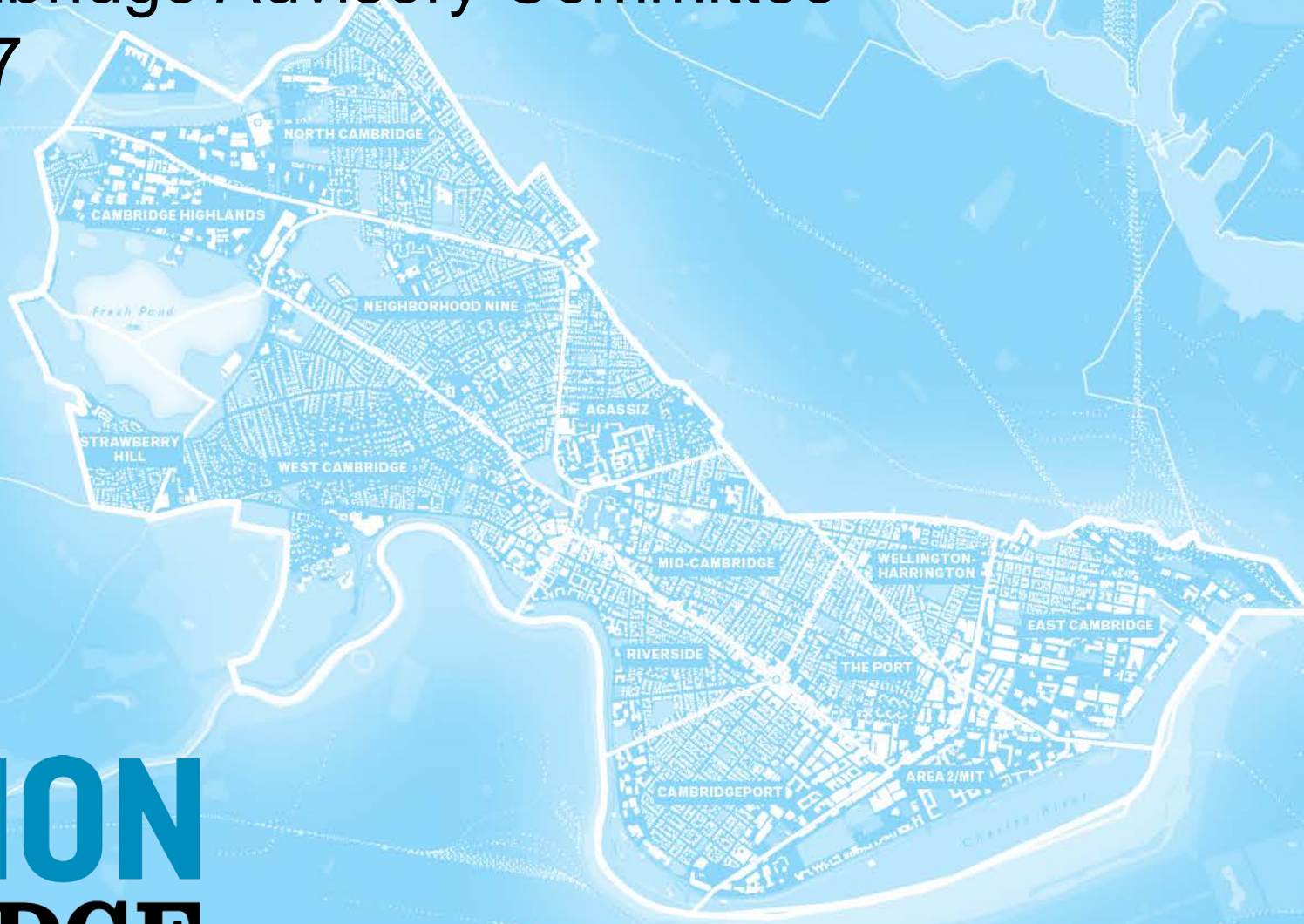


Envision Cambridge Advisory Committee

March 1, 2017



ENVISION CAMBRIDGE



Agenda

Introduction

Cambridge in the Regional Context

- Regional and local projections
- Discussion of regional pressures

Cambridge and its Corridors

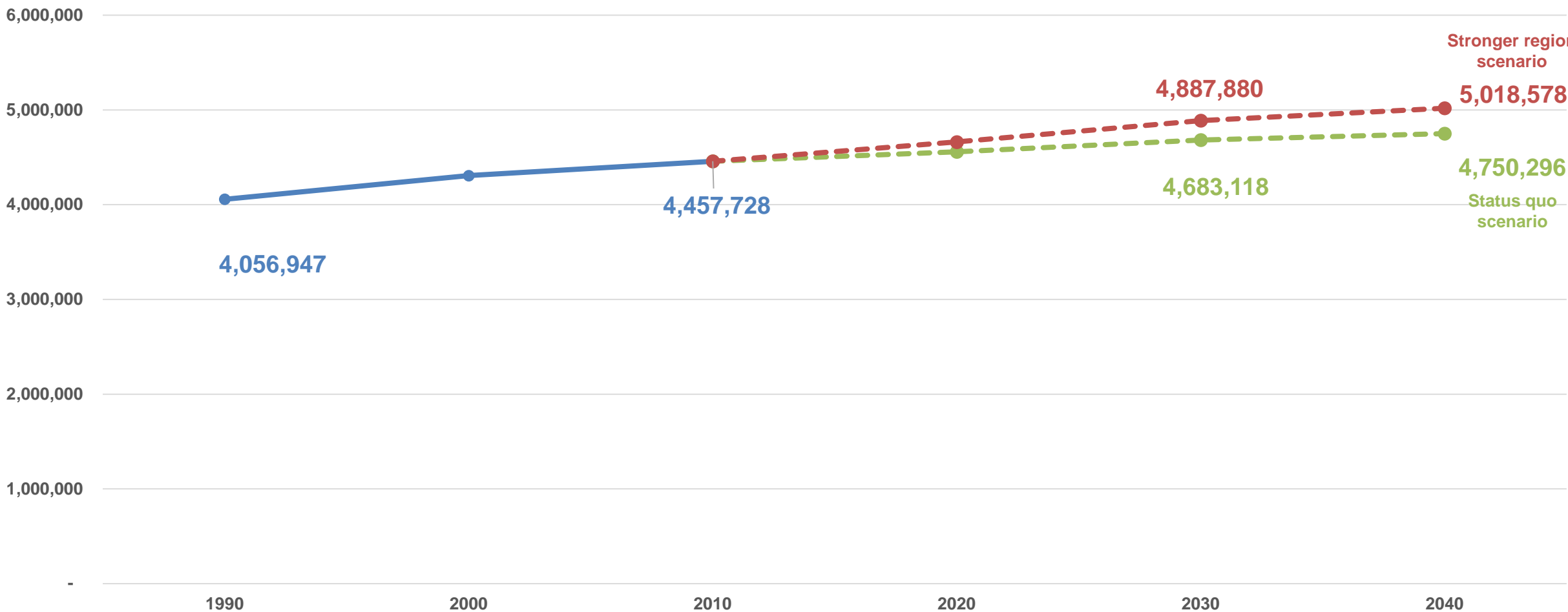
- Historic role of corridors
- Corridor considerations
- Initial corridor development analysis
- Discussion of corridor tradeoffs

Next Steps

What is the regional context for growth in Cambridge?

Regional Population Projections

MAPC projects that the region will add more than 400,000 residents over the next 20 years, and an additional 130,000 in the following decade under its **Stronger Region** scenario.

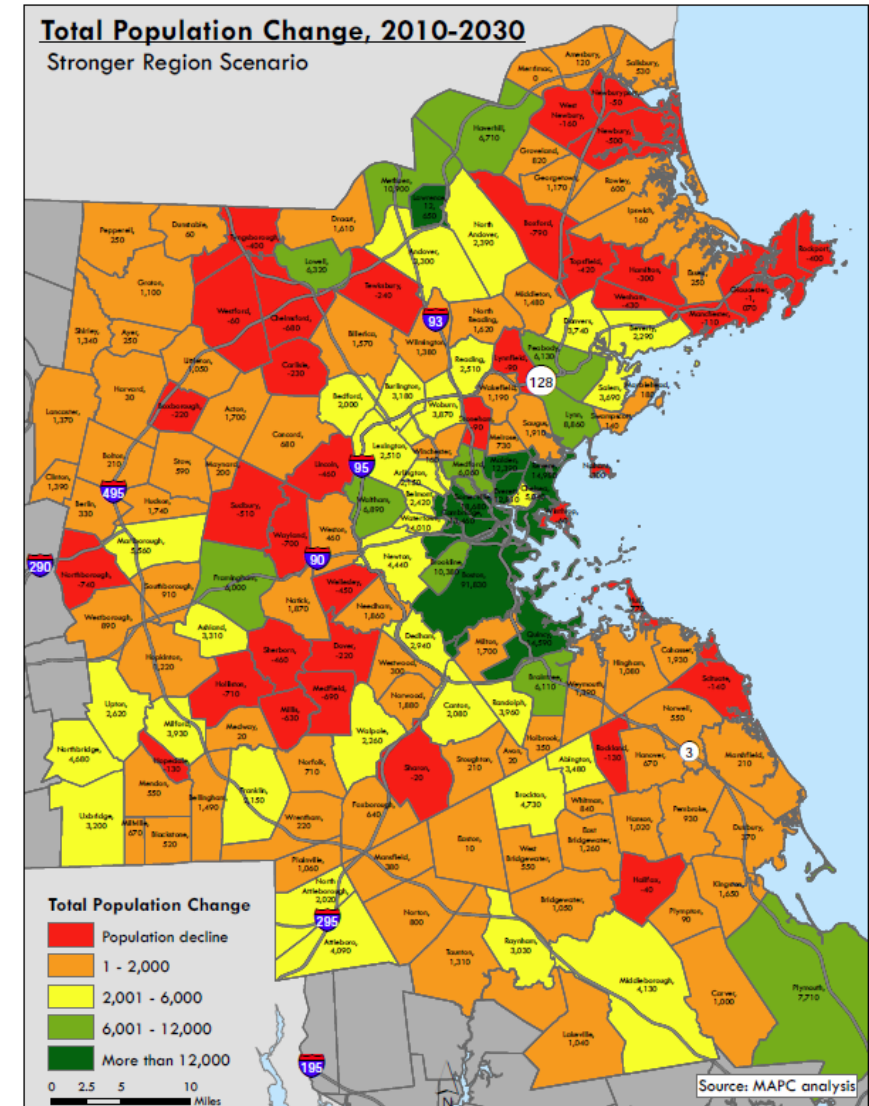
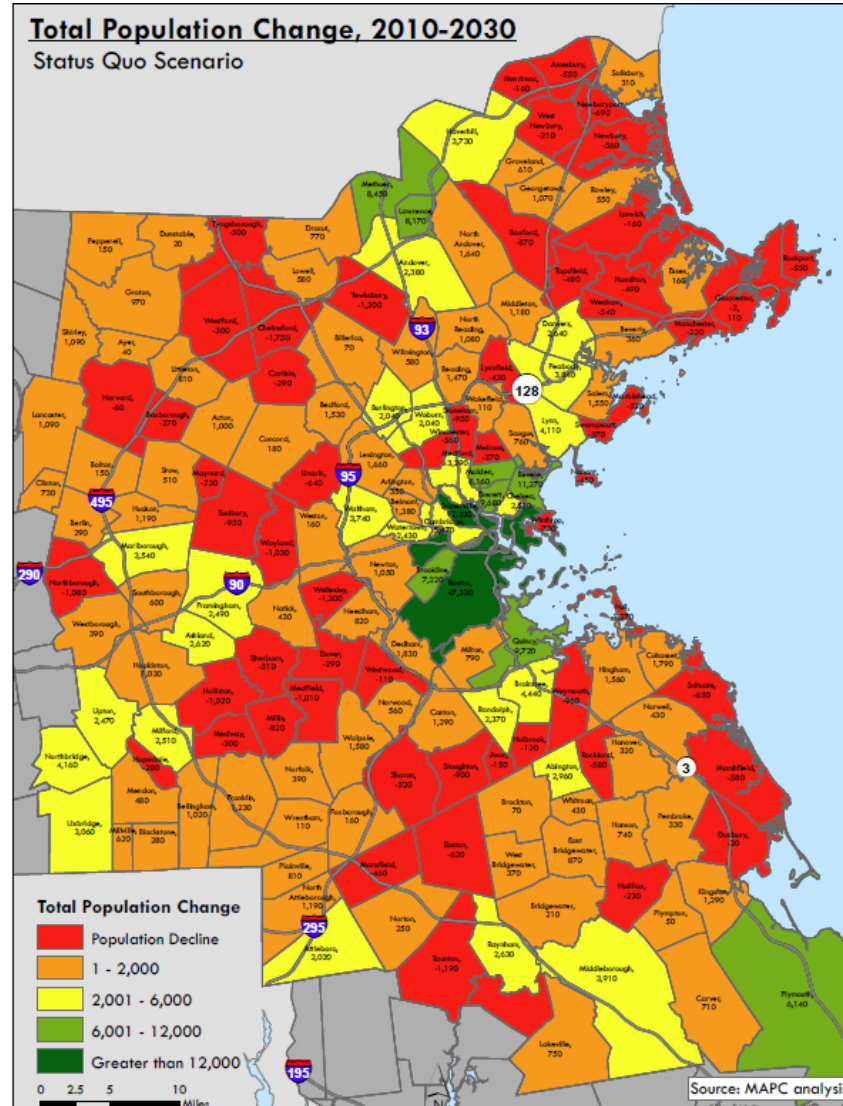


Source: 2014 MAPC Population Growth Projections

Regional Population Projections

MAPC projections include two scenarios for regional growth -

- The “**Status Quo**” scenario is based on the continuation of existing rates of births, deaths, migration, and housing occupancy.
- The “**Stronger Region**” scenario explores how changing migration trends could result in higher population growth, greater housing demand, and a substantially larger workforce.

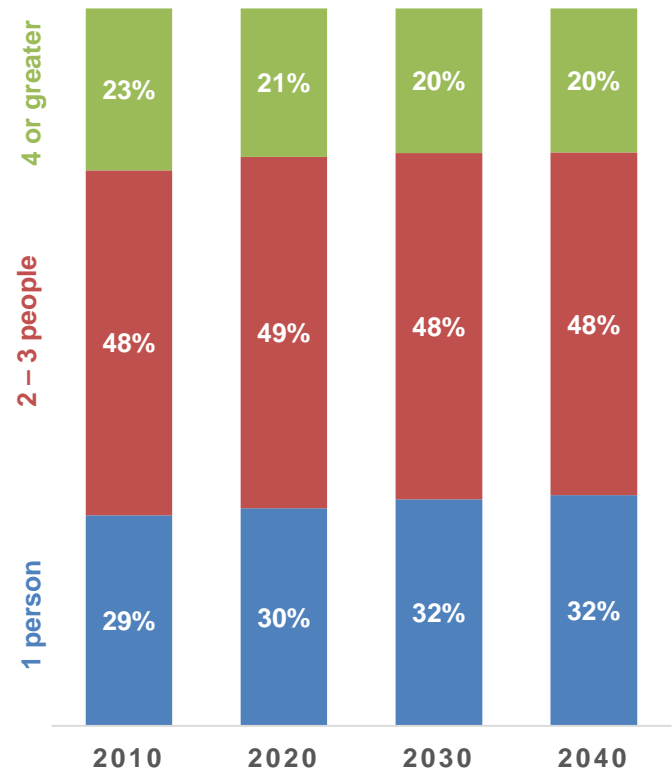


Source: 2014 MAPC Population Growth Projections

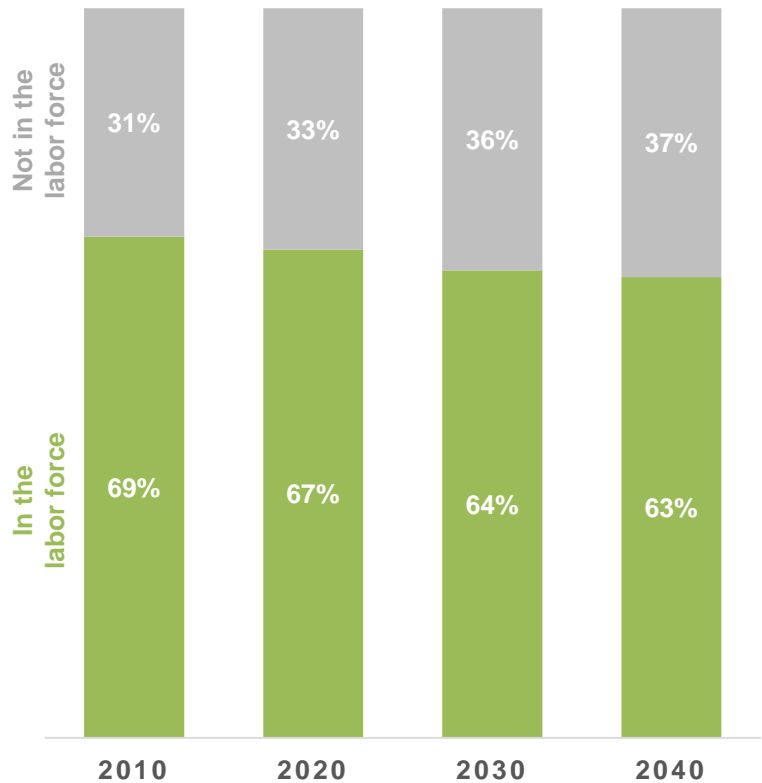
Regional Population Projections

Overall, the aging and retirement of the Baby Boomers will have profound implications for the region. More than 400,000 new housing units will be needed by the year 2040 if the region is to keep growing its economic base.

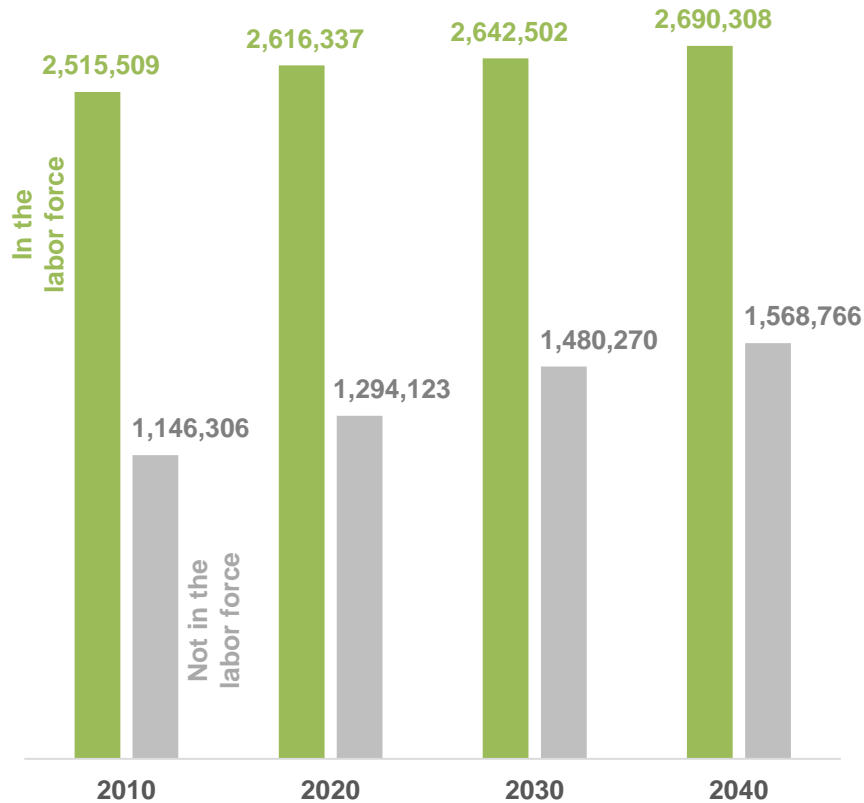
Household Size



Percentage of total population in labor force



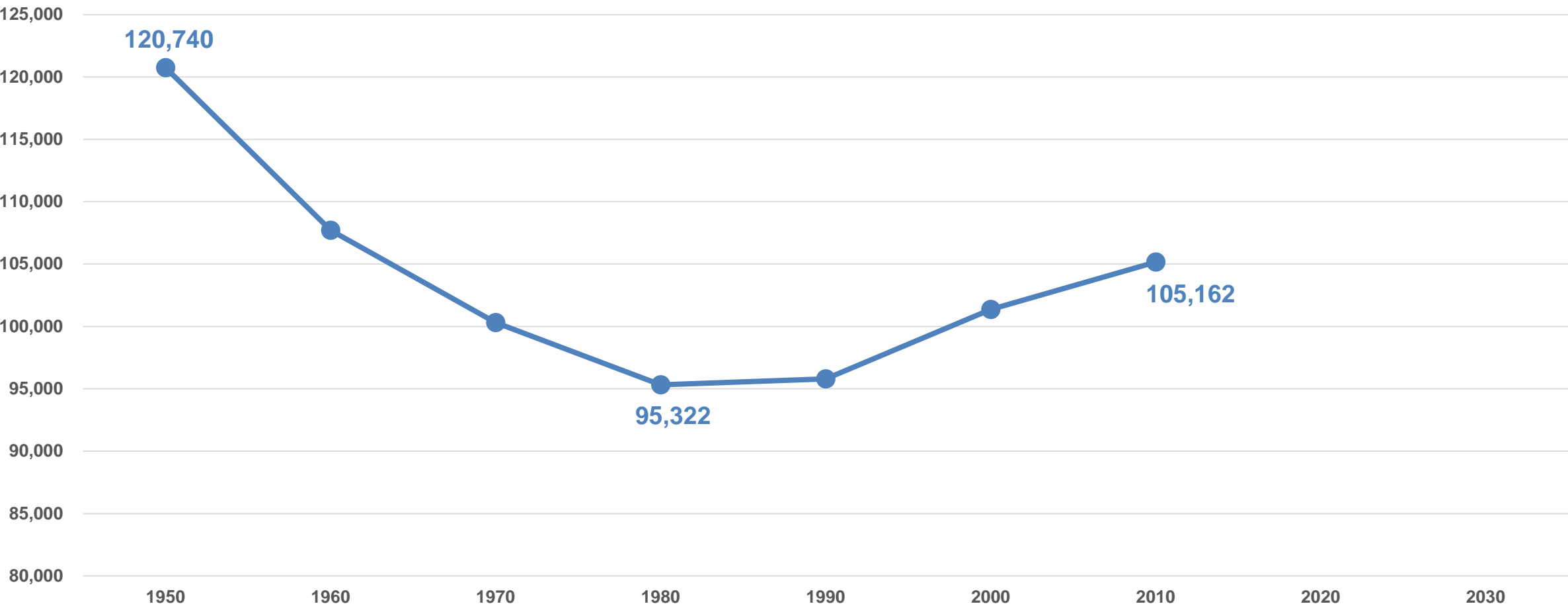
Labor force size



Source: 2014 MAPC Population Growth Projections

Citywide Population Projections

Cambridge's population was 13% smaller than its peak 1950 population at the last US Census in 2010, and 10% larger than its lowest population (1980).

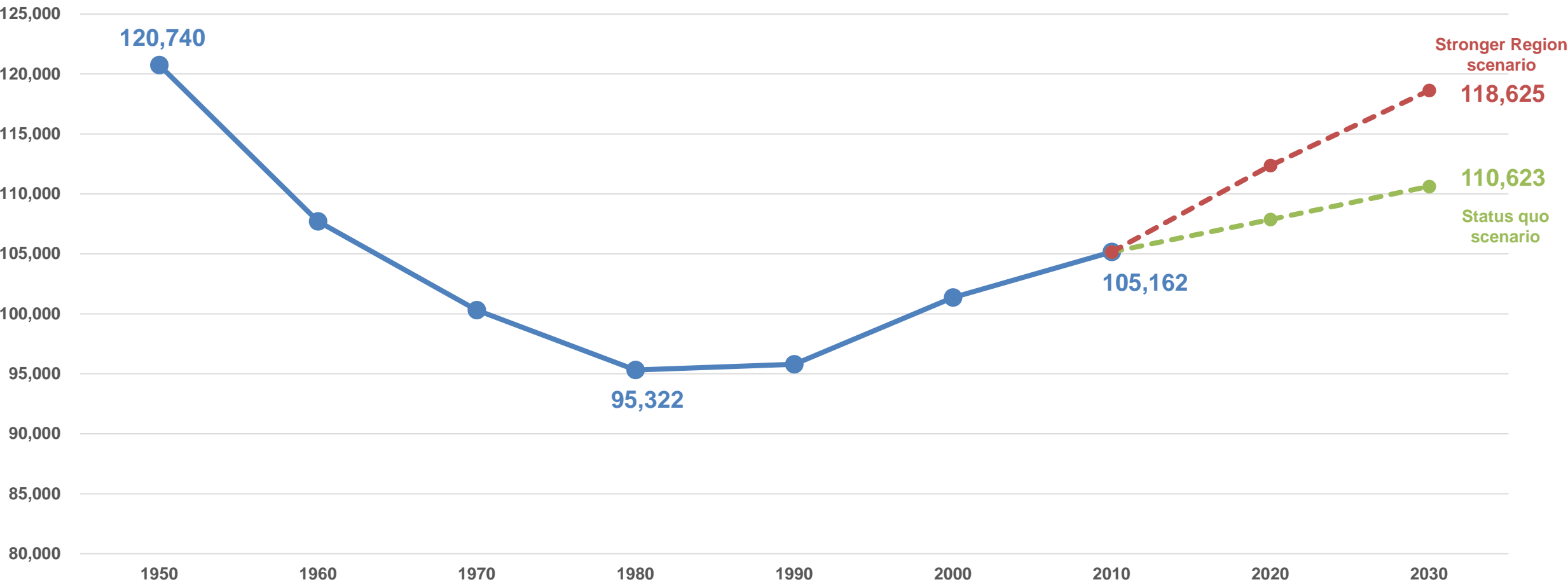


Source: US Census, 1950–2010



Citywide Population Growth

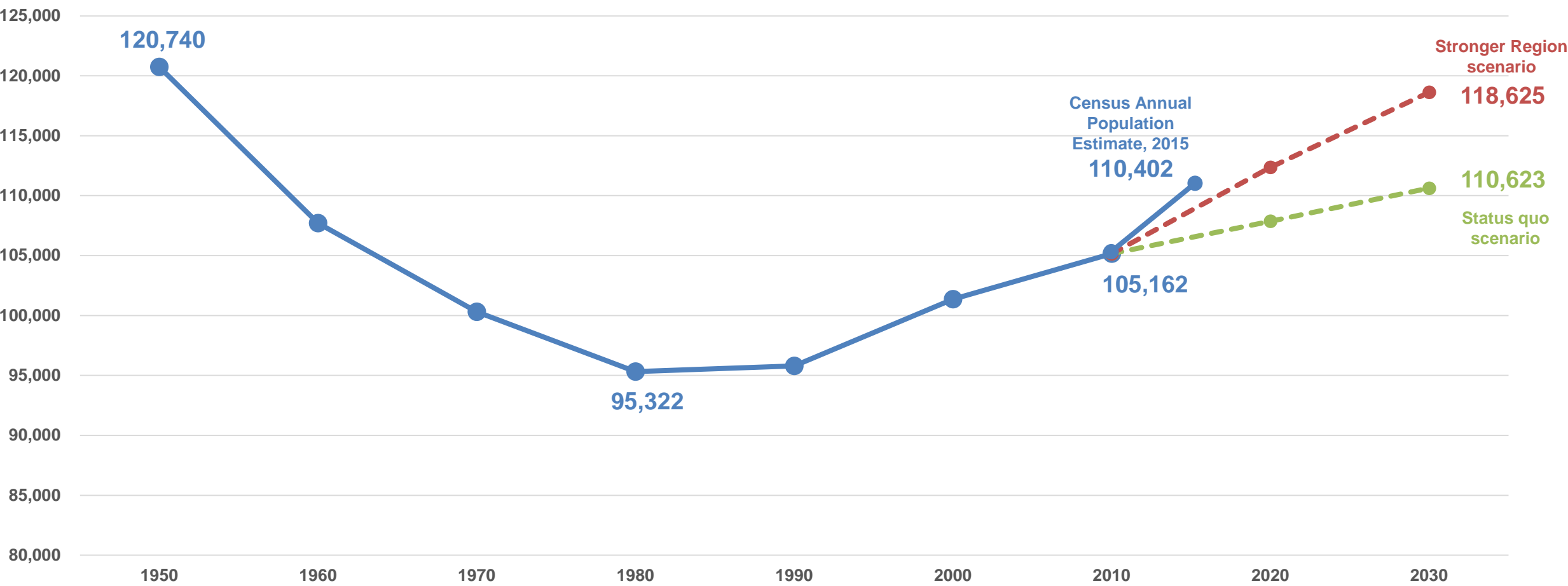
MAPC “Stronger Region” projections show Cambridge approaching its peak population by 2030.



Source: 2014 MAPC Population Growth Projections; US Census, 1950–2010. Projections based on historical births, deaths, migratory patterns of different age cohorts, and steps forward by applying variations on those historical patterns to each age cohort as they age over time.

Citywide Population Growth

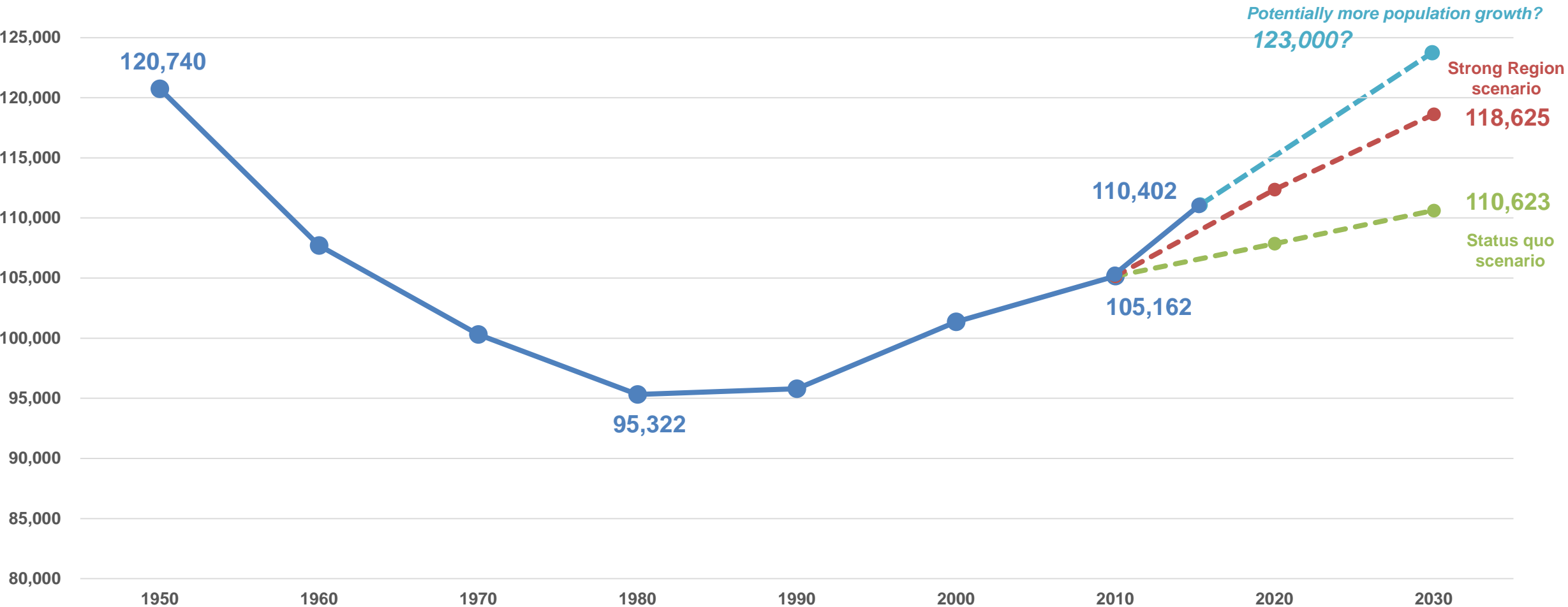
The Census Bureau estimates Cambridge has already overtaken its projected 2030 population under the “Status Quo” scenario, and is outpacing the “Stronger Region” scenario.



Source: 2014 MAPC Population Growth Projections; US Census, 1950–2010; Census Annual Population Estimates, 2015

Citywide Population Growth

Cambridge is *possibly* on track for growth exceeding MAPC projections.

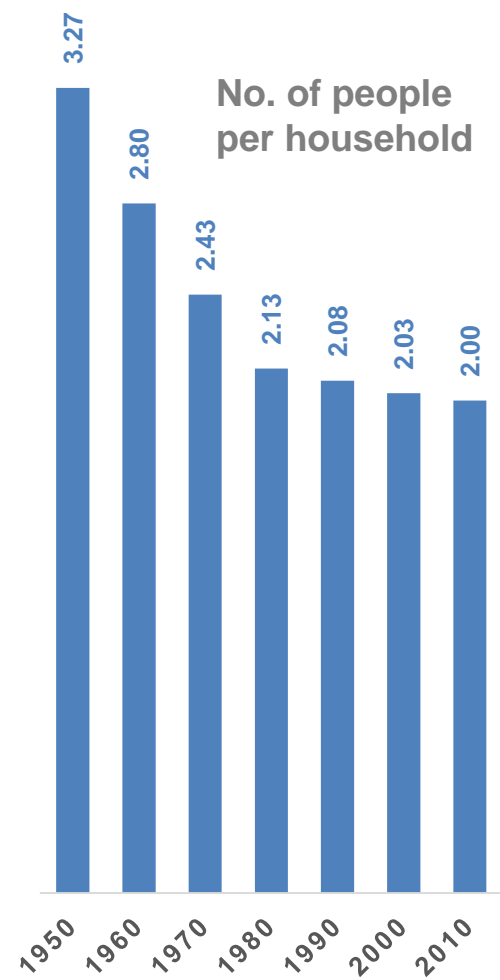
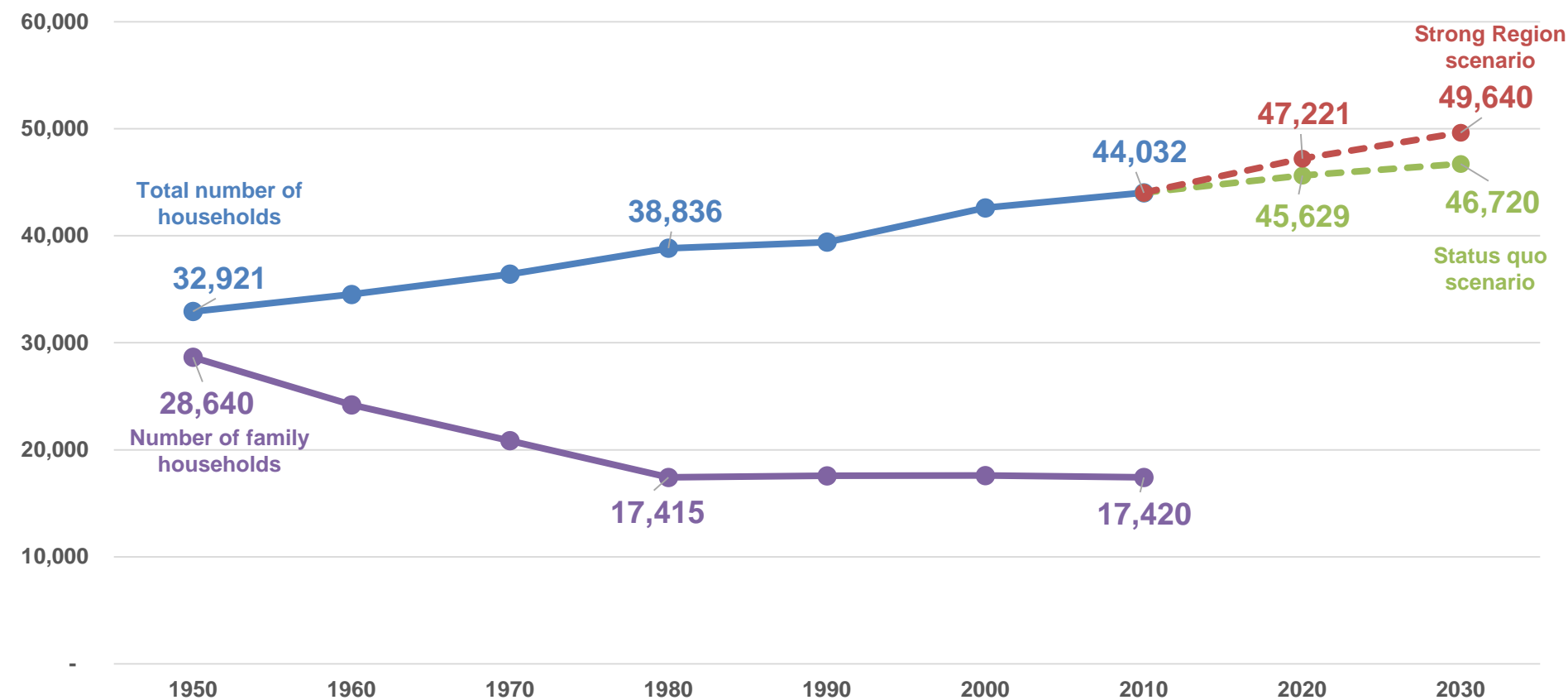


Source: 2014 MAPC Population Growth Projections; US Census, 1950–2010; Census Annual Population Estimates, 2015; Envision Cambridge analysis for largest-population projection applies an excess growth factor on MAPC’s overall population growth rate (and does not make specific adjustments to MAPC’s variables).

Citywide Household Projections

MAPC projects total number of households will continue to increase. Over time, the number of people per household decreased as the number of Cambridge's family households decreased.

No. of households

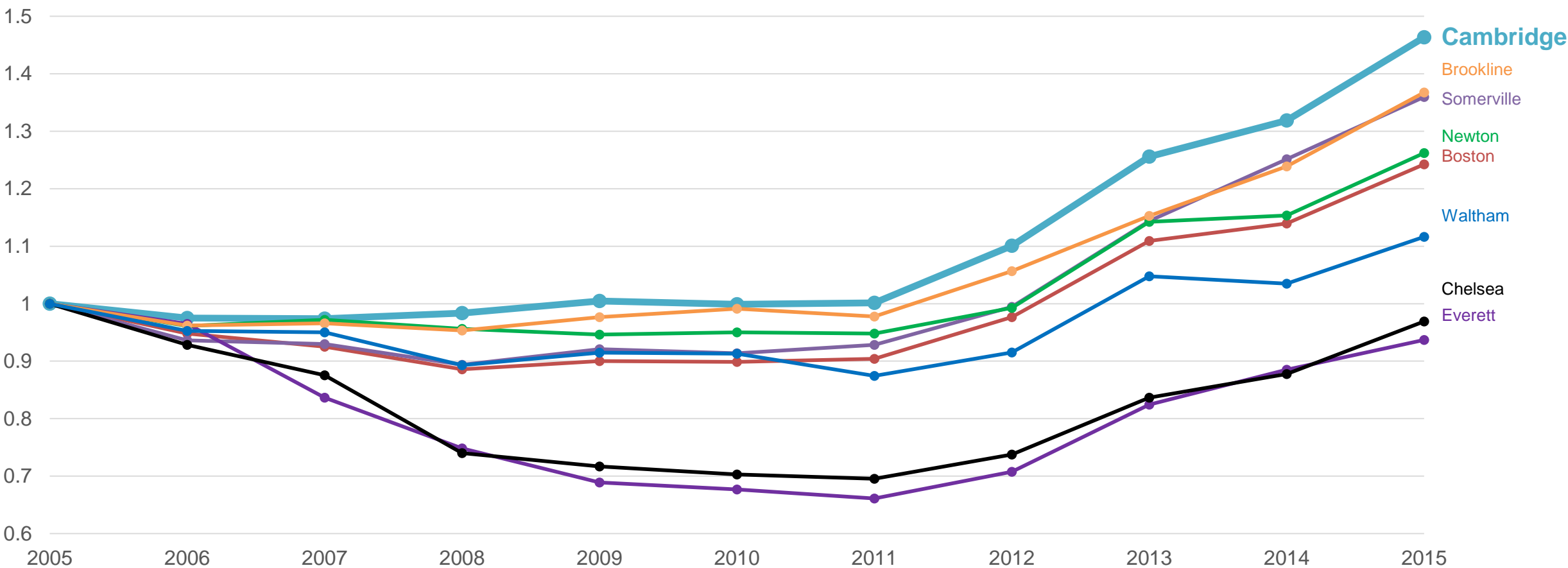


Source: 2014 MAPC Population Growth Projections; City of Cambridge Statistical Profile

Housing Affordability

Home prices increased faster in Cambridge than in neighboring communities between 2005 and 2015.

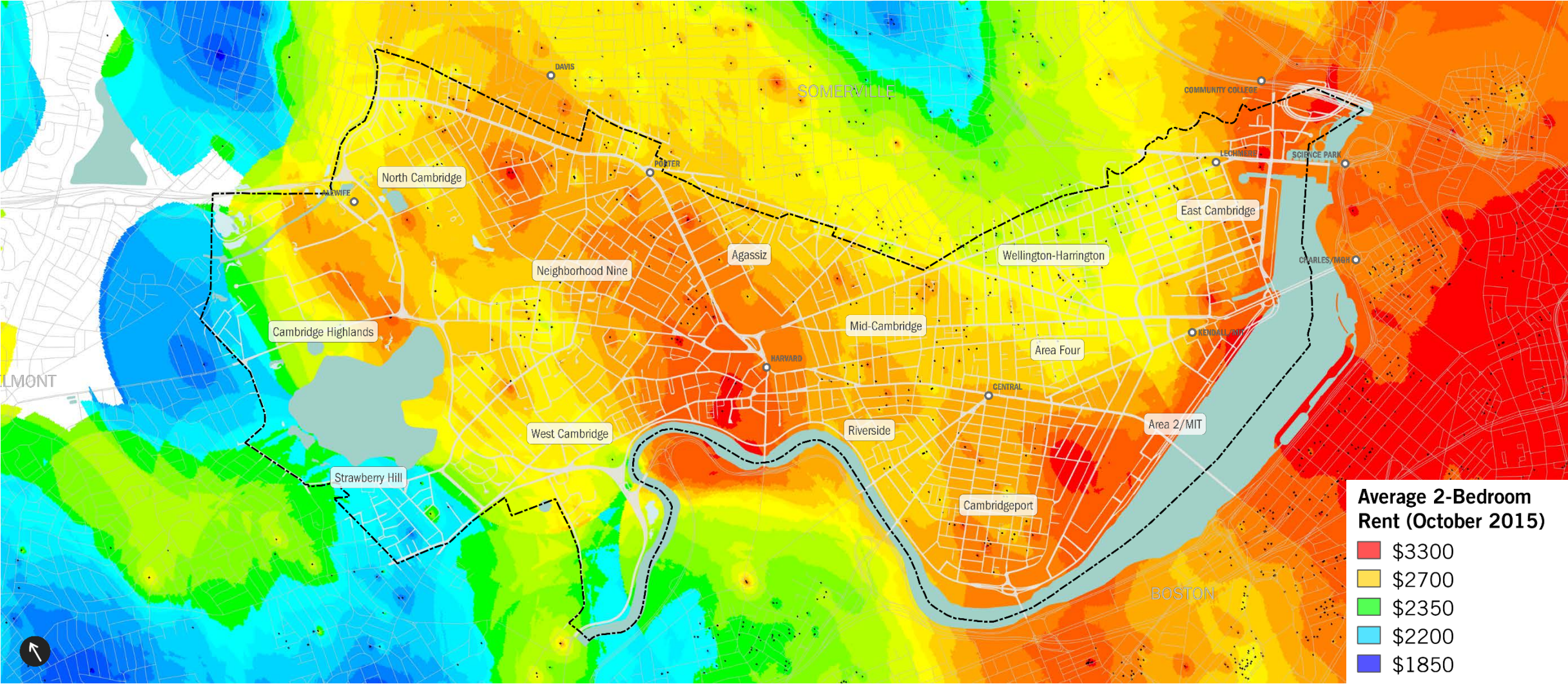
Surrounding Communities: Median Home Prices (2005=1)



Source: Zillow Home Value Index, December 2005–2015. Includes single-family, condominium, and cooperative.

Asking Rents

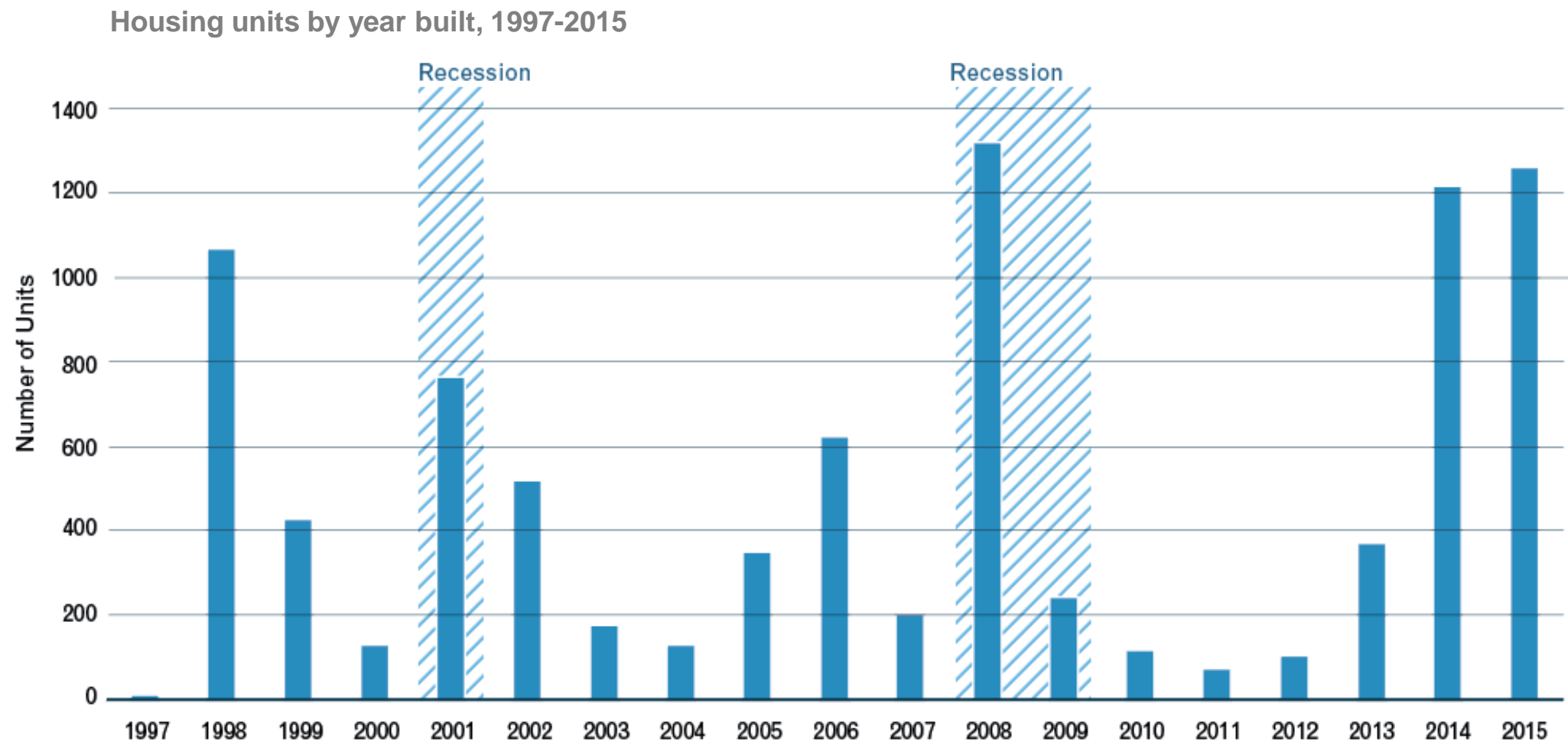
Rents for 2-bedroom apartments exceeded \$2500 across most of Cambridge as of 2015



Source: Padmapper listings, October 2015. Data is normalized to reflect 2-bedroom prices.

Housing Production

Housing production fluctuates according to real estate and macroeconomic cycles. Developers built more than 2000 new units in 2014 and 2015.

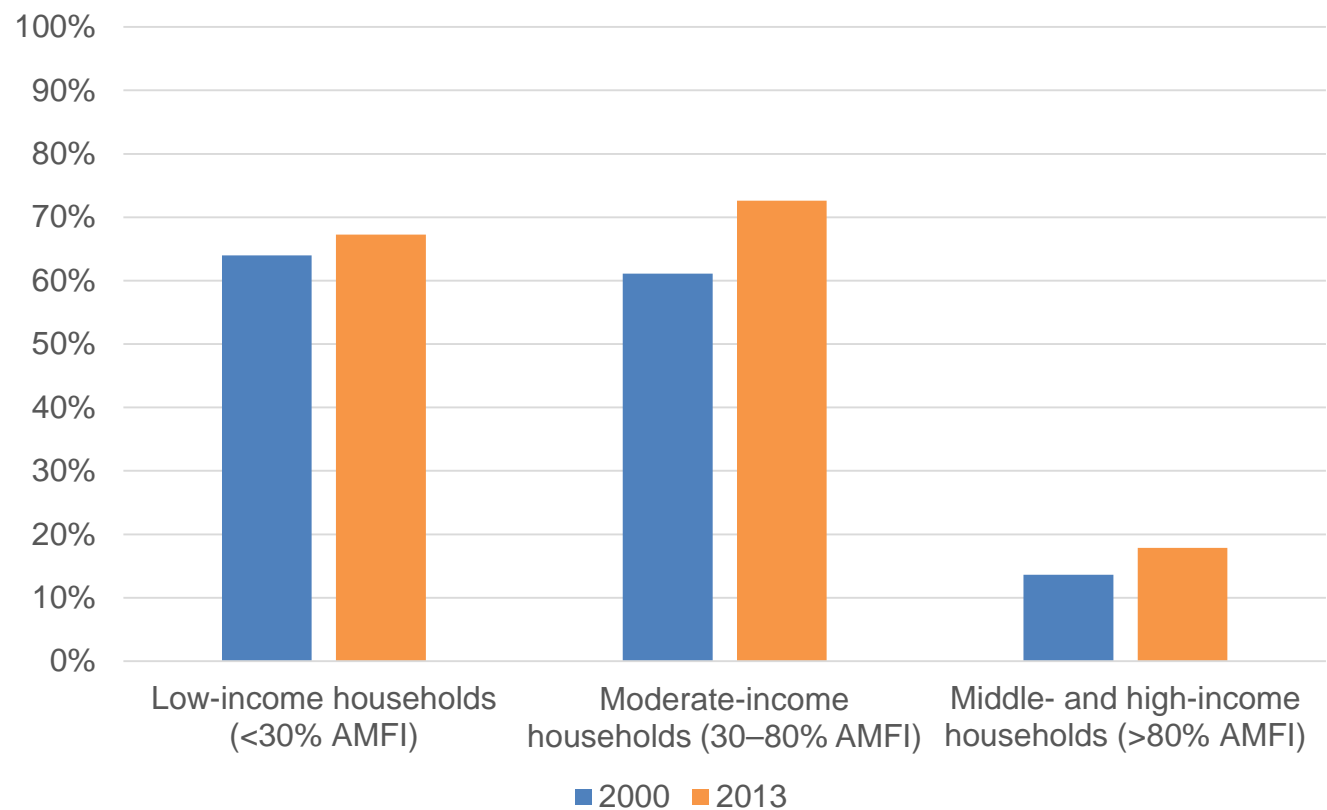


Source: City of Cambridge Development Log. Spikes in completed housing units occur at recessions as construction of projects initiated during the preceding bubble is completed.

Housing affordability

From 2000–2013, the proportion of households that are housing cost-burdened grew the most for households with moderate incomes.

Housing Cost Burden, 2000–2013

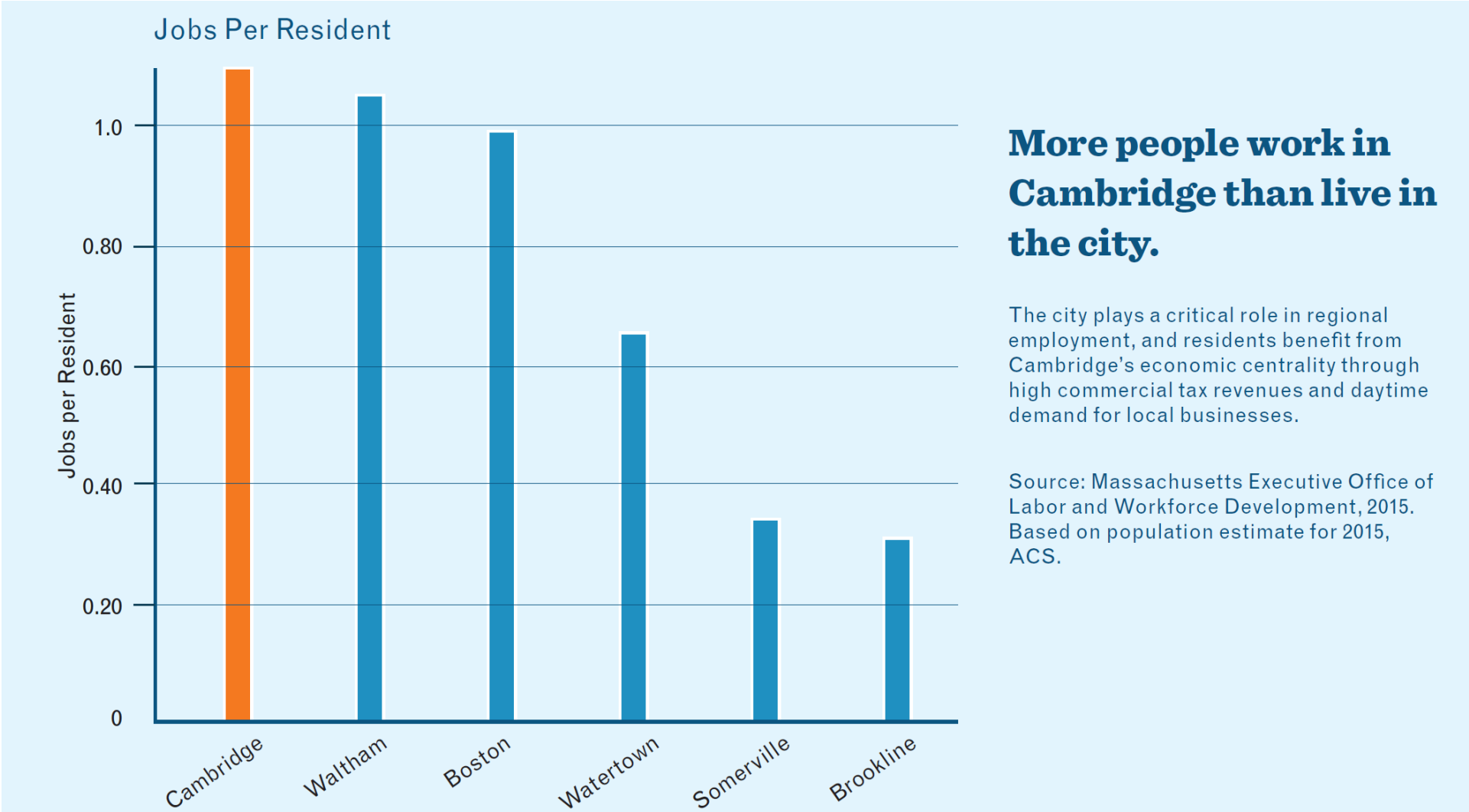


A household is “housing cost-burdened” when residents pay more than 30% of their household income toward the cost of housing. Moderate incomes here means household incomes that are 30% to 80% of the regional median household income for families (Area Median Family Income or AMFI)—between \$28,300 and \$75,500.

Source U.S. Department of Housing and Urban Development, CHAS data in 2000 and 2009–2013

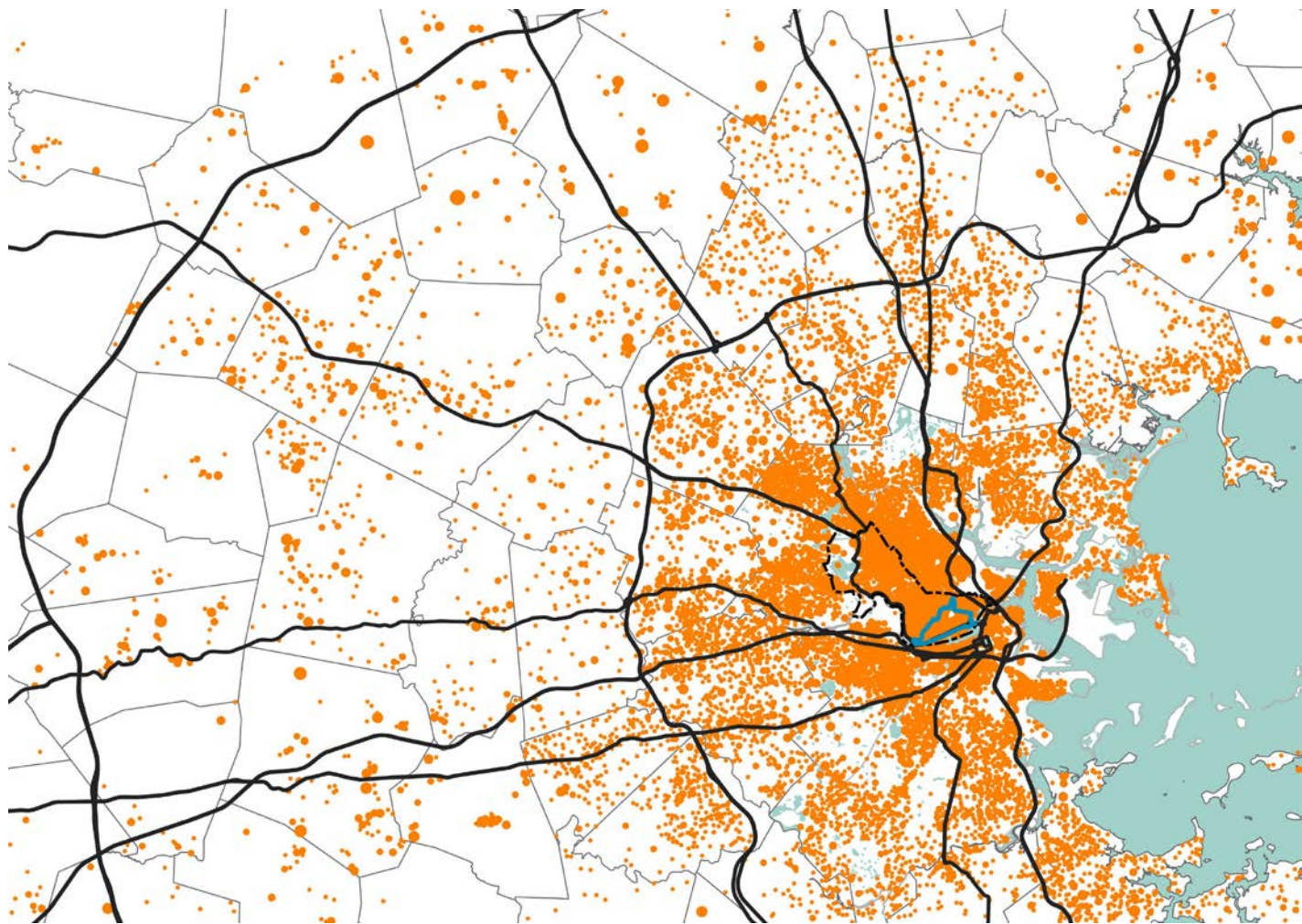
Employment and Residents

Not only a home to many, Cambridge is a jobs center within the region.



Kendall Square Commuter-shed

Cambridge is the largest origin for workers in Kendall Square, but the most workers in Kendall commute from beyond the city's borders.



12% of people working in Cambridge for their primary job also live in Cambridge

28% of people living in Cambridge also work in Cambridge for their primary job

Number of commuters to Kendall Square / MIT area in each Census Block

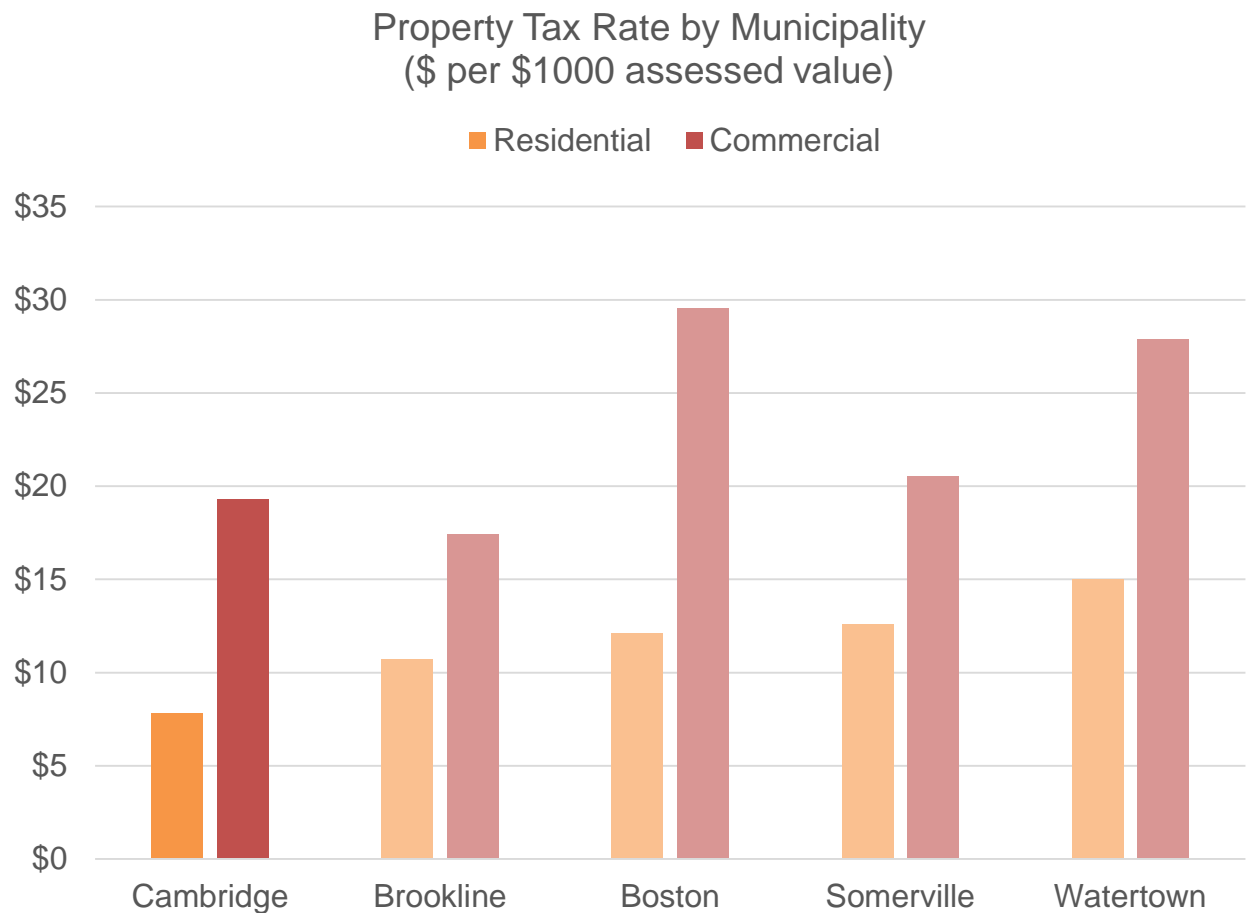


- Cambridge Boundary
- Kendall Square / MIT area boundary
- Highway
- Municipal Boundary

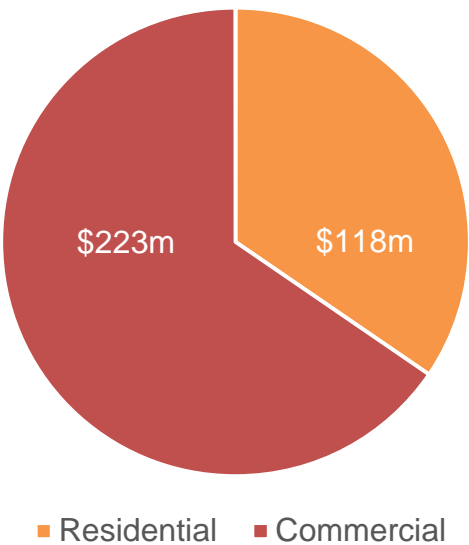
Source: US Census Bureau, Longitudinal Employer-Household Dynamics data, 2014; MassGIS.

Tax Rates and Revenues


Commercial taxes fund city services and reduce residential taxes.



Cambridge Property Tax Levy by Property Type

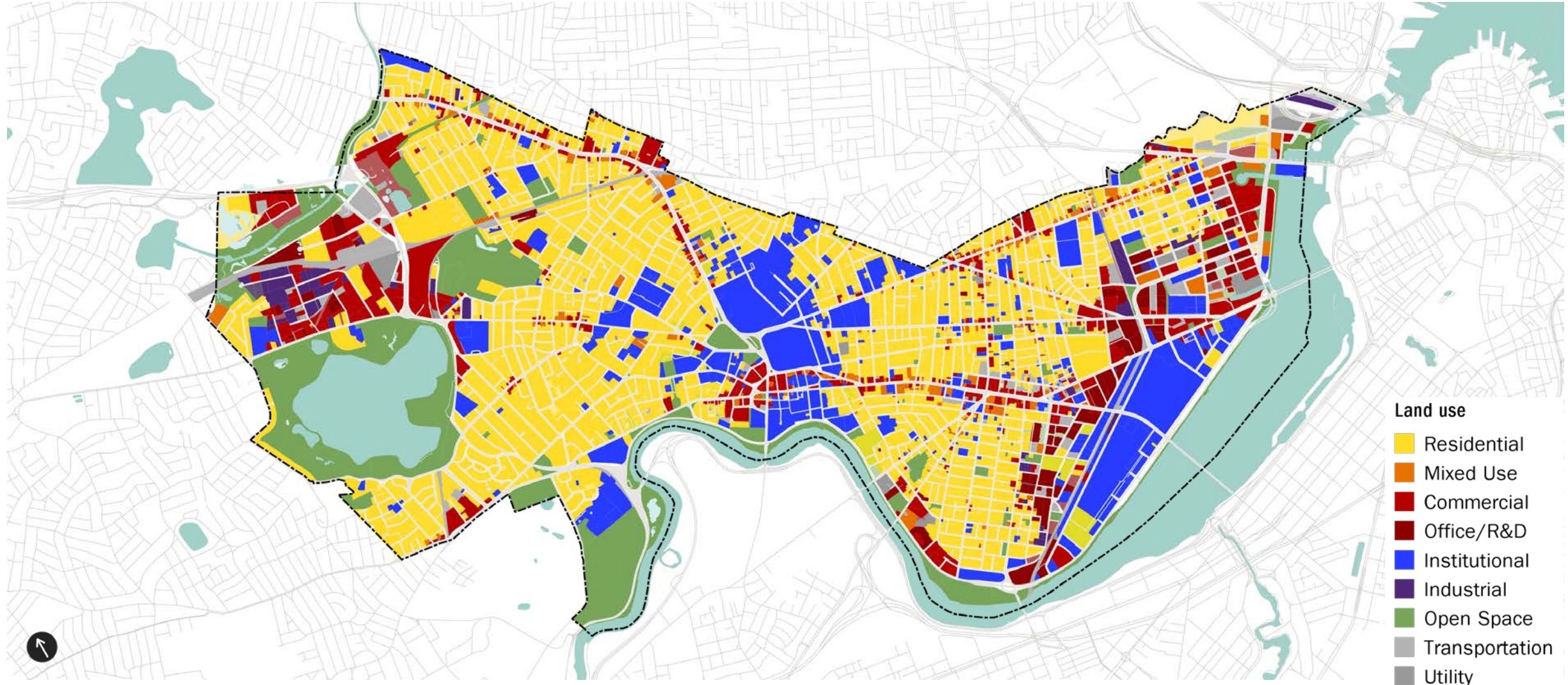


Source: City of Cambridge Budget, Fiscal Year 2016. Rates do not include residential exception.

- 
- Are there aspects of the projection data that surprised you? Why?
 - Of the issues we've presented, which require regional coordination more than local Cambridge policy responses?

How will corridors play a role in Cambridge's future?

Existing Land use



Source: Cambridge CDD

Nonresidential and noninstitutional land uses

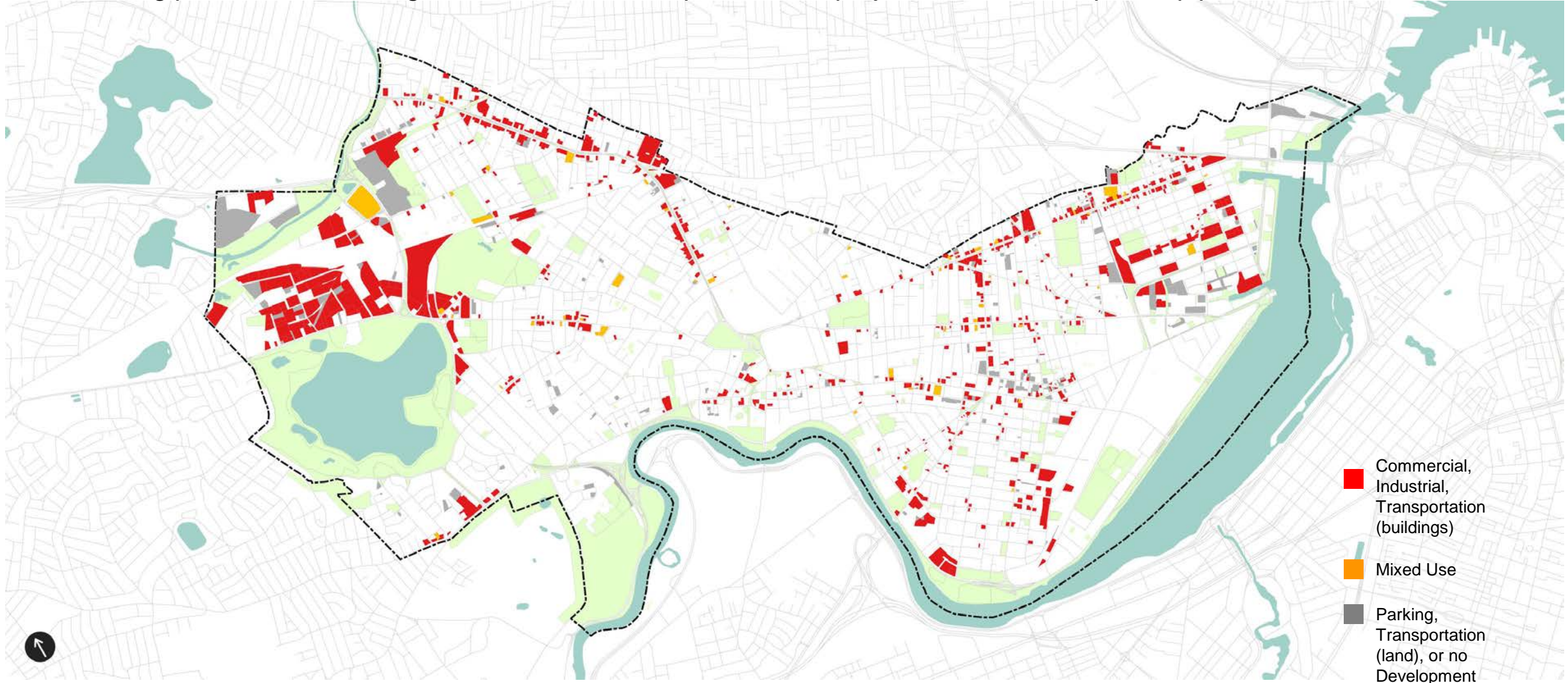
Not including parcels with buildings built after 1995 and parcels with projects in the development pipeline



Source: Cambridge CDD and Assessing Department. Pipeline as of December 2016.

Commercial and mixed use: FAR < 1.5 or height < 40 ft.

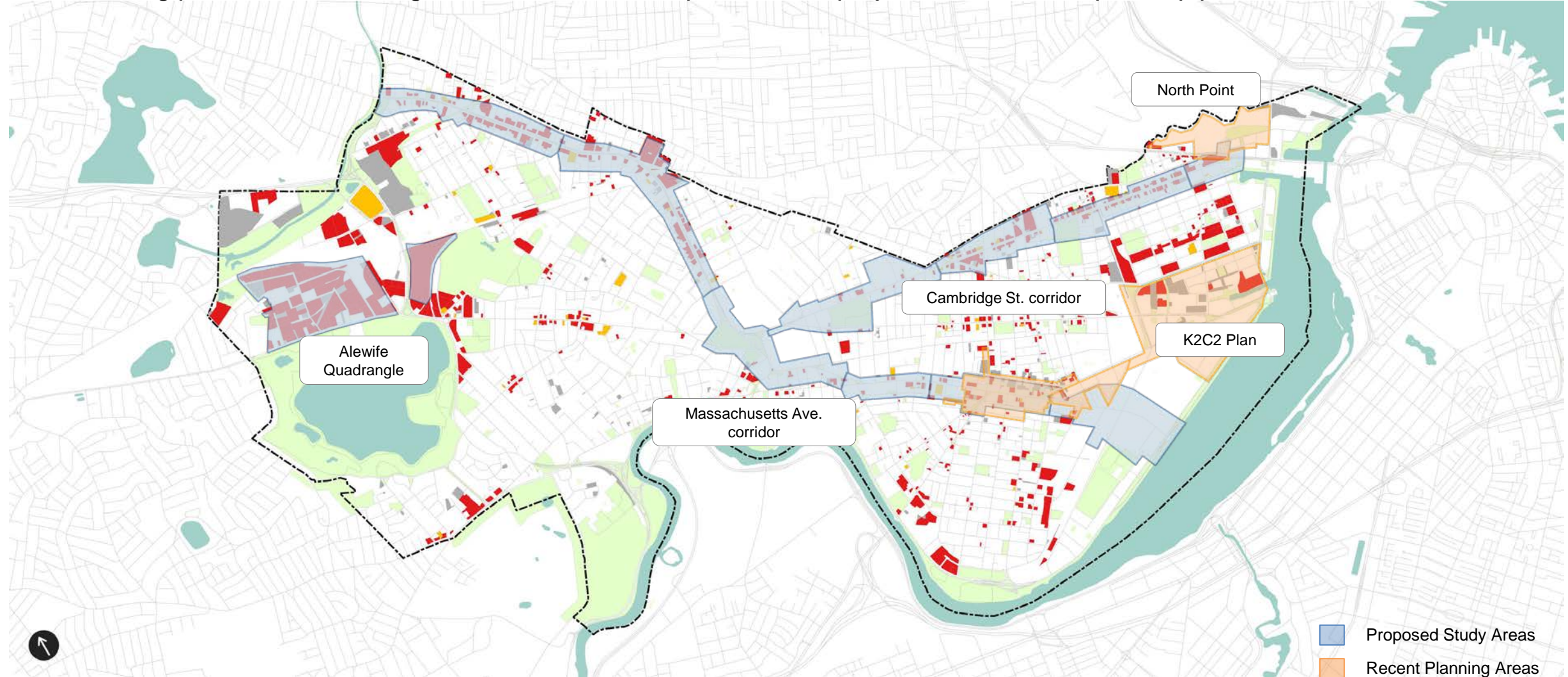
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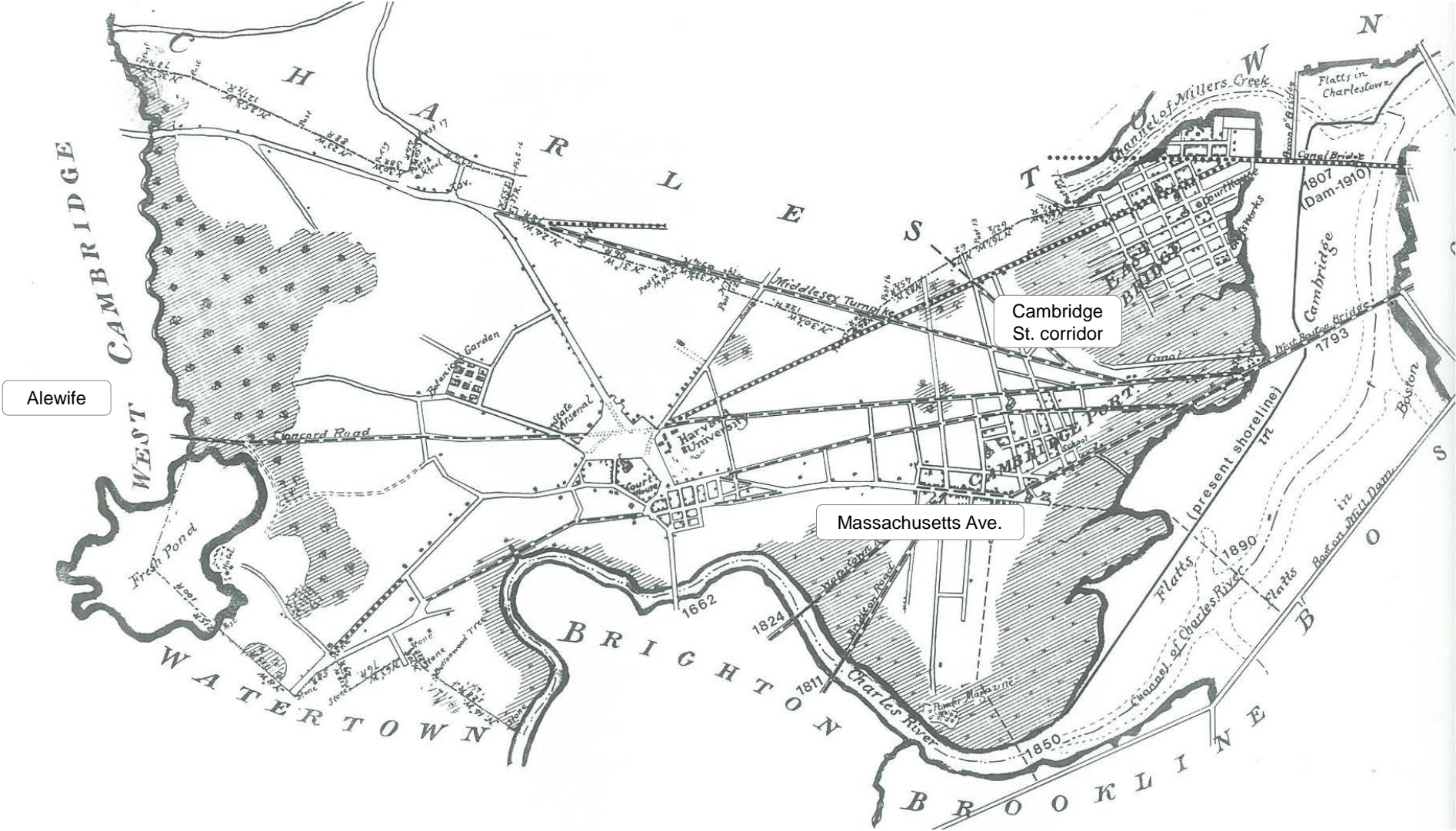
Not including parcels with buildings built after 1995 and parcels with projects in the development pipeline



Source: Cambridge CDD and Assessing Department. Pipeline as of December 2016.

Historic development

The corridors developed as some of the first and most important streets in Cambridge

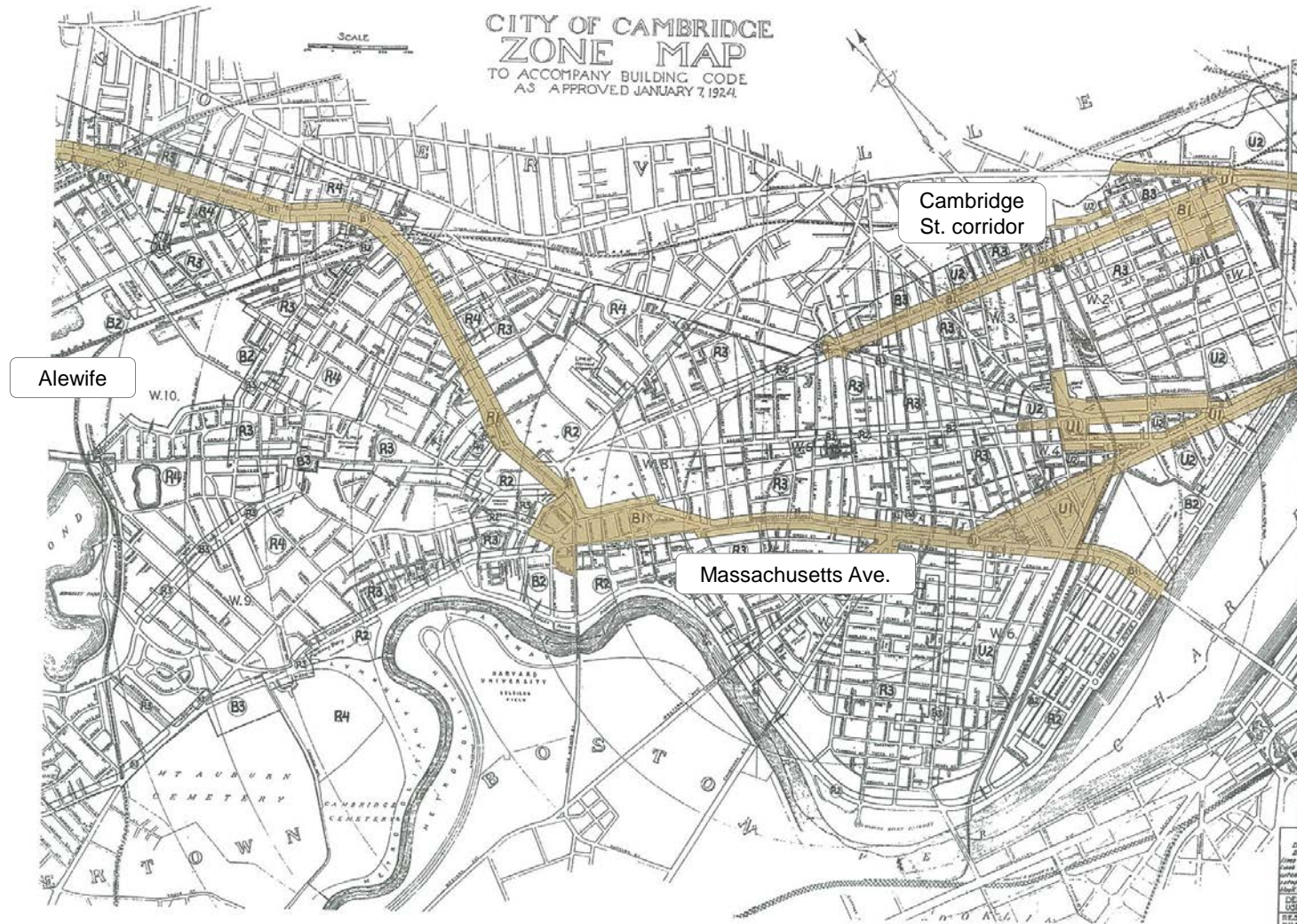


c. 1830



Historic development

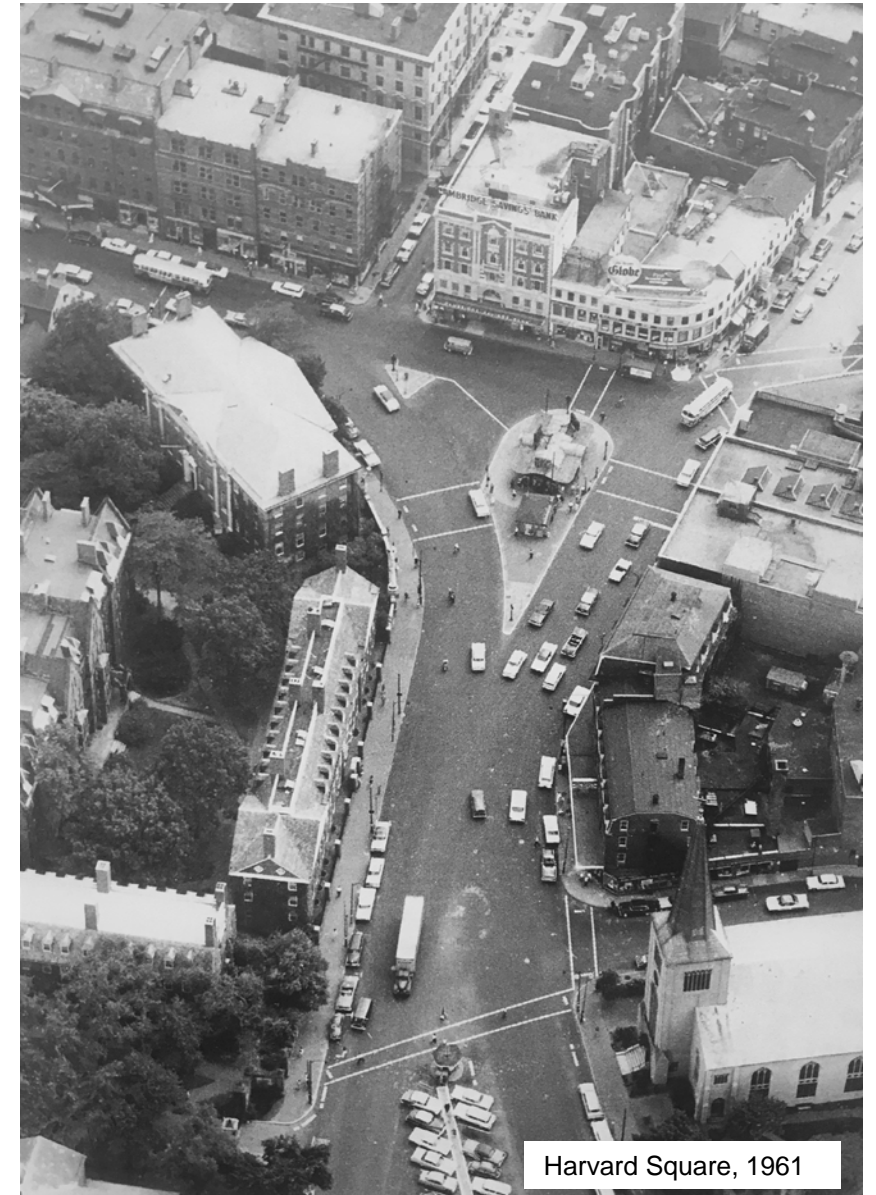
In the last century, the City has pushed development toward the corridors through regulations



1924: Cambridge's first zoning plan. Shaded areas represent a height limit of 100 ft.

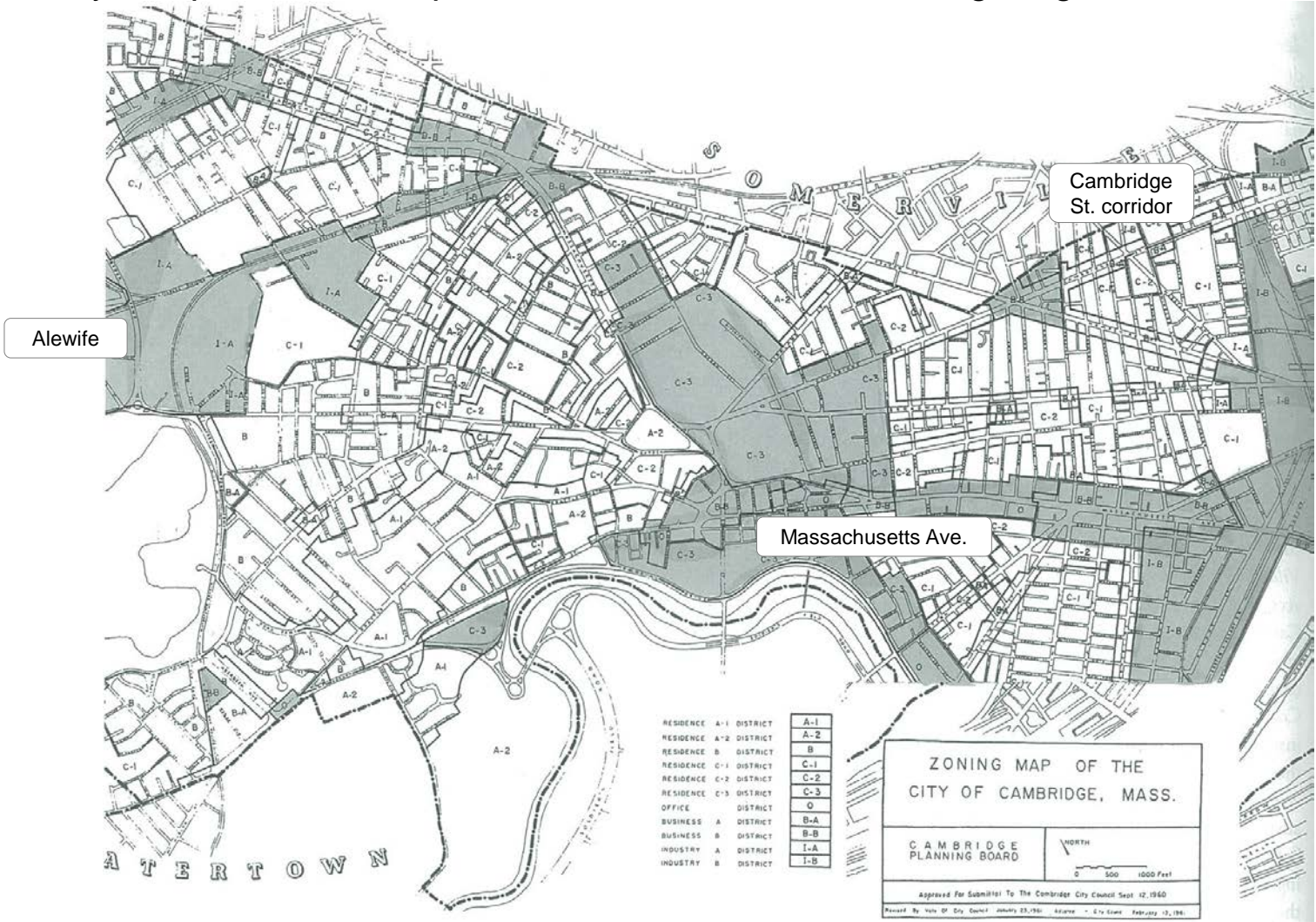
Historic development

Commercial corridors grew as centers of public life connecting residential neighborhoods.



Historic development

In the last century, the City has pushed development toward the corridors through regulations

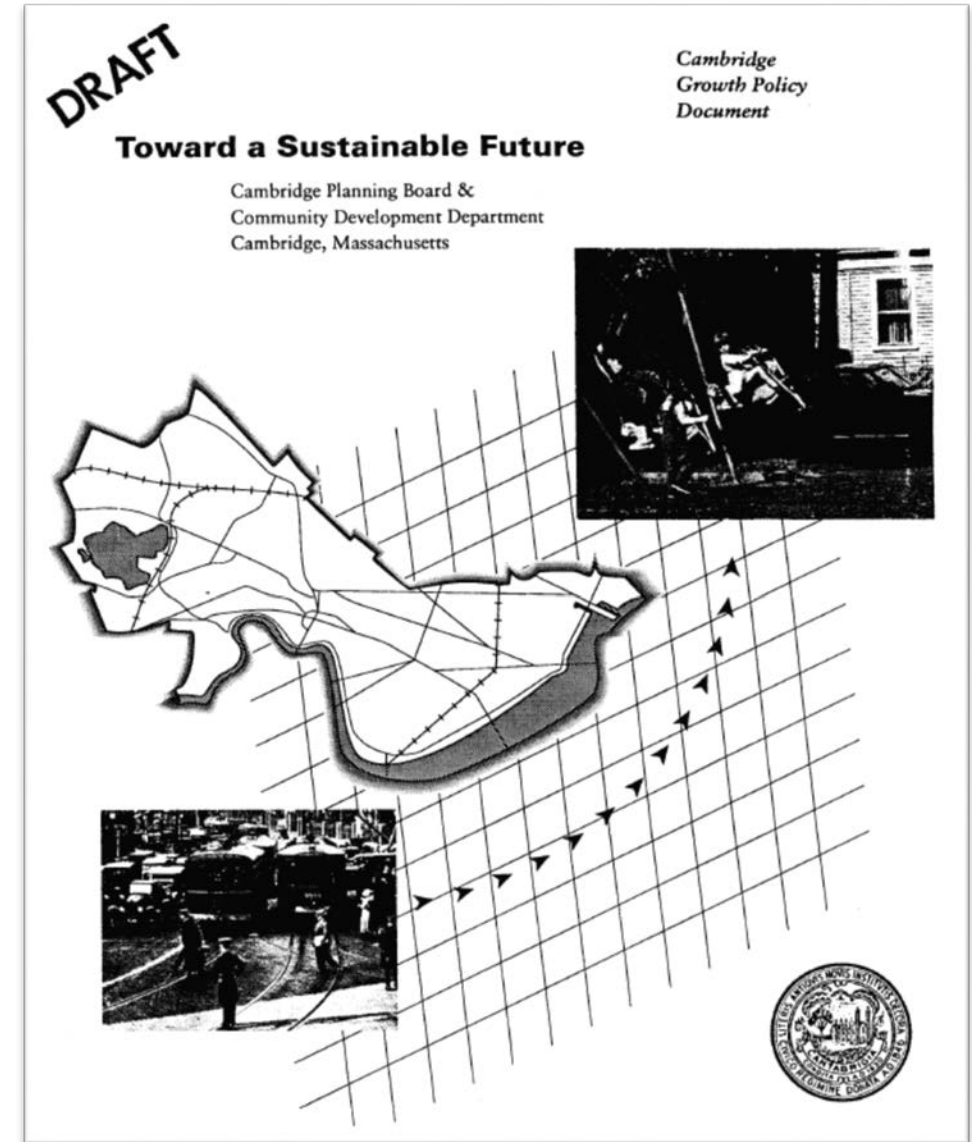


1962: Height limits abolished in shaded areas.

Growth Policy Report

The 1993 Growth Policy Report emphasized –

- Preservation of urban built character in residential neighborhoods
- The importance of retail clusters to the vitality of the city
- Role of urban design standards to ensure appropriate transitions between diversity of scales among neighborhoods
- Optimal location for highest density commercial uses near transit

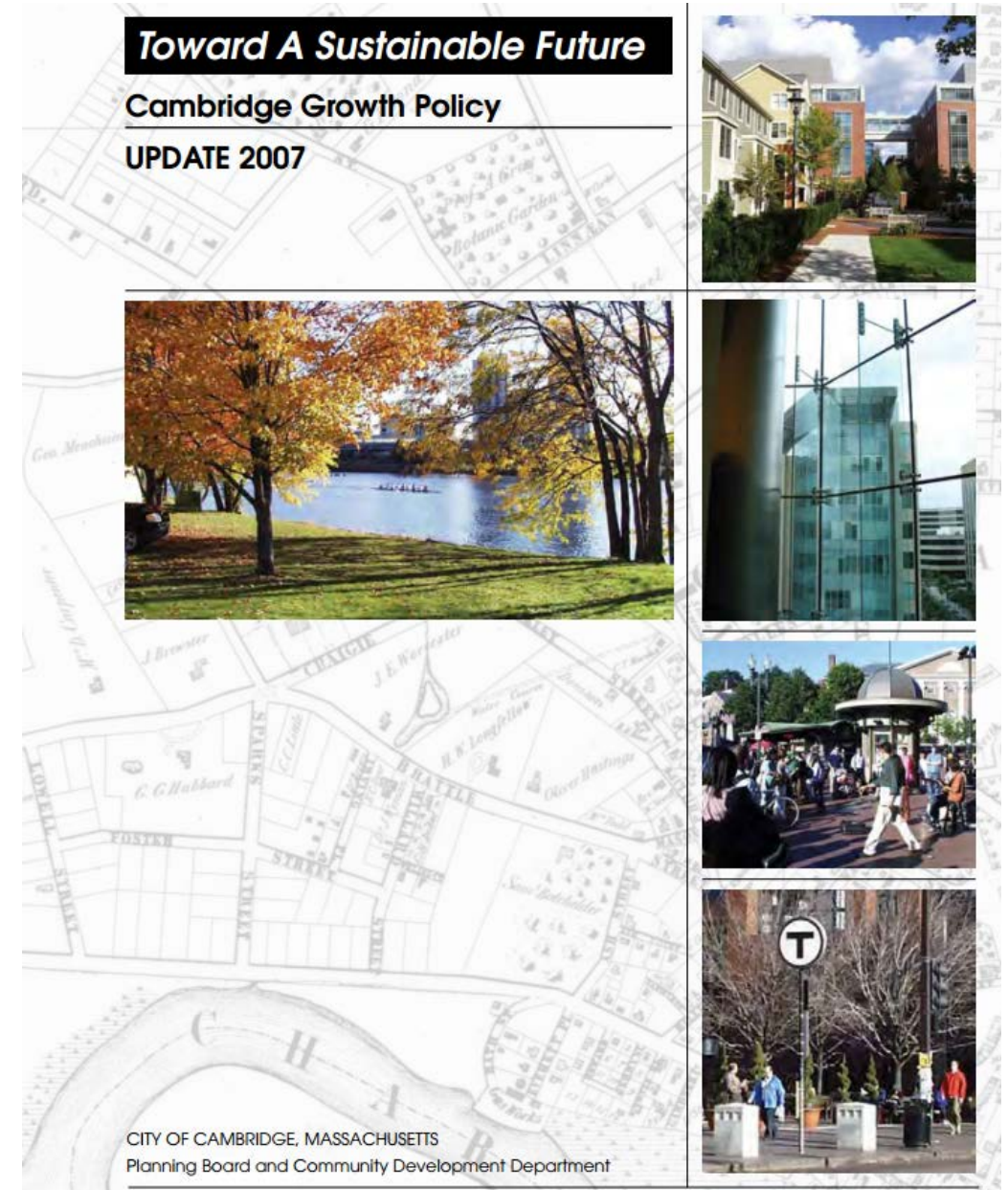


Source: Toward a Sustainable Future, City of Cambridge, 1993

Growth Policy Report update

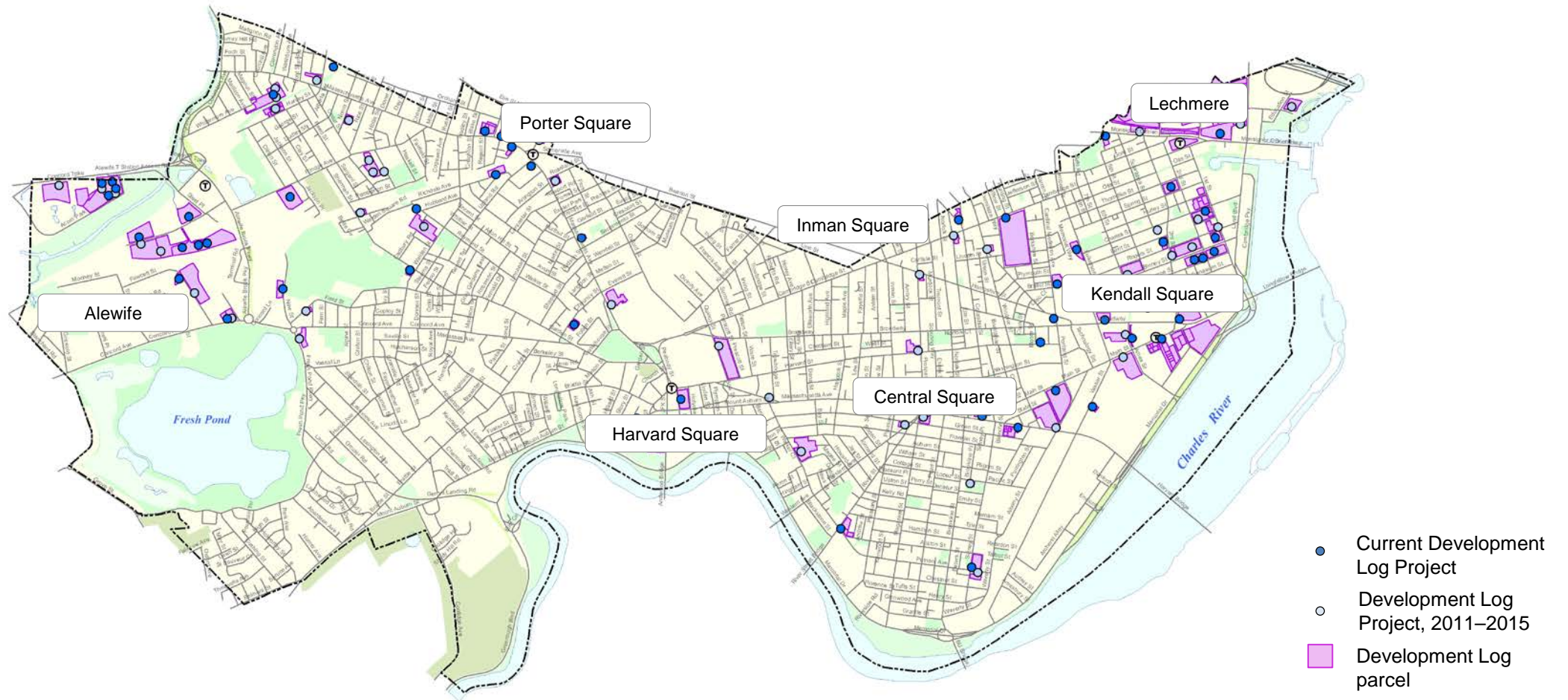
- **The 2007 Growth Policy Report update** recognized the need to adapt the pace of development to maintain the City's tax base so long as it does not overburden the City's infrastructure systems or disrupt the neighborhoods.
- It maintains that new retail should be directed towards Cambridge's existing squares and corridors.
- It also recognizes the role of urban design review to ensure that infill development is consistent with the character and scale of the existing neighborhood

Source: Towards a Sustainable Future, City of Cambridge, 2007



Development projects, 2011–2017

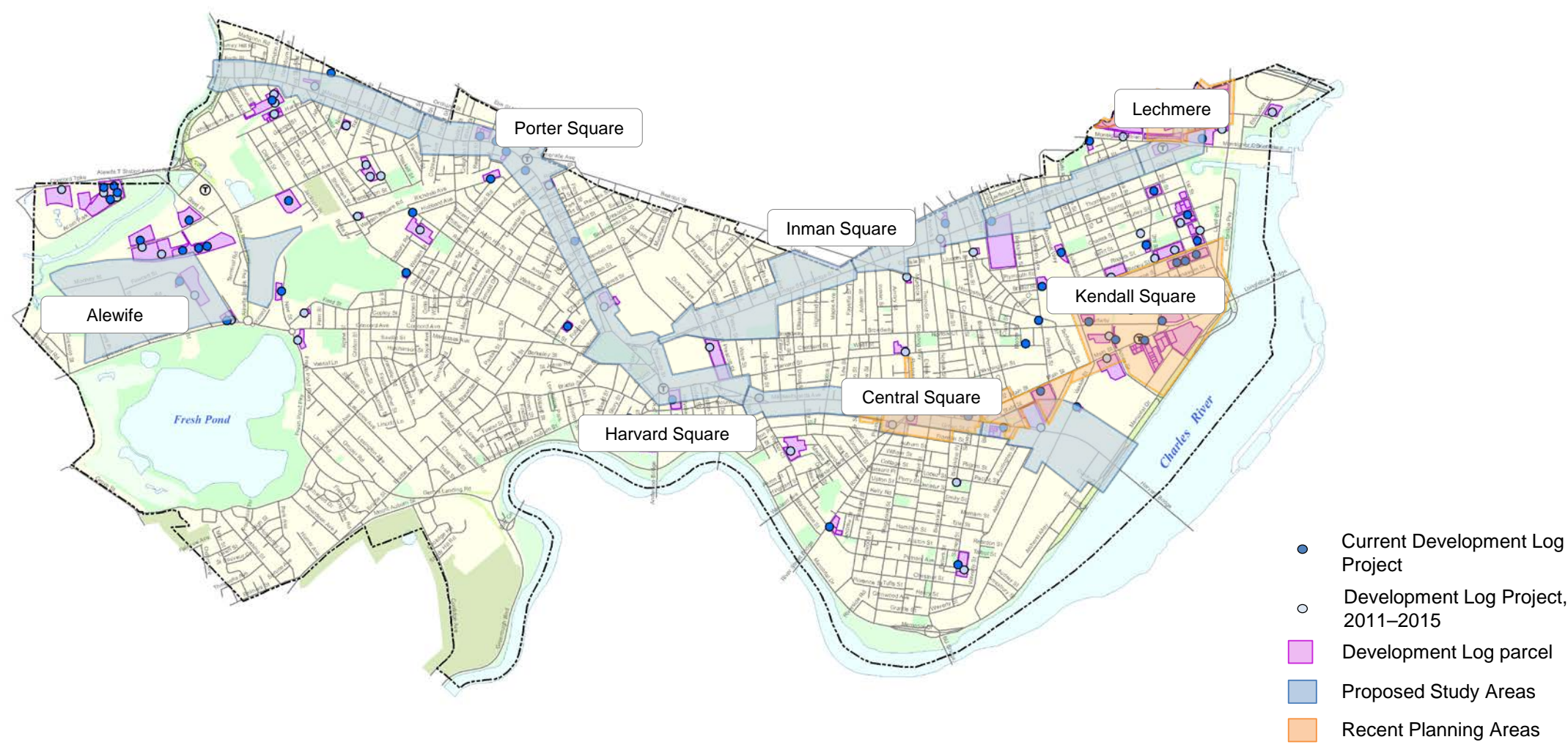
In addition to formerly industrial districts, the corridors absorb much of the new development in Cambridge



Source: CDD Development Log, 2011–2017

Development projects, 2011-2017

In addition to formerly industrial districts, the corridors absorb much of the new development in Cambridge



Source: CDD Development Log, 2011–2017

Public realm

Commercial corridors structure patterns of community interaction and everyday life through intersection of jobs, housing, transportation nodes, retail, institutions and public spaces.



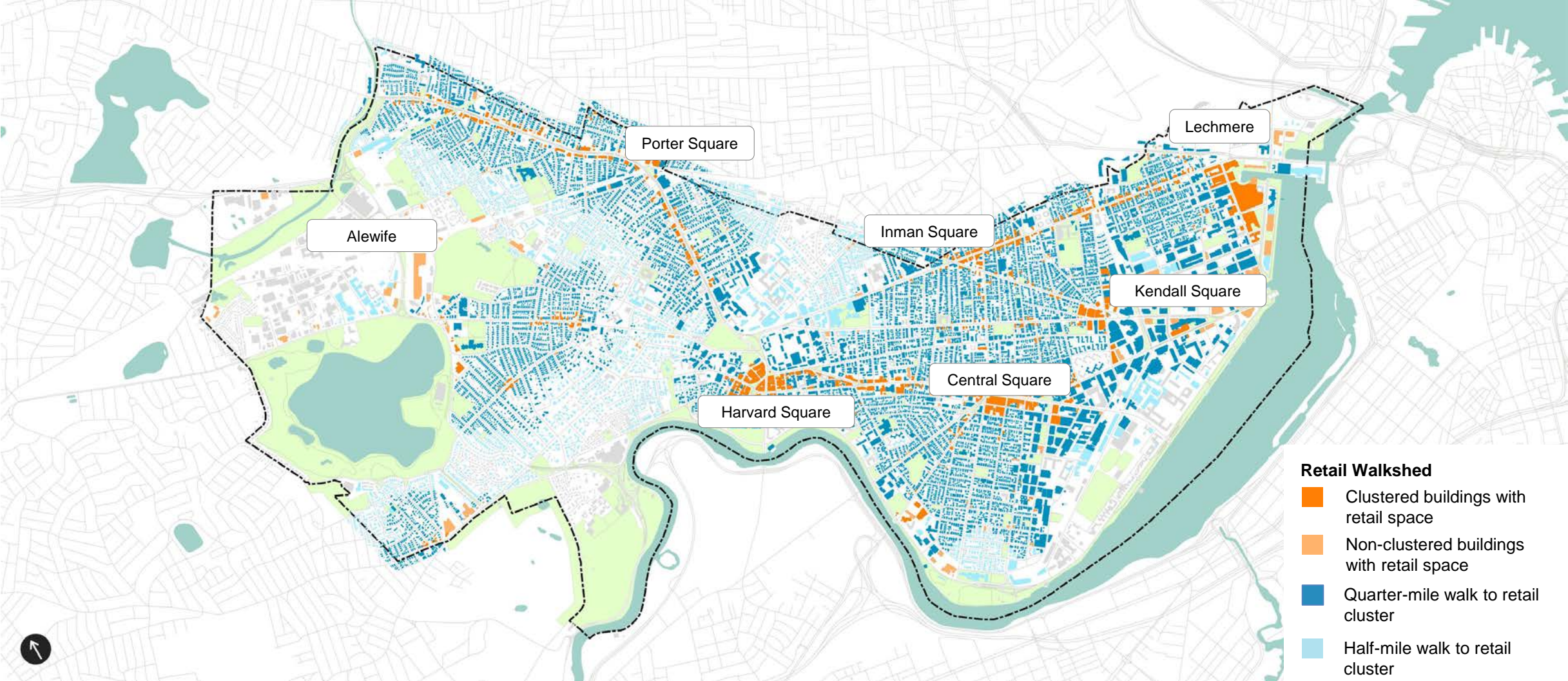
Mass Ave at Prospect, Central Square



Mass Ave at JFK and Brattle, Harvard Square

Retail cluster walkshed

The majority of retail clusters and nearby buildings are along the commercial corridors.



- Retail Walkshed**
- Clustered buildings with retail space
 - Non-clustered buildings with retail space
 - Quarter-mile walk to retail cluster
 - Half-mile walk to retail cluster

Source: City of Cambridge CDD, Envision Cambridge Analysis. Retail clusters are any group of five or more buildings with retail space without a distance of 400 ft. or greater between those buildings. List of land use codes used to determine retail space available upon request.

Street Wall

Street wall helps define the public realm and creates a cohesive urban form.



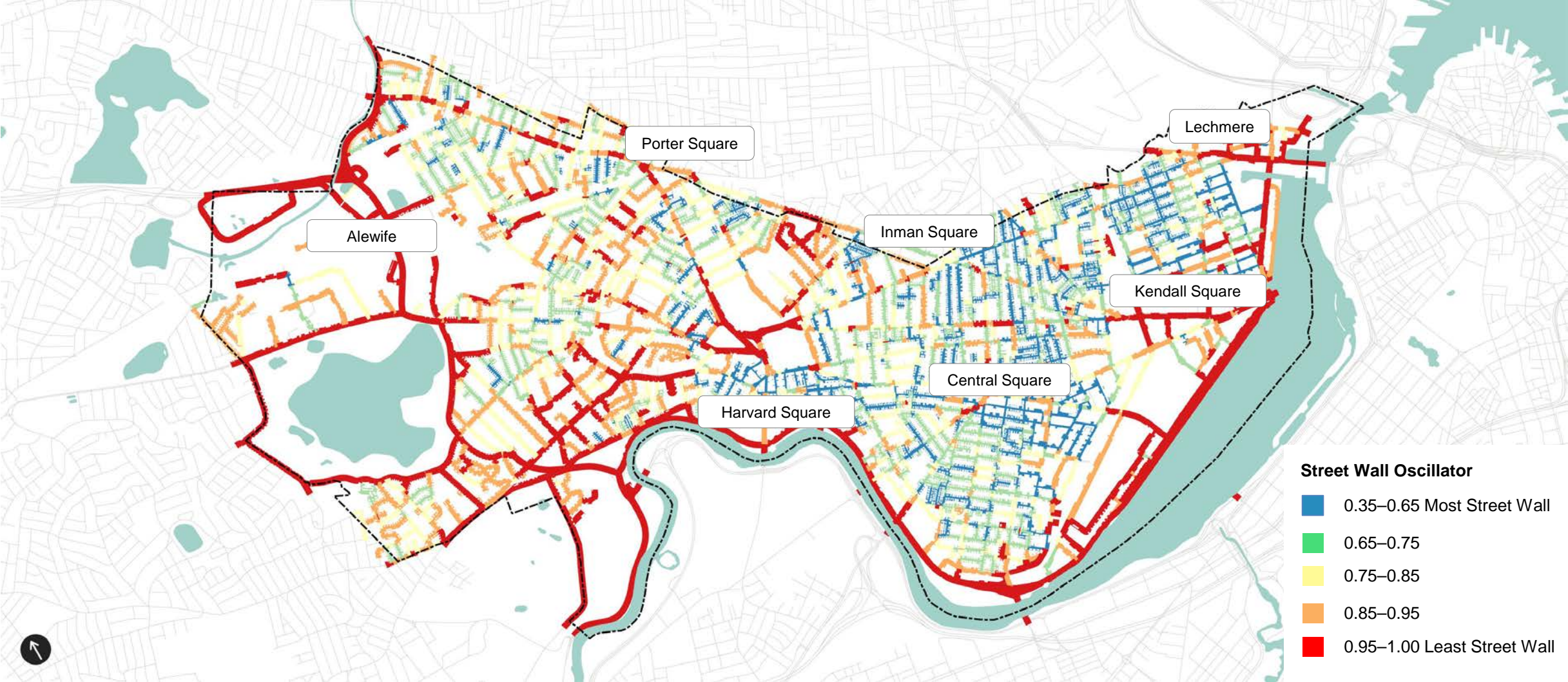
Buildings on Church Street in Harvard Square frame the street like a wall.



Buildings along Alewife Brook Parkway sit along the street, but do not form a cohesive form enclosing the street.

Street Wall

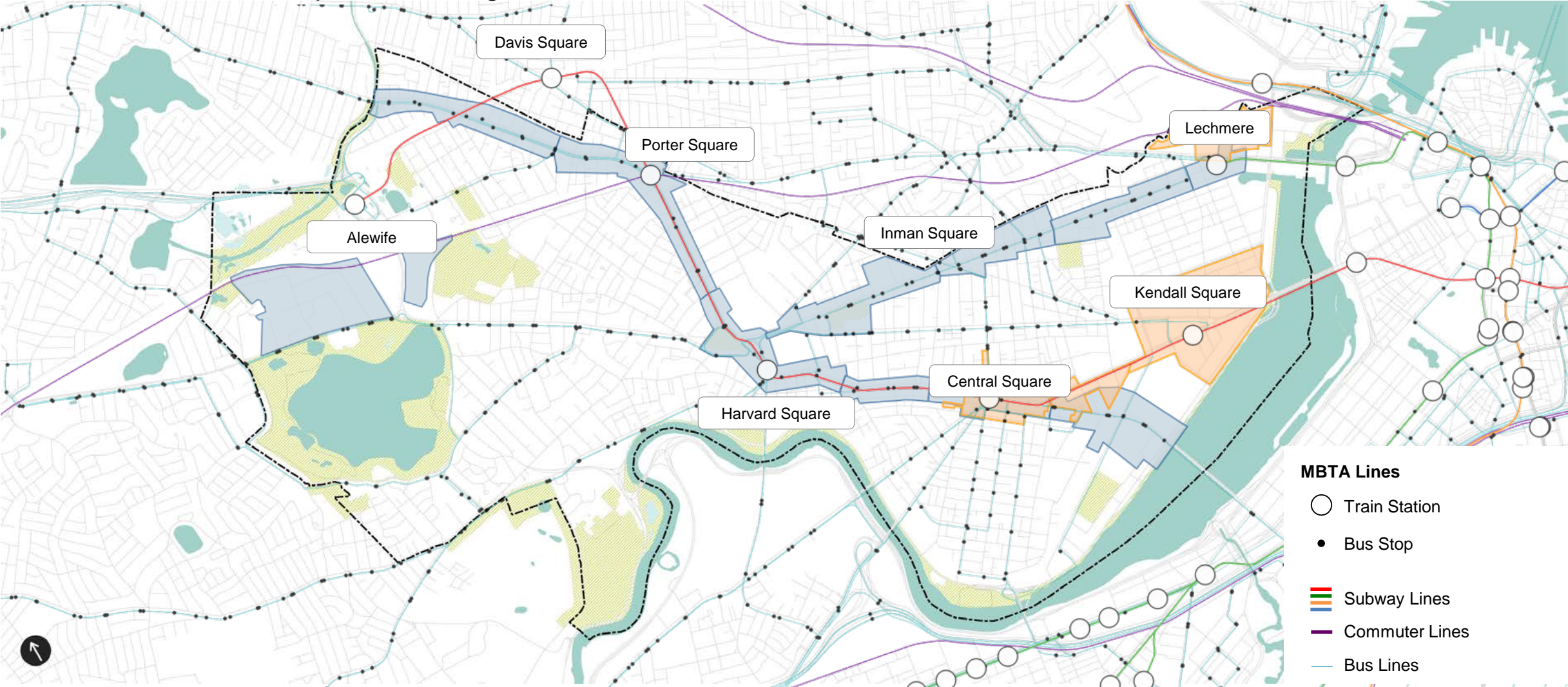
Commercial corridors have well-defined street wall (except northern Mass Ave).



Source: CDD GIS data, Envision Cambridge Analysis.

Public transit

Mass transit lines and stops in Cambridge are oriented toward the corridors



Source: MassGIS



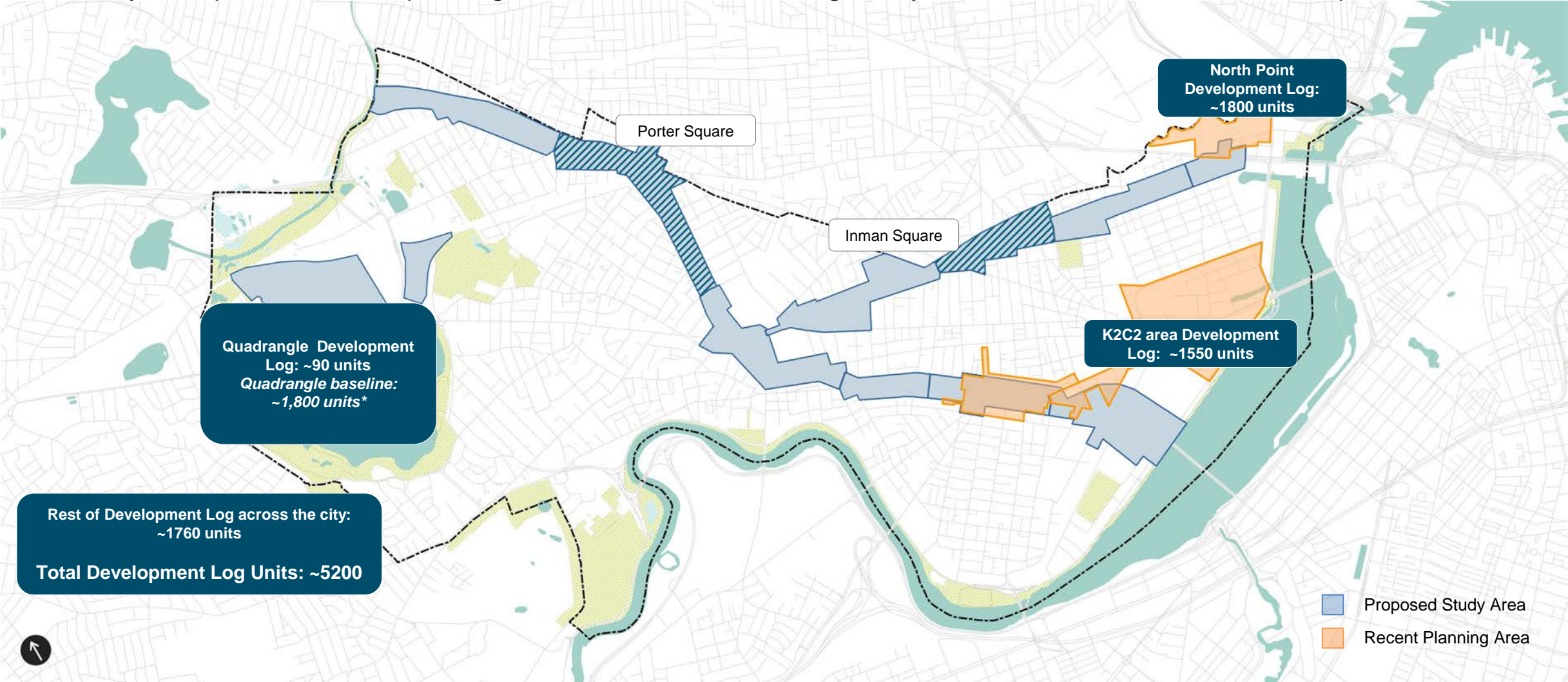
What role could the corridors play in...

- Providing public civic spaces for the community to gather
- Helping people choose sustainable transportation modes
- Supporting local, independent retail
- Creating employment and entrepreneurship opportunities
- Helping meet the City's housing needs

How might corridors respond to growth pressures?

Study Areas

Initial analysis of potential development given current market and regulatory conditions at Porter and Inman squares.



Source: City of Cambridge CDD Development Log; Envision Cambridge Analysis; Quadrangle baseline is based on the existing zoning and estimated 60% buildout by 2030, and is not included in total. Total number reflects permitted projects in specified areas and all development log projects in unspecified as of December 2016.

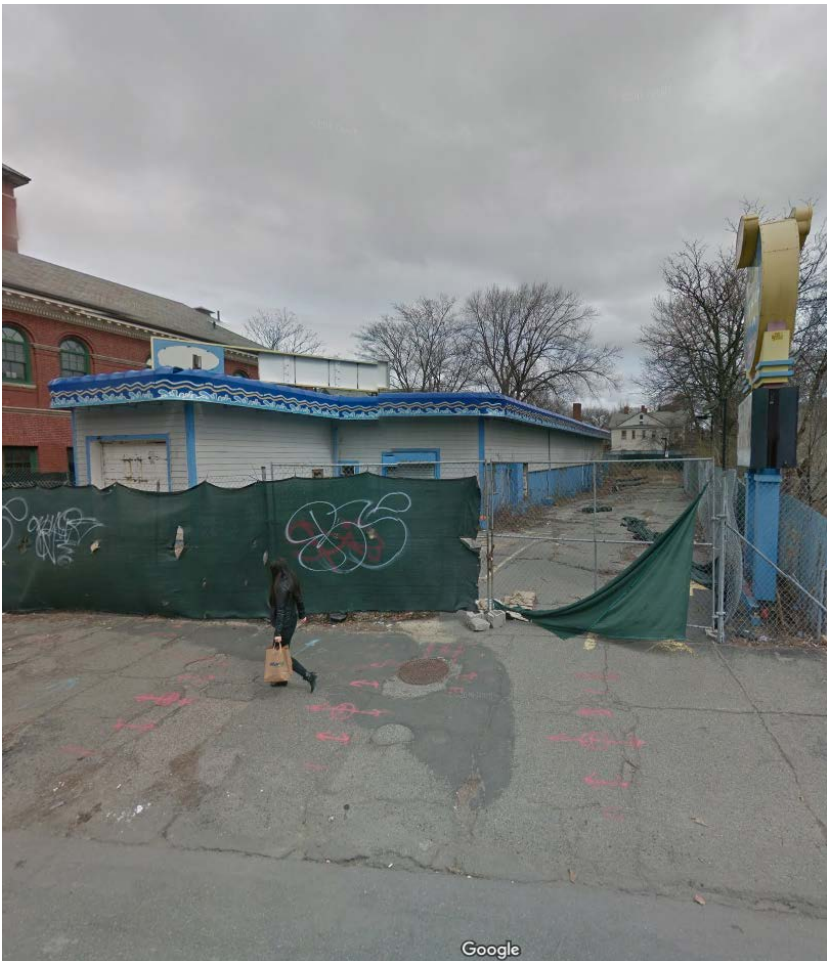
Porter Square: Representative Parcels



Least Likely to Be Developed



Likely to be Developed



Most Likely to be Developed

Porter Square Corridor






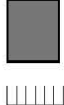


- Most Likely to Transform
- Less Likely to Transform
- Study Boundary



Corridor building types and capacity


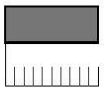
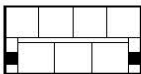
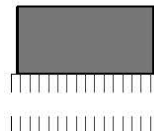

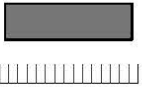
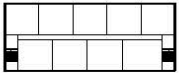
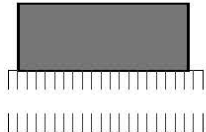

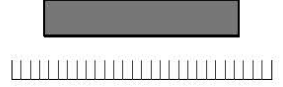
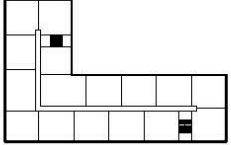
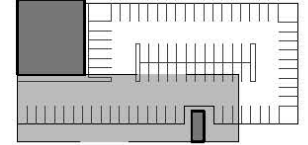
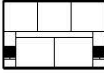
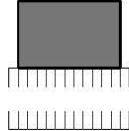
Buildings Under 40'

Typical Upper Floor Ground Floor

 40' x 50' Residential 2 Units per Floor	 Three Floors / 6 Parking Spots 6 Units / No Retail
 50' x 80' Retail w/Residential 1-2 Units per Floor	 Three Floors / 7 Parking Spots 3 Units / 3,280sf Retail
 50' x 60' Retail w/Residential 1-2 Units per Floor	 Three Floors / 7 Parking Spots 3 Units / 2,580sf Retail
 30' x 83' Retail w/Residential 1-2 Units per Floor	 Three Floors / 7 Parking Spots 3 Units / 1,914sf Retail

Buildings 40'–70'

Typical Upper Floor Ground Floor Typical Upper Floor Ground Floor

 35' x 90' Retail w/Residential 2 Units per Floor	 4+1 Floors / 10 Parking Spots 8 Units / 2,310sf Retail	 65' x 132' Retail w/Residential 7 Units per Floor	 Three Floors / 32 Parking Spots 3 Units / 7,740sf Retail
 35' x 123' Retail w/Residential 3 Units per Floor	 4+1 Floors / 15 Parking Spots 12 Units / 3,465sf Retail	 65' x 165' Retail w/Residential 9 Units per Floor	 Three Floors / 42 Parking Spots 3 Units / 9,885sf Retail
 35' x 190' Retail w/Residential 5 Units per Floor	 4+1 Floors / 28 Parking Spots 20 Units / 5,810sf Retail	 138' x 215' L Residential 16 Units per Floor	 138' x 215' L Residential 80 Units / 82 Parking Spots
 65' x 100' Retail w/Residential 5 Units per Floor	 4+1 Floors / 26 Parking Spots 20 Units / 5,660sf Retail		

Porter Square Corridor

- Most Likely to Transform
- Less Likely to Transform
- Study Boundary



Approximately 270 units and 98,000 SF of retail generated by optimal stick-built construction

Inman Representative Parcels



Least Likely to Be Developed



Likely to be Developed



Most Likely to be Developed

Inman Square Corridor

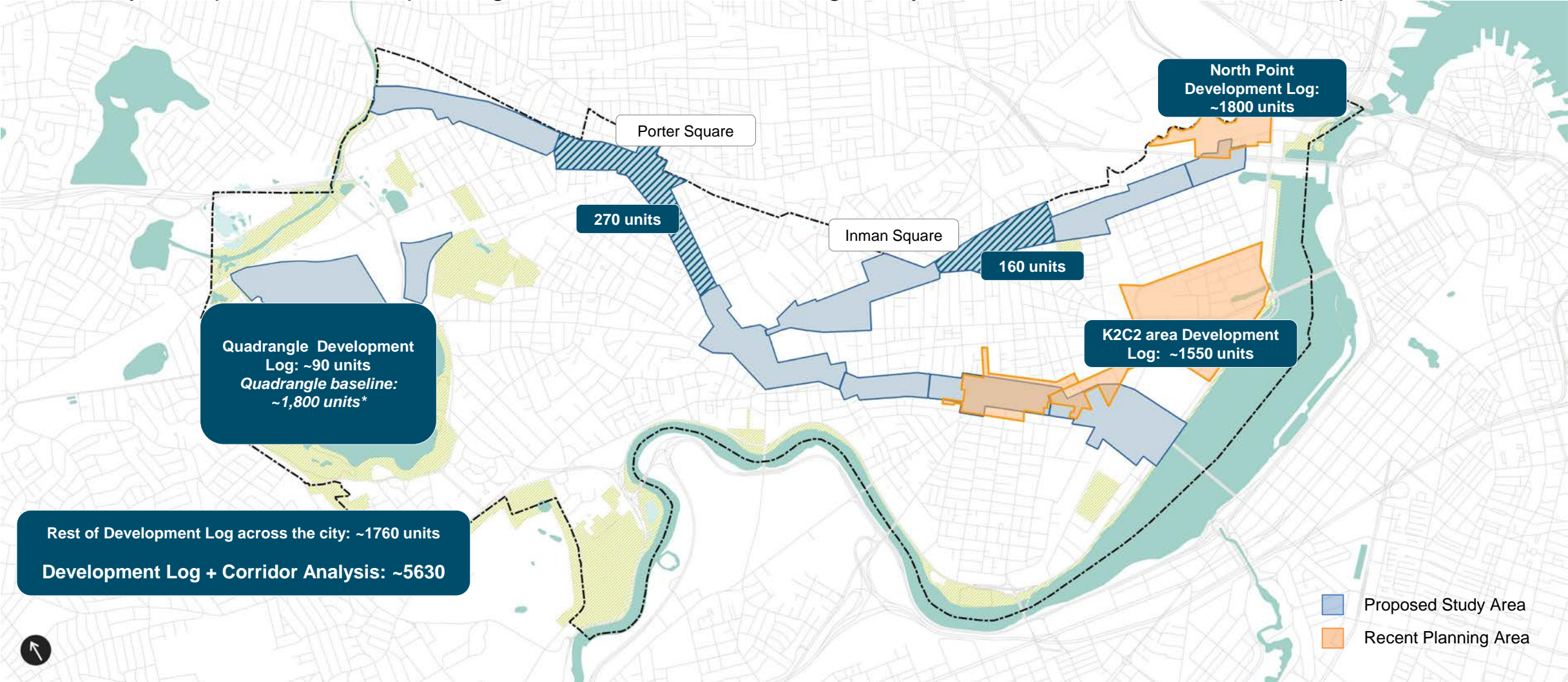
- Most Likely to Transform
- Less Likely to Transform
- Study Boundary



Approximately 160 units and 79,800 SF of retail generated by optimal stick-built construction

Study Areas

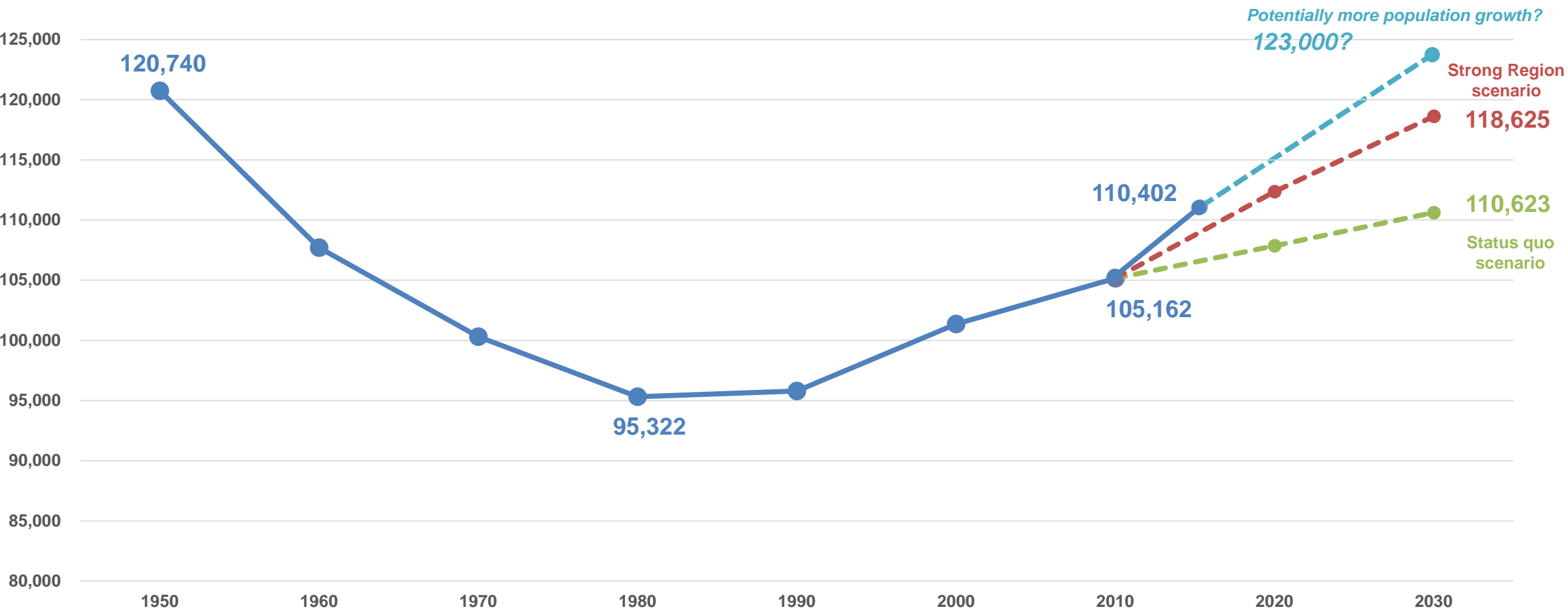
Initial analysis of potential development given current market and regulatory conditions at Porter and Inman squares.



Source: City of Cambridge CDD Development Log; Envision Cambridge Analysis; Quadrangle baseline is based on the existing zoning and estimated 60% buildout by 2030. Porter and Inman estimates based on optimal stick-build construction on parcels that are likely to be developed. Total number reflects permitted projects in specified areas and all development log projects in unspecified as of December 2016.

Citywide Population Growth

Cambridge is *possibly* on track for growth exceeding MAPC projections.



Source: 2014 MAPC Population Growth Projections; US Census, 1950–2010; Census Annual Population Estimates, 2015; Envision Cambridge Analysis

Housing deficit based on projections

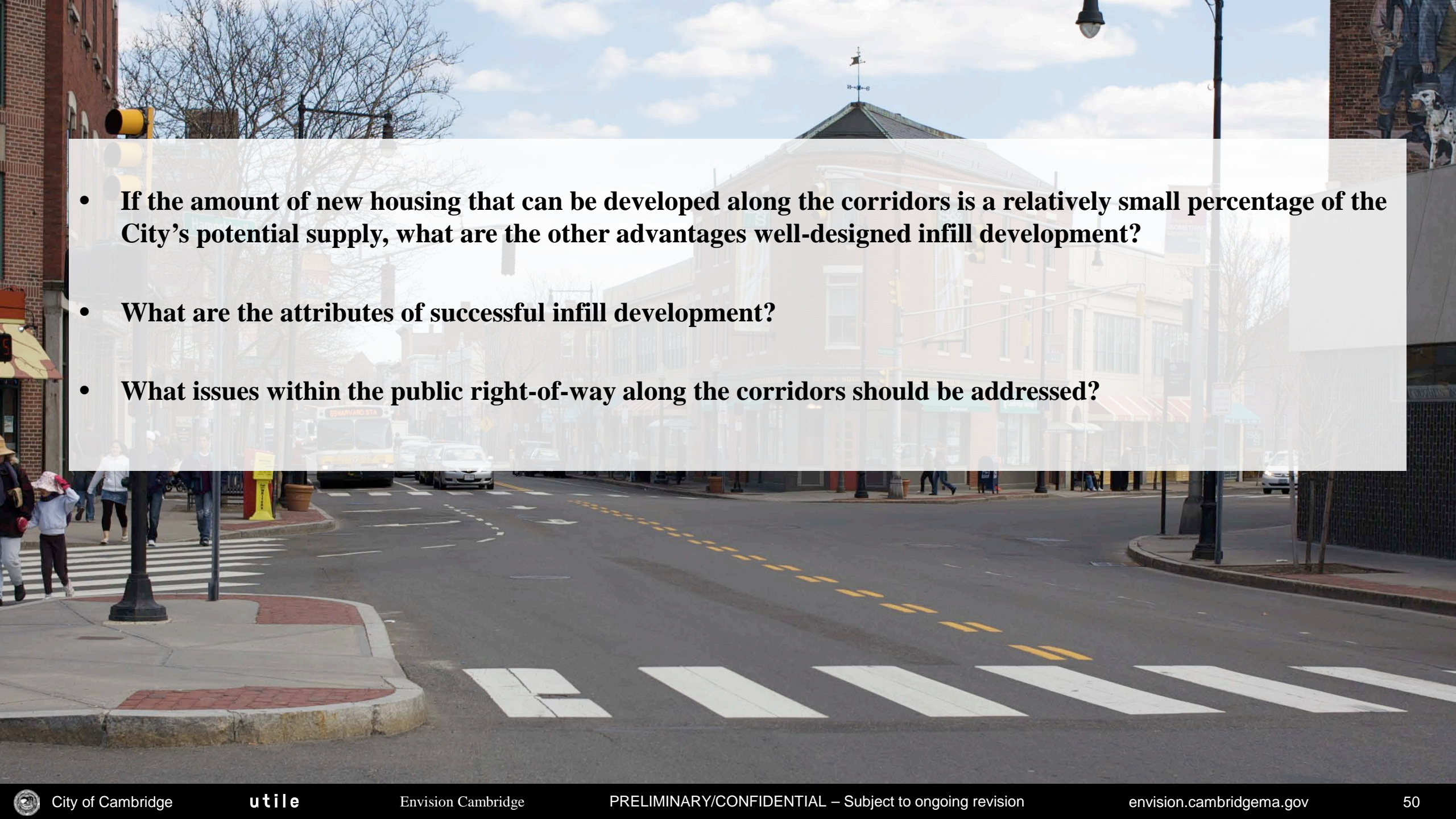
Keeping up with projected population growth is not the main driver of development on the corridors

Population forecast (2030 horizon)	Current (2010 pop count)	Some growth (2030 Status Quo)	Mid growth (2030 Stronger Region)	High growth (2030 when extrapolating current estimates)
Total population	105,162	110,623	118,625	123,000
Pop change 2010 - 2030		5,461	13,463	18,208

Area assumptions	
Avg household size	1.75 persons
Avg net household area	1,000 SF

Residential forecast				
New Housing Demand (A)		3,121	7,693	10,405
Housing stock added since 2010 and in development pipeline (B)		8,486	8,486	8,486
Housing Deficit (C = A – B)		0	0	1,919
Total housing GSF needed (C x 1,000)				1,096,571 SF

Source: 2014 MAPC Population Growth Projections; US Decennial Census, UMass Donahue, Utile Analysis, CDD development log. *Estimate of full buildout, not adjusted for market realities

- 
- A photograph of a city street intersection, likely in Cambridge, Massachusetts, featuring brick buildings, a crosswalk, and a semi-transparent white text box containing three bullet points.
- **If the amount of new housing that can be developed along the corridors is a relatively small percentage of the City’s potential supply, what are the other advantages well-designed infill development?**
 - **What are the attributes of successful infill development?**
 - **What issues within the public right-of-way along the corridors should be addressed?**