.

But they the developer had options.....

Development options



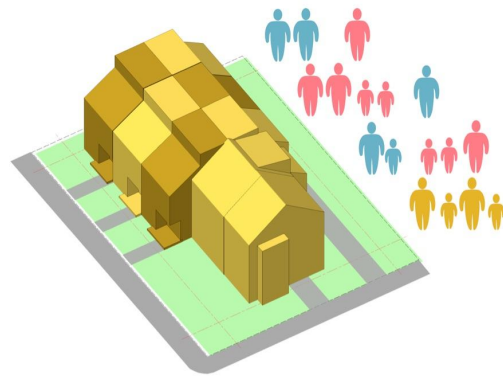
Single-family home (by right)

(1) 6-bedroom single family

+/- \$4m

(2) parking spaces

45% open space



Modest Multifamily (with variances)

(6) 2-bedroom, (1) 3 bedroom condo

+/- \$865k each

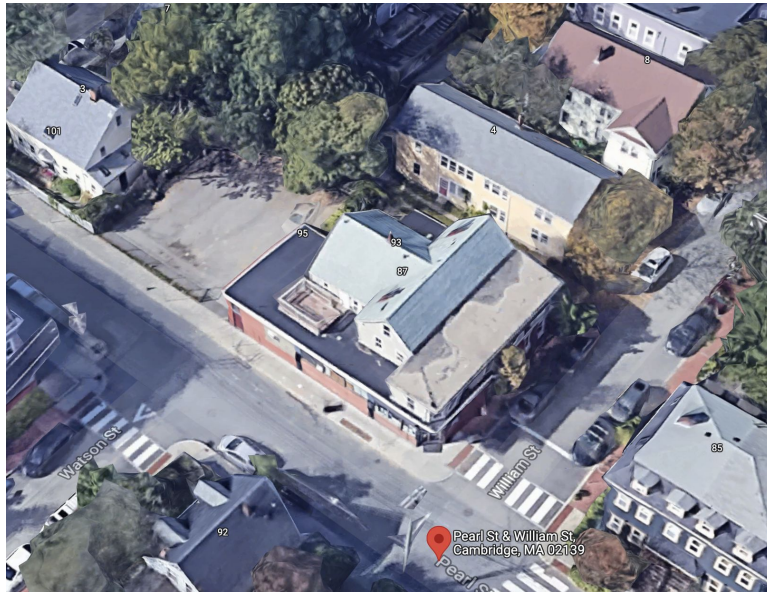
(0) parking spaces

35% open space

They could have built the single-family home on the left - it is legal anywhere, and the *only* approach they could take in the A zones. On the right is a better fit for our present demographics and environmental goals. 6 units, well under a million each, with a 7th larger, more expensive unit. It could have been just as profitable for the developer, but would have required variances, which would have delayed construction (6 months to a year).. and *may never have been approved*.

Development options (in the works)

for a 12,000 sf lot



Now for a last example, a project currently under construction. Also in Cambridgeport, a C zone.

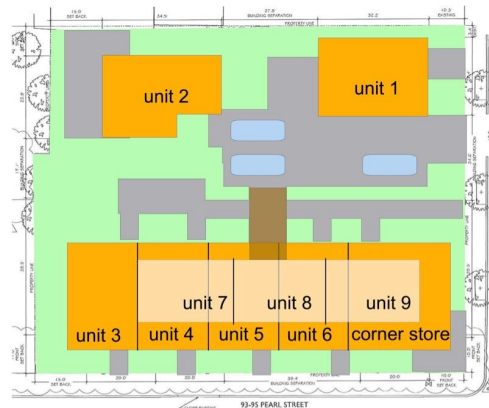
This parcel consisted of a corner store (the Pearl Street Market) that had apartments above and beside it, a two-family home to the right of it, and a parking lot. The developer purchased all three parcels.

Development options (in the works)



Under Construction (by right)

- (5) 4-bedroom single families
+/- \$2.2m each
- (5) parking spaces
- 35% open space



Alternative scheme (with variances)

- (2) 4-bedroom single families: +/- \$2.2m each
- (4) 2-bedroom townhouse condos: +/- \$1.4m each
- (3) Studio condos: +/- \$600,000 each
- (1) Corner store/commercial space
- (3) parking spaces - (1 shared)
- 35% open space

The developer designed and permitted a 5-home development, by right. That's the scheme on the left side. After meeting with neighbors, he came up with an alternative scheme that kept a corner store. It included two single-family homes on the right/rear of the lot, as well as 4 smaller townhouses and three studios at the upper level. That's a total of 9 units of various sizes and prices. It included 2 parking spaces for the single family homes and a shared parking space for the remainder of the development. The developer held a public meeting to present this scheme and get feedback. There were mixed opinions during the meeting. The developer preferred the alternative scheme, and felt it could be more profitable to him, but ultimately did not pursue it. He decided the delays would be too great, and there was a good chance that he would not get the required variances.

Development options (in the works)



The photo on the left is close to what the development will look like. It's actually a recent development by the same developer of roughly the same size and style. Each of the 5 homes will sell for about \$2.2m. On the right is his rendering of the alternative scheme in which the 9 homes would have sold for between \$600k and \$2.2m.

Unfortunately, our zoning prevents this kind of development from happening.

If Cambridge truly wants more housing at different income levels, we need to adjust our out-dated zoning system.

PJ, over to you....