

CENTRAL SQUARE DRAFT ZONING RESPONSES TO QUESTIONS

JUNE 4, 2013

This document addresses questions that have arisen during recent Planning Board discussion on Draft Central Square rezoning text, which is based on the recommendations of the Central Square Advisory Committee: 2011/2012 (C2 Committee).

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DEVELOPMENT AND BUILDING FORM

1. Not much development has happened in Central Square. Why are there so many underdeveloped parcels now? What triggers/catalysts might result in change?

In the last several decades, there has been little new development in the heart of Central Square compared to other parts of the City. The Holmes building, constructed in the early 2000s is the only recent large development. Significant development has occurred and is in progress on the eastern edge of the Square at University Park and in the Osborn Triangle (Novartis and Pfizer/610 Main St). In our estimation, the major reasons for limited change within the heart of Central Square are as follows.

- a. **Development and ownership pattern** – Most parcels in this area have some development in place hence there are no simple development opportunities. Open lots are primarily occupied by surface parking lots serving adjacent buildings, complicating any attempts to redevelop. Additionally, fragmented property ownership by many small and medium owners makes land assembly for redevelopment difficult. Central Square also has many stable, long term owners. With properties owned by families over multiple generations, the incentive for change is less.
- b. **Historic disinvestment** – Central Square suffered several waves of disinvestment -- during the post-World War II Depression Era, when upper stories of several Central Square buildings were demolished to avoid property taxes on unoccupied space; during the suburban flight of the mid-20th century, as Cambridge and the Northeast lost its traditional industrial base; and during the 1960's, when plans to build the eight-lane "inner-belt" highway negatively affected property values. This led to diminishing attractiveness of Central Square and the sense that it was a less desirable location than other parts of Cambridge. This impression has been changing in recent years.
- c. **Historical buildings** – Central Square has many historic structures that add richness to the urban fabric. The path of demolition and redevelopment is, therefore, not straightforward for properties in the areas requiring, at minimum, review by the Cambridge Historical Commission. Since redevelopment on many sites would have to interface with preservation of historic structures, it would typically make such development more complex and potentially more expensive than building on an open site. The market demand has to date not been sufficient to offset the investment of addressing this complexity.
- d. **Existing supply** – Until recently, the building stock in Central Square has been sufficient to meet market demand for residential and office space in the area.
- e. **Existing zoning/market demand** – The combination of market demand and building height and density limits in the current zoning regime have not offered sufficient incentive for property owners to take on the complexities created by the points noted above.

Some of these conditions are changing. While we do not anticipate wholesale, immediate change, there are some factors that are evolving and could serve as catalysts for change.

- a. The **Quest sites** clustered near Lafayette Square, one of the largest set of parcels in Central Square under long term ownership was recently purchased by Twining Properties/Normandy Real Estate Partners. As Quest Diagnostics transitions out of Cambridge, the Twining/Normandy partnership has expressed an interest in transforming the area to a more vibrant, mixed-use development. We anticipate that the investment in this could create many positive changes and could seed positive change beyond the site.

- b. **Proposed zoning** – The following measures in the proposed C2 rezoning, if adopted, could facilitate redevelopment in the area and may make it appealing for developers to tackle some of the complexity noted in the previous section.
 - Increased density and heights for residential uses would create an incentive for developing housing in the heart of Central Square and the Osborn Triangle.
 - Allowing coordinated development on multiple lots in common ownership could allow for phased, master planned development.
 - Shared parking provisions could facilitate the development of private parking lots such as the ones flanking Prospect Street at Bishop Allen Drive. Long term leases for parking spaces may continue to complicate the situation.
- c. **Vision and recent investment** – The City has been working to invest in Central Square. The infrastructure improvements of the early 1990s, coupled with recent planning endeavors such as the Red Ribbon Commission work and the C2 planning process have created a vision for the area that will provides guidance to property owners and help direct change.
- d. **Nearby development within walking distance** (in Kendall Square, Osborn Triangle, and University Park) coupled with trends towards increasing appeal of urban, transit-oriented housing, will likely make Central Square a more desirable location for residential uses.
- e. **City parking lots** – The vision established by the C2 study includes the transformation of the City-owned surface parking lots to a true public amenity (affordable and middle-income housing, public gathering space, and local retail) with parking relocated below grade. While any development of City property would involve much more public process and City Council action, such action could also facilitate redevelopment on adjacent sites.

2. Where is change most likely to happen along the Avenue in Central Square?

We will present a soft site analysis at the June 11 Planning board meeting.

3. Use a sample lot/scenarios (built form and use mix) to explain the types of mixed-use scenarios that might result from the proposed regulations. Use modeling/visualization tools to illustrate the forms that development might take under proposed regulations – particularly illustrate Bishop Allen/ Green Street transitions.

We are currently analyzing a range of scenarios on a sample lot and will present the analysis at the June 11 Planning Board meeting.

4. Explain the rationale for proposed heights?

The C2 height proposal includes the following key elements:

- a. **Non-residential uses** – maximum height permitted for non-residential uses would generally remain unchanged from existing zoning.
- b. **Neighborhood edges** – Heights at the neighborhood edges and transition mechanisms such as bulk control plane that exist in the zoning now would remain unchanged.
- c. **Residential uses** – One of the most important goals of the C2 Committee was the creation of new housing in Central Square, including housing for middle income families. Height increases are proposed for residential uses to create an incentive for housing. The following considerations were important:
 - Advice of the C2 consultant team and conversations with residential developers reveal that while an FAR incentive for housing is an important tool, it is most effective when coupled

with increased height allowances as units on upper floors yield greater value and can be utilized to leverage desired benefits.

- Buildings exceeding 70' in height trigger fire insurance and Massachusetts Building Code requirements that make them much more expensive to build. The Committee wanted to ensure that a height incentive provided for residential development was sufficient to offset the cost of constructing the building and provided sufficient incentive for creation of new housing.
- Allowing buildings to go taller allows greater flexibility in building design and site planning and increase the potential to incorporate open space at ground level.

The Committee reviewed a series of height and density scenarios to visualize the impact of changing heights and density and the potential public benefits that would be possible with each scenario.



Option 1: existing heights+ FAR

Benefits:

- Small plaza
- Ground floor retail



Option 2: +2 floors, +20% FAR

Benefits:

- Larger plaza
- Ground floor retail
- Middle-income housing (5 units)



Option3: +3 floors, +35% FAR

Benefits:

- Larger plaza
- Ground floor retail
- Middle-income housing (5 units)
- Affordable retail/non-profit space (12,500sf)

Balancing the benefits and tradeoffs, the Committee recommended increasing the maximum height for residential uses to 140' in the heart of Central Square and 160' in the Osborn Triangle to be able to create a middle-income housing requirement and also have an expectation that the project would contribute to improvements in the public realm, create improved edges and publicly accessible space and mid-block pedestrian connections.

To manage the taller buildings, ensure height variation, and minimize the impacts of height the following limits are proposed for elements of a project over the base district height limit:

- a. Only residential uses would be permitted
- b. Floorplates would be limited to 10,000 sq. ft.
- c. For parcels larger than 40,000 sq. ft, height over the base district height would be limited to 25% of the site area.

An additional 20' of height would be permitted to accommodate transferred density to a site if the Transfer of Development Rights provision is utilized to transfer GFA out of a Neighborhood Edge District.

As in the rest of the City, mechanical equipment is not included in district height limits. In the proposed zoning, the tall buildings would be residential for which mechanical equipment is typically 5 – 10' in height and can be set back from the façade to limit visibility.

SUSTAINABILITY

5. What is the additional cost of requiring LEED Gold?

According to the an article by *Larson Allen Consultant*, compared to a non-LEED certified building, the estimated cost premium for LEED Silver is 3-4% with a 5-year payback and the estimated cost premium for LEED Gold is 5-6% with 6-year payback. The payback is calculated using LEED-related energy savings to offset the initial cost premium. Savings are achieved through an average 15% reduction in utility bills and operating expenses that are 2-3% less in LEED certified buildings than comparable non-LEED buildings.¹

Research done by *Swinerton Builders* and the *University of San Diego* states that the cost premiums are 0.66% of the total cost for LEED Certified (\$1/sf), 1.9% of the total cost for LEED Silver (\$3/sf), 2.2% of the total cost for LEED Gold (\$4/sf), and 6.8% of the total cost for LEED Platinum (\$12/sf).²

It is expected that the cost of meeting LEED criteria is offset by energy savings in high performance buildings based on improved energy efficiency. It is estimated that energy use intensity (EUI) for LEED building is below the Commercial Building Energy Consumption Survey (CBECS), a national average for all commercial buildings.³ In general, EUI of LEED certified projects is 26% lower than the CBECS average, EUI of LEED Silver projects is 32% lower than the CBECS average, and EUI of LEED Gold and Platinum projects is 44% lower than the CBECS average.⁴

On the residential side, the Home Energy Rating System (HERS) Index is the industry standard by which a home's energy efficiency is measured. Based on the average HERS ratings for each level of LEED certification, there is approximately 30% energy reduction for LEED Silver Homes and approximately 48% energy reduction for LEED Gold Homes.⁵

6. What is the impact of predominantly glass buildings on sustainability/energy efficiency?

In recent years, the use of glass facades has gained popularity across all building types. It is an aesthetic that has found favor in contemporary architectural expression. On a more practical level, large glazed areas offer a significant amenity providing views and natural light to building interiors. This is particularly appealing in urban settings.

Glass facades can, however, pose challenges. In general, glass offers poorer insulation than most solid façade assemblies such as masonry and allows more thermal gain and loss. Some glass facades can be less durable than conventional wall assemblies and more expensive to maintain, requiring replacement in the long run.

¹ Nancy Lee, "Q&A: Understanding LEED Certification," [2012].

² Swinerton Builders & University of San Diego, "Green and LEED: How Much Does It Cost?"

³ Cathy Turner, "Energy Performance of LEED for New Construction Buildings," [2008].

⁴ Cathy Turner, "Energy Performance of LEED for New Construction Buildings," [2008].

⁵ USGBC, "Benefits of Green Homebuilding," [2012].

The industry is working on refining materials and strategies that offer the look of glass while reducing solar heat transfer. Double skin facades such as at the Genzyme building and the Cambridge Public Library significantly increase energy efficiency by using the thermal barrier provided by air sandwiched between the glass layers. Some alternatives offered by *Building Green*⁶ include the following:

- a. Substitute insulated spandrel panels for glazing (this can retain the all-glass look).
- b. Use the best spectrally selective, low-e glazings, and (where possible) specify different glazings for different orientations of the building.
- c. Increase the number of layers of glazing.
- d. Provide fixed exterior shading to control solar heat gain and reduce cooling energy use.
- e. Provide exterior roller blinds or shades to control both solar heat gain and heat loss.
- f. Provide automated, interior blinds to control solar heat gain (this is not as effective as blocking that solar gain on the outside of the glazing).
- g. Use lightshelves and other features to bring daylighting deeper into buildings and keep that solar heat gain further from the façade zone.

Recently, the use of glass facades vis a vis sustainability has been a topic of much debate in Toronto, Ontario. While the City of Toronto is still discussing the issue, the Ontario Ministry of Municipal Affairs and Housing made changes to the building regulation (the closest parallel is the Massachusetts building code) that includes the requirement for minimum overall performance of the building envelope aimed at providing an appropriate thermal resistivity to create a comfortable environment for building occupants. The result of this provision is that when glass is used in the facade, other building components need to compensate for the additional heat loss through the glass.⁷

Our recommendation on the topic of energy efficiency is to use a performance based approach rather than a prescriptive approach. In a world where materials technology is evolving to keep pace with stronger energy standards, a prescriptive approach runs the risk of getting outmoded quickly while a performance based approach allows designers the flexibility to make building design and façade materials choices best suited to the development program, anticipated uses, and available materials while being held responsible for meeting the desired level of energy. The C2 proposal anticipates that this will be achieved through the proposed enhanced sustainability benchmark of LEED Gold.

⁶ BuildingGreen.com, "It's Time to Rethink the All Glass Building", 2010.
<http://www2.buildinggreen.com/blogs/its-time-rethink-all-glass-building>

⁷ Ontario Ministry of Municipal Affairs, "Ruling of the Minister of Municipal Affairs and Housing," 2013.
<http://www.mah.gov.on.ca/Asset10095.aspx?method=1>

7. Define “high albedo” roofs and discuss potential glare issues.

The term “high albedo roof” refers to roof materials which have high solar reflectance. There are two main environmental benefits to using reflective materials: reducing heat gain within a building, thus needing less energy to provide cooling; and reducing the “urban heat island effect” that is created when buildings or paved areas absorb heat and cause higher outdoor air temperatures in developed areas.

LEED standards rely on calculating the solar reflectance index (SRI) of a material, a property based on its solar reflectance and thermal emittance. A surface that is entirely black has an SRI of zero while a surface that is entirely white has an SRI of 100. The LEED standard for roof materials is an SRI of at least 78 for flat roofs (no more than a 15% slope) and at least 29 for pitched roofs. The proposed zoning, in its next version, will be updated to provide a more specific definition.

White roofs, because of their color have a high albedo. Glare from a bright white or silvery roof on a low-rise building may disturb occupants of taller neighboring buildings. In this situation a colored (nonwhite) cool roof may be more appropriate for the shorter building. Visual and glare concerns have led to the development of coatings and roofing materials that are reflective in the infrared spectrum, meaning they reflect heat but don't look reflective to the eye. Such materials and coating are generally slightly less effective than white roofs but offer significant improvement over traditional black roofing membranes. In the Design Guidelines, we could include a goal that if high albedo roof is being used, particularly in a context where neighboring buildings are taller, then materials with high albedo but low glare properties should be utilized.

TRANSPORTATION AND PARKING

8. What transit analysis was done as part of the K2C2 Planning Study? How would future development in Kendall and Central Squares impact transit? Are there opportunities for coordination with MBTA?

Extensive Red Line capacity analysis was done as part of the K2 and C2 planning processes (available at

<http://www.cambridgema.gov/CDD/Projects/~media/3F3A97CE14D64CD98F6380085C377B19.ashx>). The analysis shows that there is sufficient peak hour capacity on the Red Line to accommodate the K2C2 development projections for 2030 while acknowledging that there are high congestion levels during the ‘peak of the peak,’ meaning that individual train cars may be full for short intervals.

As the number employees using transit grows, train cars will be full for longer intervals unless the capacity of the Red Line is increased or alternative transit options are put in place. Anticipated growth in the region outside Cambridge will contribute more significantly to Red Line congestion than will growth within Cambridge. To address long-term transit capacity concerns, the K2C2 study includes a number of recommendations to both improve existing service and advocate for transit expansion, including the following:

- extending some bus routes to Kendall that currently terminate in Central Sq to reduce congestion on the Red Line between Central and Kendall
- working with MBTA and property owners to have ‘next bus’ information displayed at the bus stops and/or in nearby stores
- improving EZRide (and/or other shuttle, open to the public) routes and frequency, and
- encouraging walking and biking, including Hubway system expansion, for short trips.

The plan for C2 and K2 proposes density near transit nodes and includes a mix of residential, commercial and retail land uses. This mix of uses, combined with transit availability and robust walking and biking infrastructure, enables people to live, work and play in the same area and reduces traffic generated by new development. The rate of auto ownership and commuting by car in Cambridge has shown a clear decline over time as a result of reduced traffic generation by existing buildings and in some cases less traffic being generated than anticipated at the time of permitting of newer projects.

The City advocates consistently for transit improvements that help both Cambridge and the broader region. The K2 and C2 studies recognize that in addition to work by City staff, “business associations, residents and all stakeholders must advocate for continued MBTA systemwide infrastructure improvements, with special emphasis on enhancing Red Line capacity”. City transportation staff work closely with the MBTA to improve service and to optimize bus operations. To create a more detailed analysis on Central Square, the C2 recommendations include an item for the City to “work on a study with the MBTA to look at routing, layover and stops changes for Central Square buses. One goal would be to look at ways to reduce the crowding from people waiting for the bus at this location. The City is interested in having the route 70 and 70A buses extended to Kendall Square.”

In addition the City Manager has recently appointed a citywide Transit Committee comprising residents, large and small businesses, and representatives of institutions to guide the City’s positions

and policies regarding long term sustainable funding for transit by the Commonwealth, transit expansion, service planning for modification or expansion of bus routes, and service reliability and improvements including ways to better design our street network to prioritize bus transit.

9. Discuss issues around reducing or completely waiving residential parking requirements.

The zoning recommendation for a reduction from minimum 1.0 space/unit to a minimum 0.5 space per unit and maximum 0.75 is based on studies that show that housing developments in Cambridge located near transit average 0.5 automobiles per unit. Data on residential parking demand in/near Central Square was presented and discussed at the September 12, 2012 C2 public meeting. The presentation can be seen at

<http://www.cambridgema.gov/CDD/Projects/Planning/~media/B100DAE147BB43D88E75AE848EB4EECO.ashx>

The residential parking ratios are intended to provide enough parking to meet the needs of residents who own a car and limit on-street parking by residents in new developments, but not provide too much parking that may encourage residents who do not own a car to buy one.

HOUSING

10. Discuss demographics in Central Square and the surrounding neighborhoods.

According to the 2010 U. S. Census, approximately 45,000 people live in the four neighborhoods touching Central Square – Area 4, Cambridgeport, Mid-Cambridge, and Riverside (Central Square Area). This figure represents 43% of the total population of the city in 2010. Across the central Square district persons under 18 and those 65 and older number somewhat less than might be expected, in comparison to the city as a whole. There are 4,432 people under 18, or 37% of the citywide figure, and 3,095 people 65 and older, or 31% of the citywide figure.

The diversity of the combined four neighborhoods mirrors that of the city as whole. Whites comprise two thirds of the population, 64%, Blacks 12.5%, and Asians 16.4%. People who identify as belonging to another race or with two or more races include 6.9% of the population. Those of Hispanic origin, which is counted separately from race, include 7.9% of the residents. The range of diversity differs across the four neighborhoods. Area 4 has the largest minority population, almost 50% of the total, as well as a Hispanic population totaling 12.3%. In contrast, Mid-Cambridge is 74% White.

The U. S. Census classifies people as living in either households or group quarters. Persons who live in group quarters share facilities such as kitchens and bathrooms, and the great majority of group quarters residents in Cambridge reside in university dormitories. Group quarters residents in the Central Square Area comprise 62% of the Cambridge group quarters population. Note that the four neighborhoods adjacent to the Square include both Harvard Yard and the River Houses, as well as a substantial presence of MIT graduate dormitories. Notwithstanding the large number of dormitory residents, the great majority of area residents (80%) are household members.

In 2010 there were approximately 18,000 households in the Central Square Area, 41% of the city's total. Households can be divided between family and non-family households. Families include households where two or more people are related by birth, marriage, or adoption.

Families comprise 6,287, or 35%, of the households in the Central Square Area. In comparison, citywide 40% of households consist of families. Only 15%, or 2,731, of Central Square households include children, less than one in six households. The proportion of district households with children is somewhat less than the citywide figure of 17%. The likelihood that a family residing in the Central Square Area includes children is about the same as across the city. Among Central Square families with children, approximately a third are single parent households.

The presence of both families as a group and the subset of those with children varies substantially between the four neighborhoods in the Central Square Area. In Area 4 families comprise 44% of all households, the fourth largest proportion of families among Cambridge neighborhoods. 24% of these households include children, the largest proportion in Cambridge. Single parents head over half of those households. In contrast, Mid-Cambridge has the lowest percentage of family households in the city, 31%, and the lowest proportion of families with children at 10%. A quarter of that neighborhood's families are single parent households. Riverside is similar to Mid-Cambridge in that the neighborhood has the second lowest percentage of families at 31% and the second lowest proportion of children at 14%. Among the Central Square Area neighborhoods the household structure comes closest to resembling citywide averages in Cambridgeport.

The most common household configuration around Central Square and throughout Cambridge is a person living alone. Single person households number 7,476 around Central Square, or 42% of all district households. The number of single person households varies across the four neighborhoods, ranging from 28% in Area 4 to 48% in Mid-Cambridge.

Persons 65 and older occupy a large number of these single person residences around the Square; 1,462 older persons live alone. While only 20% of all single person households, this figure equals 47% of persons 65 and older residing around Central Square.

At the current time we do not have access to reliable projections of population or households for either Cambridge or specific neighborhoods. Any projections available from other sources would not take into account the effect of the rezoning proposals under discussion.

	Area 4	Cambridgeport	Mid-Cambridge	Riverside	C2 Neigh Total	Citywide	C2 Neigh. as % City
Total Population	6,792	12,220	12,991	12,695	44,698	105,162	42.5%
Under 18	1,206	1,384	958	884	4,432	12,028	36.8%
65 and Older	442	928	1,116	609	3,095	9,988	31.0%
White	3,427	7,880	9,670	7,671	28,648	70,006	40.9%
Black	1,887	1,598	671	1,444	5,600	12,253	45.7%
Asian	762	1,931	1,923	2,732	7,348	15,917	46.2%
Other	716	811	727	848	3,102	6,986	44.4%
Hispanic Origin	836	844	796	1,002	3,478	7,974	43.6%
Household Residents	6,597	10,299	11,084	7,655	35,635	90,499	39.4%
Group Qtr. Residents	195	1,921	1,907	5,040	9,063	14,663	61.8%
Households	2,653	5,049	6,195	4,069	17,966	44,032	40.8%
Persons/Hld.	2.49	2.04	1.79	1.88	1.98	2.00	99.2%
Family Hld.	1,177	1,926	1,891	1,293	6,287	17,420	36.1%
w/ Related Children <18	638	875	640	560	2,713	7,368	36.8%
Married Couples	275	540	481	386	1,682	4,792	35.1%
Single Parent	363	335	159	174	1,031	2,576	40.0%
Other Fam. Hld.	539	1,051	1,251	733	3,574	10,052	35.6%
NonFamily Hld.	1,476	3,123	4,304	2,776	11,679	26,612	43.9%
Single Person	744	1,957	2,938	1,837	7,476	17,933	41.7%
65 or Older	179	459	496	328	1,462	4,242	34.5%
Roommates	732	1,166	1,366	939	4,203	8,679	48.4%
Housing Units	2,791	5,391	6,615	4,281	19,078	47,291	40.3%
Occupied	2,653	5,049	6,195	4,069	17,966	45,032	39.9%
Renter Occupied	1,962	3,459	4,066	3,214	12,701	29,797	42.6%
Owner Occupied	691	1,590	2,129	855	5,265	15,235	34.6%
Vacant/For Sale/Other	138	342	420	212	1,112	3,259	34.1%

11. Where will the needs of future families living in the area be met – services, parks etc?

The Central Square area is well served and well connected to many existing amenities that future families living in Central Square could access such as the Senior Center, branch library, post office, nearby parks, Area 4 Youth Center. Proximity to transit via the Red Line and buses provides easy access to an even larger range of amenities.

The City of Cambridge consistently evaluates the community's needs for public amenities such as schools, open space and playgrounds which would be impacted by evolving population in Central Square.

The proposed zoning exempts 'community-desired ground floor uses' from counting towards the FAR allowed on a site. These include daycare, preschool or kindergarten, public recreation building and library. FAR exempt ground floor retail is intended to target small, locally owned retail serving the neighborhood. The plan and zoning also aim to enhance walkability and bikeability and enrich the public spaces, further improving Central Square as a family-friendly neighborhood.

12. What is the impact of new market rate housing on the rents in existing housing stock?

The market for rental housing is driven by the desirability of living in Cambridge. Ready access to jobs, educational opportunities, transit, open space, cultural institutions, etc. makes Cambridge a very desirable place to live. Demand for housing in Cambridge is high and will grow as new Cambridge-based workers are added to the workforce. Increased demand will result in higher housing costs, especially if the supply of housing remains fixed. Increasing the housing stock will help to match supply with demand for housing, however it may not be possible to increase the housing stock to a level adequate to reduce current housing prices.

Increasing the housing supply will help to mitigate price increases resulting from continued and growing demand for housing. Existing and new demand for housing in Cambridge will surely impact prices in the existing housing stock, and will do so more dramatically if the amount of housing remains constant.

13. Do we have examples that incentives work to create housing and affordable housing?

A very good example of an incentive working to create new housing is the rezoning efforts undertaken in the early 2000s through the Citywide Growth Management process and rezoning, the Eastern Cambridge rezoning and the Concord-Alewife rezoning. These comprehensive rezoning efforts made housing an allowed use in every zoning district in the City and incited the creation of housing by allowing residential density beyond that which would be allowed for commercial uses. These changes have helped foster the creation of over 4,100 units in the past decade as well as the same number of units now permitted or under construction.

14. What does "middle income" mean? Who is the target? How does it relate to "family" housing?

"Middle-income" is the term we have used to refer to households earning between 80% and 120% of the area median income (AMI).

Households in this range are not eligible for most traditional affordable housing programs, which, with some exceptions, are generally limited to households who earn less than 80% of AMI. These households also have fewer options in the market as housing costs remain unaffordable to many in

this range. Housing for households in this income range was a concern for both the K2 and C2 Committees.

<u>Household Size</u>	<u>80% AMI</u>	<u>120% AMI</u>
1-person	\$52,880	\$79,320
2-person	\$60,480	\$90,720
3-person	\$68,000	\$102,000
4-person	\$75,520	\$113,280

Family housing was also a concern of the C2 committee as many families find it hard to find affordable units sized appropriately for families (i.e. 2 and 3-bedrooms). There are fewer affordable options in the market for larger middle-income households than smaller households in this income range. There are fewer larger units in the housing stock (at all price levels) and newly developed units tend to be smaller. There was a desire for any middle-income affordable units created through zoning incentives to serve these families, many of whom might otherwise only find suitable options outside the city.

15. How will the middle income provision interact with inclusionary?

As the petition will be proposed, the middle-income affordable units will have no adverse impact on the inclusionary housing requirements in Section 11.200. Market units created under the additional FAR that is allowed by the middle-income units will be included in determining the number of required inclusionary units. Middle-income affordable units will not be included in that calculation.

The inclusionary housing requirements will continue to be based on the number of market-rate units in a new building. Because there would be an increase in the number of market units in buildings which include a middle-income housing component, there would also be a resulting increase in the number of inclusionary units available to low and moderate-income households.

The City’s Housing staff and the Affordable Housing Trust are continuing to work to refine the middle income affordability proposal.

16. Should the middle-income housing provision be part of a citywide program?

Zoning-based affordable housing requirements work best when there is one set of requirements which applies city-wide. Requirements are predictable and clear for developers to understand and units are easier to administer and make available to applicants. The City’s inclusionary housing program is a good example of a predictable and consistent program working well across the city.

We have considered that any middle-income affordable units that might be created based on K2C2 recommendation would be a program only in these areas where we believe there is more need and demand for this type of housing. There are fewer market options for households in this income range generally, especially for families, and we have heard of and have seen middle-income families moving from Cambridge because of lack of affordable housing, demand for middle-income affordable units is difficult to predict, especially when considering such a program city-wide. Our experience with middle-income affordable units is mostly limited to homeownership, and we have

seen less demand than we see for low/mod affordable units. We would expect most middle-income units created would be rental units. Households in rental units would be required to re-certify their income annually and be subject to other program requirements (e.g. household size, asset limits, etc) which might affect interest in program participation.

Given the high market rents in new buildings in which new middle-income units would be created, we believe there will be demand from middle-income households who want to participate in this program and live in these buildings paying below market rents, especially if units created are sized for families. It is hard to say to what extent that demand might exist in other parts of the city where there may be more options available in market and/or other options in adjacent communities.

The middle-income program could be expanded if it is successful, there is demand for units beyond the Central and Kendall Square areas, and there is a mechanism in place to produce middle-income affordable units in new market developments. In the case of middle-income units that might be produced Central and/or Kendall Square, the opportunities that come from allowing denser developments included in the study recommendations allow for the consideration of a variety of potential public benefits including middle-income affordable housing.

17. Discuss funding for housing programs (state/federal cuts).

City funding for housing programs comes through the Community Preservation Act (CPA) and the Federal CDBG and HOME programs. CPA funds are administered by City's Affordable Housing Trust which uses funds to preserve and create affordable units. CPA funds are used to leverage commitments of other public and private funding sources.

Federal housing programs are experiencing the same cuts and uncertainty as other federal programs. CDBG and HOME funds the City receives from HUD have been cut considerably in recent years, and we are still working to determine the exact impacts of sequestration will have on housing programs in FY2014 and beyond. CDBG has been a critical source of funding for City housing, job training, economic development, and human service programs for more than 30 years. The Cambridge Housing Authority and other federally funded agencies are experiencing similar cuts with the expectation that cuts and uncertainty about future funding allocations will continue for the foreseeable future.

18. It is advantageous to have a mix of incomes within a building. Can we incentivize/require?

Yes, mixed-income buildings are preferred where possible and work well to reflect the socio-economic diversity of the city building by building. One significant benefit of the inclusionary housing ordinance is that it has resulted in the creation of mixed-income buildings throughout the city and created affordable units for low- and moderate-income households in areas where it would be very difficult to create affordable units through other means. The proposed provisions which would allow for middle-income affordable units would allow for creation of a more diverse mix of incomes in buildings that take advantage of these provisions.

19. Should we create a minimum housing requirement?

Creating a minimum housing requirements for a zoning districts have typically been utilized in parts of the City where

- a. there is limited or no housing and the requirement is deemed a necessary mechanism to create a mixed use district and/or
- b. development pressure is great and there is a concern that market pressure to build non-residential uses would significantly outcompete housing

Neither of these conditions is present in Central Square. Since residential development to address the growing need for housing in Cambridge and the region is an important goal for Central Square, the proposed zoning incentivizes housing by allows higher density and height limits for residential uses.

Given that Central Square has not attracted much development in recent decades (refer to Q1), we believe that creating a housing requirement runs the risk of disincentivizing desired change. In our estimation utilizing the incentive mechanism is the more prudent approach for Central Square.

RETAIL

20. Discuss urban density as a driver for retail activity.

Urban density is still considered a driver for retail development with office density varying from residential density. A rule of thumb is that an office worker will support a few square feet of retail businesses — essentially lunchtime eateries and perhaps a drugstore. In comparison, a resident will support 10-20 square feet. The difference is an order of magnitude. Outside of a downtown retail core, the presence or absence of people living nearby determines whether a shop dies, barely survives, or thrives.⁸

According to Aaron M. Renn, “if you don’t have sufficient population and income density, you can’t support urban neighborhood retail; if you can’t support neighborhood urban retail, you don’t have any real walkability...”⁹

While there has long been competition between malls and downtowns, brick and mortar stores are experiencing unprecedented competition from online businesses. This has influenced the retail mix that thrives in an area, skewing towards larger percentage of services such as drycleaners and hairdressers, restaurants, and retail that caters to the daily needs of nearby residents such as convenience stores, pharmacies, and grocery stores.

Recent experience in New York City demonstrates that retail health is influenced not just by people living in the area, but by pedestrian and bicycle volumes and public space that invites people to visit and linger. Transforming an underutilized parking lot in Brooklyn to programmed public space resulted in 172% increase in retail sales at local businesses compared to 18% borough-wide; creating a parklet in a curb lane in Manhattan resulted in 14% sales increase in resulting businesses; adding dedicated bus and bike lanes along First and Second Streets in Manhattan correlated with 47% fewer retail vacancies compared to 2% more borough-wide.¹⁰

21. Consider extending the retail requirement proposed for Massachusetts Avenue along Main Street as far as Windsor St.

Central Square and Kendall Square form strong retail clusters at both ends of Main and Windsor Streets. In addition, Pfizer will have some retail in their new space at Main and Albany St. While these retail nodes are strong, and even the retail on Main and Windsor itself appears to be thriving, we should be concerned about requiring too much additional retail, which could have a dilutive and therefore detrimental effect on what already exists. In fact, requiring retail when it is yet unproven how much additional need there is could lead to blocks of vacancies and For Lease signs, which

⁸ Crosscut.com, “Seattle is killing retail by requiring too much of it”, September, 19,2011,

<http://crosscut.com/2011/09/19/architecture/21314/Seattle-is-killing-retail-by-requiring-too-much-it/>

⁹ Shareable.net, Density Reconsidered, April 19, 2010, “<http://www.shareable.net/blog/density-reconsidered>

¹⁰ New York City DOT, “Measuring the Street: New Metrics for 21st Century Streets”, 2012,

<https://d3n8a8pro7vhmx.cloudfront.net/americanbikes/pages/211/attachments/original/1351785187/2012-10-measuring-the-street.pdf?1351785187>

would be the opposite of what is hoped for this area. It is recommended that in this area, we incentivize retail, but do not require it.¹¹

In addition, the desire for street activation may be accomplished in other ways. For example, Central Square Business Association is interested in working with the Cambridge Arts Council to activate the streetscape with arts, entertainment and retail market activities on the public way. Some of the locations being considered are in the Osborn Triangle. This idea was embraced by the C2 Committee and could positively impact the surrounding businesses through associated street activation.

22. Explain the Formula business proposal – is it over-regulating?

The current Fast Order Food cap in Central Square has restricted not only fast food chains but also local cafes and ice cream shops that have been interested in locating in the square. The Central Square Study recommends replacing that “cap” with standards that are more supportive to local businesses.

Although zoning cannot regulate based on ownership, it can be used to protect the aesthetic character of neighborhood – Cambridge’s signage regulations are an example. Formula Business regulations are a tool used by some communities to limit the aesthetic impacts of national-brand businesses on the character of a historic or otherwise unique area. A Formula Business is defined based on its design characteristics, including signage, façades, brand images and interior décor. Some communities require design review or special permits for a Formula Business, while others have restrictions or limits on the number of such businesses allowed in an area. Places that have implemented Formula Business regulations include the Massachusetts towns of Dennis, Nantucket and Chatham as well as larger cities such as San Francisco. The Massachusetts Attorney General has approved these regulations as being consistent with Massachusetts zoning laws, but has warned that that they may be subject to constitutional challenges.

The proposed Central Square zoning suggests a Planning Board special permit review process for new Formula Business establishments. A less onerous alternative could be to require only an advisory review conducted by the Central Square Advisory Committee and/or CDD staff. In either case, there would be an opportunity for public input and suggestions for how the business could fit in with the character of Central Square and better serve the community.

23. Can the storefront limitations for banks be extended to other use types (gyms, phone stores, offices)?

The proposed Central Square zoning includes a limitation on the ground-floor frontage that can be occupied by a bank use. This is a standard meant to limit the impact of large banks on the retail character of a block, because banks tend not to have the same “enlivening” effect on the streetscape as retail stores. Bank uses can have a smaller entryway but can occupy larger spaces within the interior of the building or on upper floors.

¹¹ Crosscut.com, “Seattle is killing retail by requiring too much of it”, September, 19,2011, <http://crosscut.com/2011/09/19/architecture/21314/Seattle-is-killing-retail-by-requiring-too-much-it/>

The proposed zoning also includes a requirement that at least 75% of the frontage on Mass Ave must be dedicated to retail uses. Retail uses include stores, restaurants, and consumer service establishments such as cleaners, barber shops and tailors. Banks are not classified as retail uses but as office uses, along with offices for doctors, real estate professionals and the like. Cellular phone stores are typically classified as retail uses. Fitness-related uses can fall under different categories, sometimes considered “commercial recreation” (which is a retail use that requires a special permit) and sometimes considered an educational use if they principally offer instructional classes, such as a yoga studio. While these types of uses may not seem appealing to everyone, they do attract customer activity and contribute to street life outside of normal weekday 9-to-5 office hours, which banks and other offices typically do not.

Alternatives for limiting the frontage of specific types of ground-floor retail uses could be considered, but would need to be weighed against the desire to accommodate a diverse range of business types to promote vitality and street life in Central Square.

LAND USE & OPEN/PUBLIC SPACE

24. Discuss potential issues with proximity of biotech uses to housing – emissions, noise, other?

New biotech in Cambridge must follow a very strict set of regulatory processes, not only in accordance with Federal requirements, but, as outlined the City’s Recombinant DNA Ordinance, they must follow the Cambridge Bio-safety Committee procedures. These procedures, while applying very strict guidelines for the containment of contaminants from work within the building, do not prescribe distances to nearby buildings. Distances from ventilation/exhaust are specified as no nearer than 10’ from the property line in the state plumbing code.

For noise regulation near residences, the City of Cambridge noise ordinance sets a maximum decibel level at the lot line of a residential zoning district, or at residential lot lines within business or industrial districts. New residential buildings within a mixed use district are designed and constructed to be stronger acoustically than older residential structures.

25. How will the public space vision be achieved? Are there opportunities for open space improvements besides City parking lots?

The C2 recommendations envision the following mechanisms for achieving open space improvements in Central Square:

- **Parklets on the sidewalk** – The C2 plan recommends creating a parklet program that partners with local businesses, property owners, and the Central Square Business Association to create small interventions through plantings, seating clusters and/or public art that help create the sense of Massachusetts Avenue as a great public space.
- **Public space improvements in conjunction with new development** – Future projects would be expected to create improved edges to the public realm. The proposed zoning includes an incentive for the creation of indoor public space and pedestrian connections open to the public. It is anticipated that modest new open space could be created in conjunction with redevelopment and when development occurs on parcels adjacent to existing public space, it could be leveraged to enhance the space e.g. redevelopment on the Quest site could further enhance Jill Brown-Rhone Park
- **Improvements to existing public spaces** such as Carl Barron Plaza and Jill Brown-Rhone Park/Lafayette Square. Such improvements could happen through working with property owners to create compatible uses in existing and new development. Physical improvements are also possible through the City’s capital improvement program, which is typically a long-term process.

26. Should there be a minimum open space requirement in the zoning?

Cambridge zoning does not generally require open space for commercial development or mixed-use development in commercial districts. The exception is within areas such as Planned Unit Development (PUD) districts, the MXD/Cambridge Center district and the CRDD/University Park district. In those districts, the expectation is for large parcels of land in common ownership to be developed into multi-building complexes with plazas, outdoor pathways and other public spaces. PUD districts typically require that about 10-20% of the land area on a development parcel must be publicly accessible open space. The location, shape and design of the open space is reviewed and

approved by the Planning Board as part of the development plan. The minimum parcel size for a PUD is 25,000 square feet, and in many districts the requirement is larger.

According to CDD’s ownership analysis, there are only 16 property owners with at least 25,000 square feet of land area in the proposed Central Square Overlay District, and many of these owners have properties in smaller lots scattered throughout the district. It may be onerous or undesirable to require public open space on small lots. However, there could be some minimum percentage of publicly accessible open space required for development on large contiguous lots under common ownership. The exact size, shape and configuration of the open space could be approved by the Planning Board when reviewing a proposed development for the site, or could be waived if open space on a particular site would not benefit the public. For a sense of scale, a requirement of 10% open space on a one-acre site would yield at least 4,356 square feet of open space, which is the approximate size of the pocket park on the Inman Street side of 344 Broadway.

27. What will need to happen to get the “covered community space” envisioned?

The proposed zoning creates an FAR exemption for indoor public space leaving open the possibility of creating a covered community space in conjunction with private development. Small versions of such spaces may be included in private development projects.

In our assessment, the City would need to be a partner for the creation of a covered community space of significant size that incorporates public programming. The development of such a space is most likely to occur in conjunction with redevelopment of the City parking lot(s).

OTHER

28. Explain/resolve relationship between zoning text and map of historic resources.

The Central Square Overlay District and the Central Square National Register District were established at about the same time. The National Register District was updated in 2012 and now contains about 65 buildings that have been designated as “contributing” by the Massachusetts Historical Commission and the U.S. Department of the Interior.

The proposed Central Square Overlay District includes part or all of several National Register Districts, as illustrated in the attached map. In addition, there are a number of buildings more than 50 years old within the Central Square Overlay District but outside of any National Register District that are considered to be ‘potentially contributing’ by the Cambridge Historical Commission staff.

In both the current and proposed zoning for Central Square, a criterion for issuance of a special permit is that no contributing building should be demolished or substantially altered unless the Historical Commission determines that a proposed demolition or alteration would not impact the eligibility of the district or the building for the National Register. The zoning effectively makes approval by the Historical Commission a prerequisite for issuance of a special permit that proposes demolition or significant alteration of any of those buildings.

The updated map to accompany the Overlay District (to be provided at June 11 meeting) will show the boundaries of National Register Districts, contributing buildings, and buildings in the Overlay District but outside National Register districts that the Commission staff considers to be ‘contributing’ under Department of the Interior guidelines.

A second map (to be provided at June 11 meeting) will show all buildings of historic interest, including contributing and potentially contributing buildings in the Central Square Overlay District, buildings that have been protected as landmarks by the City, and buildings that the CHC staff considers potential landmarks.

Cambridge’s Demolition Delay Ordinance (Ch. 2.78, Art. II) enables the Commission to review demolition permit applications for buildings over 50 years old. Applications for ‘significant’ buildings are reviewed at a public hearing; buildings determined to be ‘preferably preserved’ are protected from demolition for up to six months. Contributing buildings are automatically ‘significant.’ The ‘potentially contributing buildings’ in the Central Square Overlay District map would be considered significant for demolition permit review purposes.

A Commission determination that a building is ‘significant and preferably-preserved’ places a six-month hold on the demolition permit. During this moratorium the Commission will consider the broader significance of the building and may initiate a landmark designation study. Buildings under study for landmark designation are protected for up to one year while the Commission considers a recommendation to the City Council for permanent designation.

What does the City control in addition to the parking lots?

Please refer to the attached *Property Ownership* map showing City of Cambridge ownership in green.

