

Undercount of Boston's Population: City of Boston Research Division presentation to U.S. Census Bureau

November 18. 2024



City of Boston
Planning Department

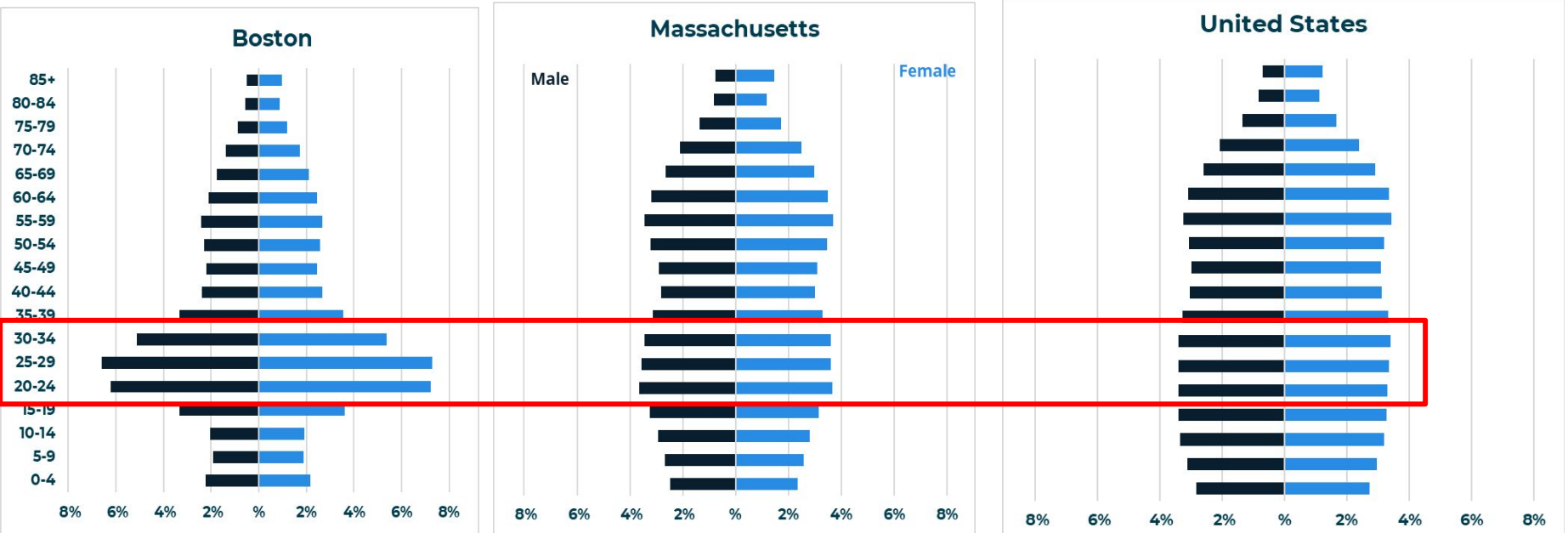
WHY IS BOSTON'S POPULATION SO HARD TO COUNT?

(EVEN WITHOUT A PANDEMIC)



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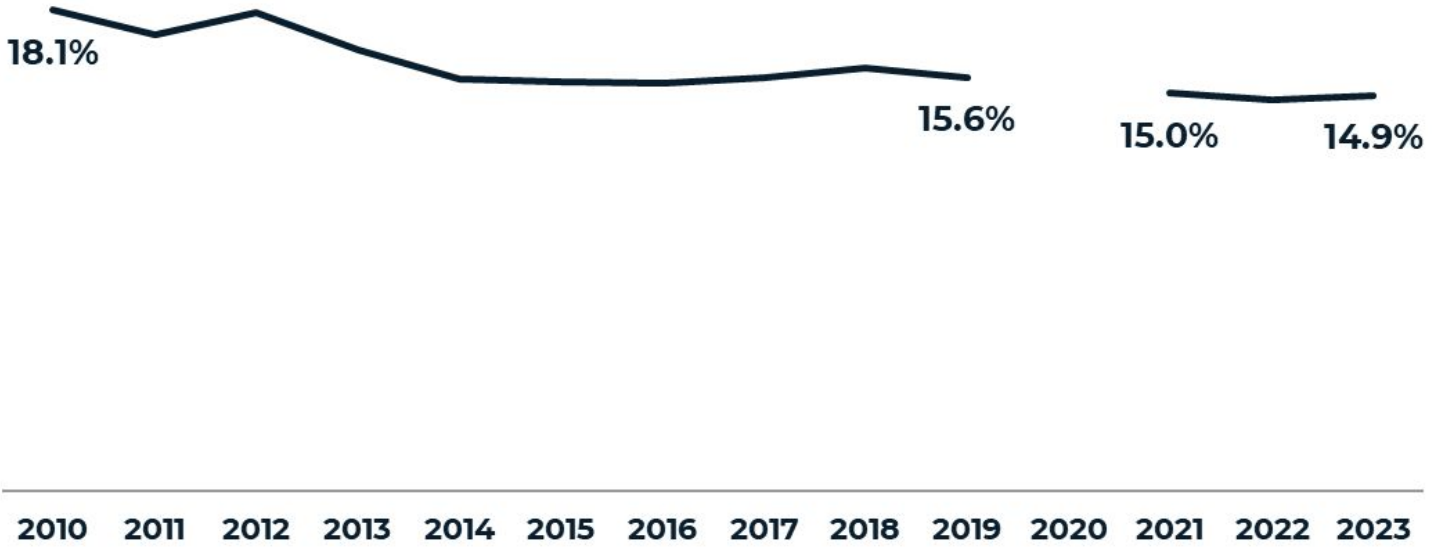
BOSTON'S LARGE YOUNG ADULT POPULATION IS DIFFICULT TO COUNT DUE TO HIGH RATES OF MIGRATION



Source: 2020 Decennial Census & Planning Department Estimates, City of Boston Planning Department Research Division Analysis

BOSTON IS BOTH A LARGE CITY AND A COLLEGE TOWN

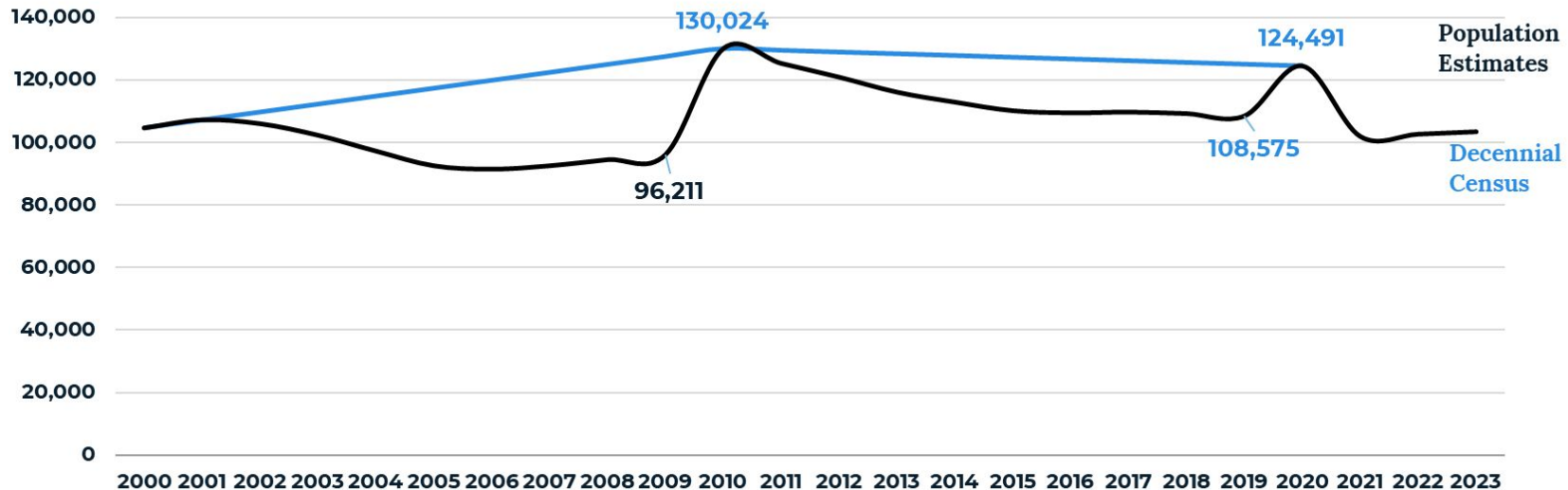
SHARE OF BOSTON RESIDENTS ENROLLED IN COLLEGE OR UNIVERSITY



Source: American Community Survey, City of Boston Planning Department Research Division Analysis

ANNUAL POPULATION ESTIMATES HAVE HISTORICALLY UNDERESTIMATED SUFFOLK COUNTY'S 18-24 POPULATION, COMPARED TO DECENNIAL CENSUS COUNTS

SUFFOLK COUNTY 18-TO-24 POPULATION



Sources: Decennial Censuses and Population Estimates, City of Boston Planning Department Research Division Analysis

The Census applies a “college fix” methodology to smaller “college towns” to more accurately capture the annual in-and-outflows of young adult students.

In September 2023, the Research Division assisted Mayor Wu to request that the Census Bureau develop a “college fix” adjustment methodology for Boston to address the decades-long undercount of young adults in the population estimates.



City of Boston, Massachusetts
Office of the Mayor
MICHELLE WU

Karen Battle
Chief of the Population Division
U.S. Census Bureau
4600 Silver Hill Road
Washington, DC 20233

September 18, 2023

Subject: Applying a “college fix” to Boston’s Annual Estimate of the Resident Population

Dear Ms. Battle,

As you may know, the City of Boston successfully petitioned the Census Bureau in a Post-Census Group Quarter Review because our large college dorm population was incorrectly counted in the 2020 Census due to COVID-19 restrictions. We are grateful for this review, but we still have concerns about the Population Estimate Program’s (PEP) estimate of our college-aged population. The last two decennial censuses have shown significantly higher counts of Suffolk County’s 18-to-24 year-old population compared to the previous year’s PEP estimate. This was true in 2020 despite pandemic-related obstacles to counting the young adult population.

In consultation with Susan Strate, the Massachusetts representative of the Federal State Cooperative for Population Estimates (FSCPE), the Boston Planning and Development Agency’s (BPDA) Research Division has prepared the attached memo that identifies concerns about the validity of our college-aged population estimate and demonstrates how these concerns can hinder planning in Boston’s neighborhoods. The City of Boston’s University Accountability Ordinance (UAO) annually requires colleges and universities in Boston to report enrollment data and whether these students live in dorms or housing units in Boston’s neighborhoods. These administrative data could be useful to the PEP staff.

I encourage the PEP to investigate how its current methodology estimates the 18-to-24 population for Suffolk County to check if any changes are warranted. If PEP staff would find Boston’s UAO data helpful in their review, please get in touch with the BPDA Research Division.

Sincerely,

Michelle Wu
Mayor of Boston

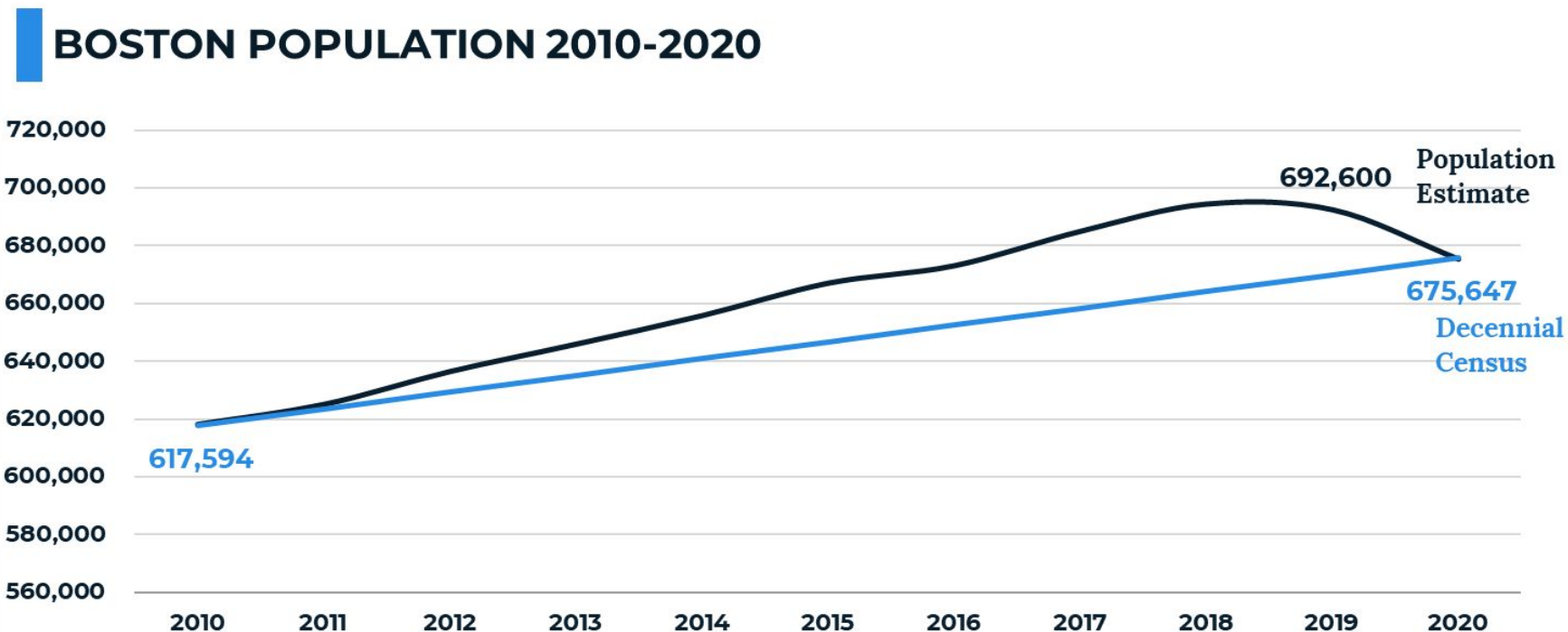


**THE PANDEMIC MADE
BOSTON'S
POPULATION EVEN
HARDER TO COUNT IN
2020**



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THE 2020 CENSUS COUNT FOR BOSTON WAS LOWER THAN PRIOR POPULATION ESTIMATES



Source: 2010 & 2020 Decennial Census & 2011-2019 Vintage 2020 Population Estimates, City of Boston Planning Department Research Division Analysis

PROBLEMS WITH THE GROUP QUARTERS COUNT IN 2020

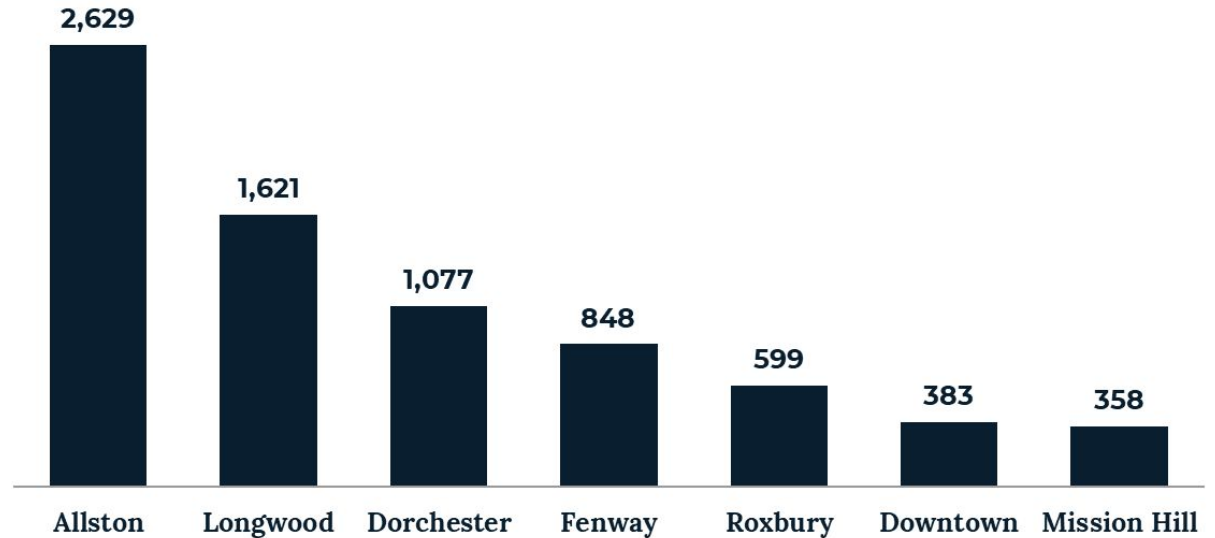


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PANDEMIC DISRUPTIONS LED TO AN UNDERCOUNT OF THE COLLEGE DORM POPULATION OF BOSTON

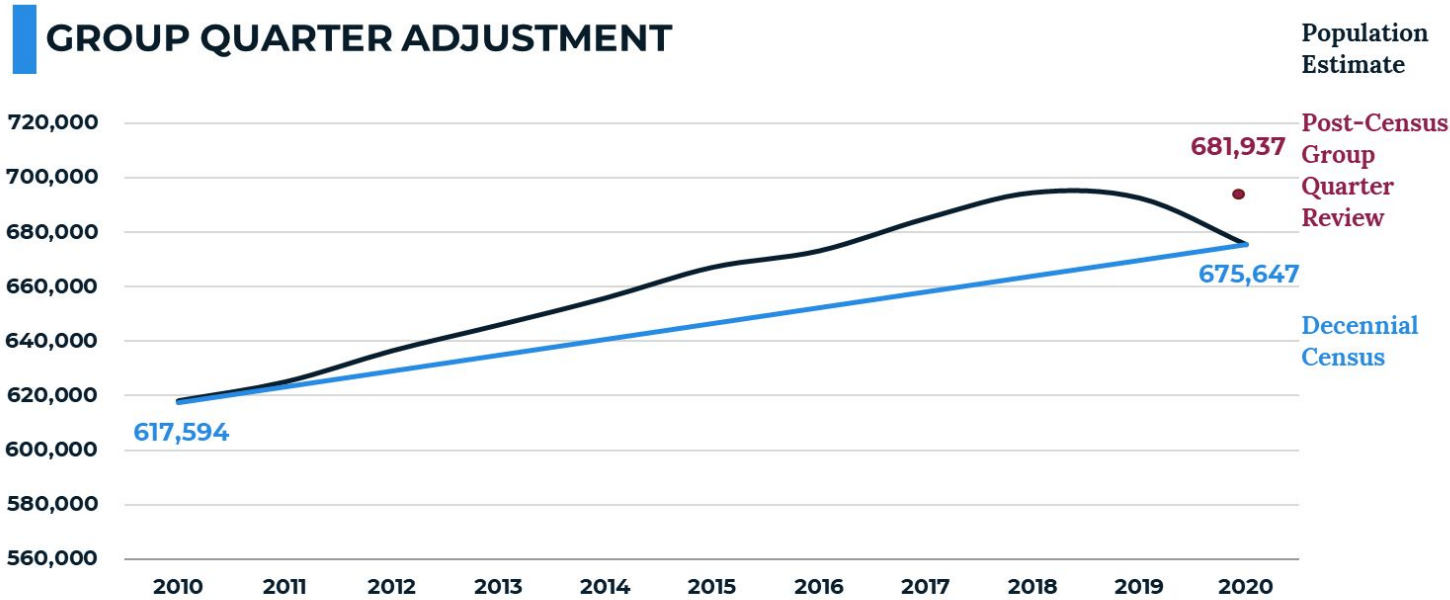
Boston challenged the 2020 Census Group Quarters count using data from colleges and universities and the Suffolk County Sheriff's Department to show an **undercount of 6,290 dormitory and correctional facility residents.**

2020 CENSUS GROUP QUARTER UNDERCOUNT



Source: Fall 2019 University Accountability Ordinance Data, City of Boston Planning Department Research Division Analysis.

CORRECTING FOR THE GROUP QUARTERS UNDERCOUNT WOULD BRING BOSTON'S 2020 POPULATION BASE TO 681,937



Source: 2010 & 2020 Decennial Census & Vintage 2019 Population Estimates 2020, City of Boston Planning Department Research Division Analysis

Source: U.S. Census Bureau, City of Boston Planning Department Research Division Analysis



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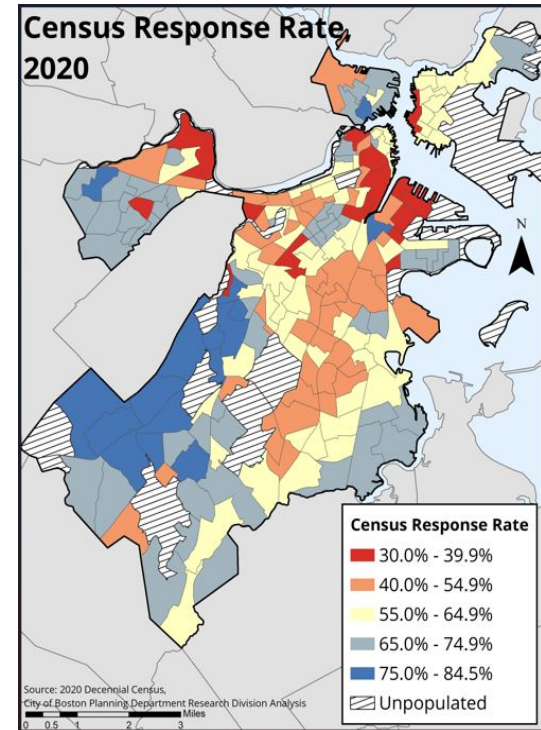
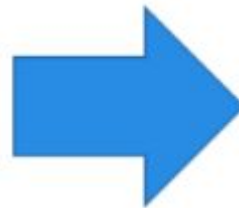
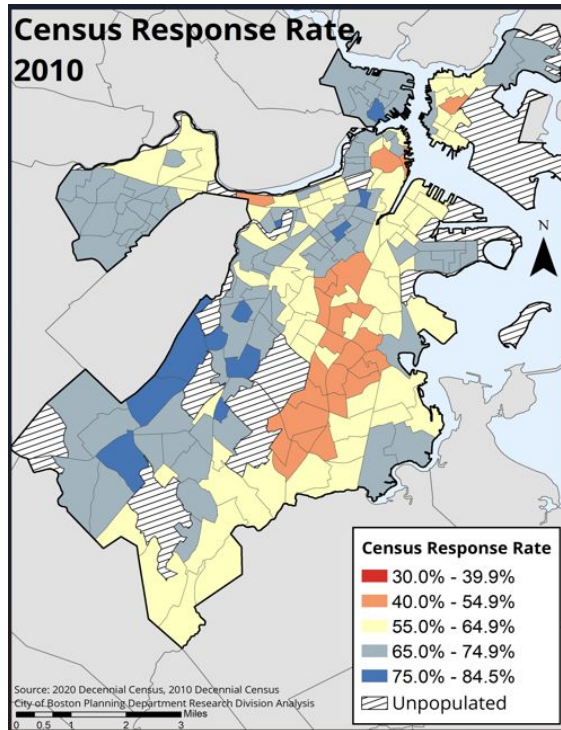
PROBLEMS WITH THE HOUSEHOLD POPULATION COUNT IN 2020



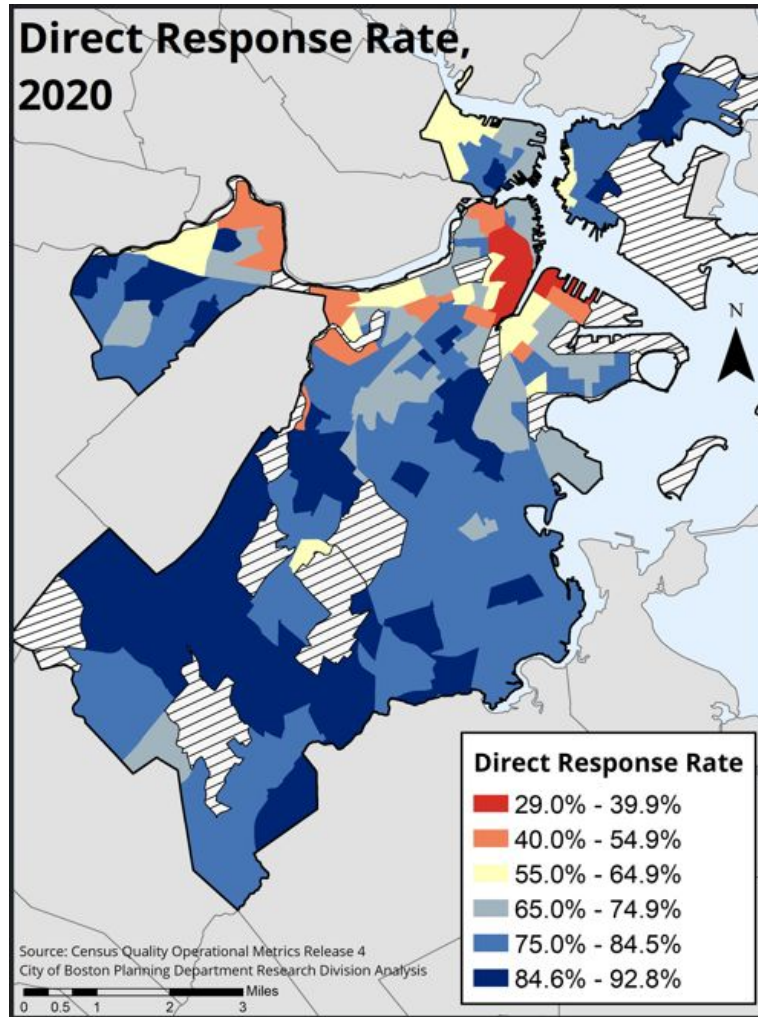
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LOWER 2020 CENSUS HOUSEHOLD SELF-RESPONSE RATES RAISE CONCERNS ABOUT UNDERCOUNT OF THE HOUSEHOLD POPULATION IN BOSTON AS WELL

Some tracts had self-response rates below 40% of households

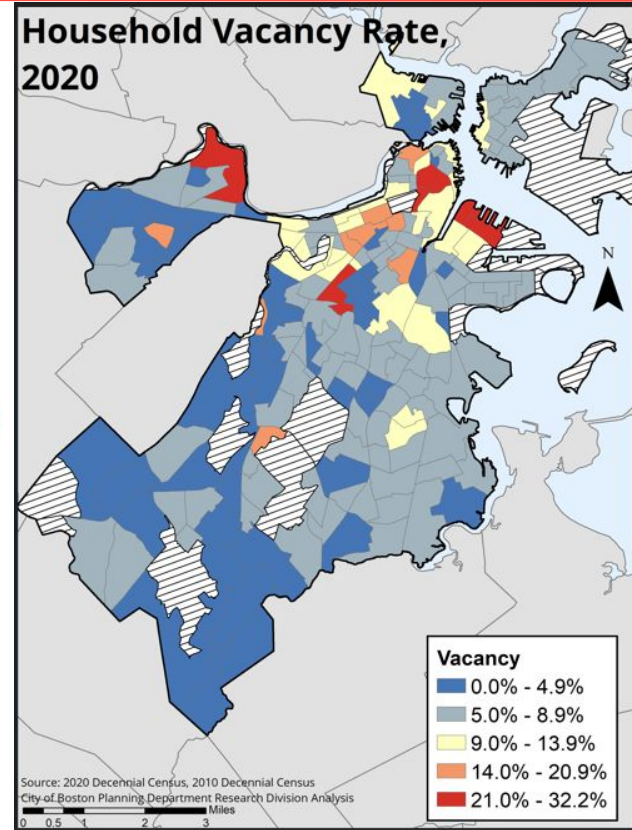
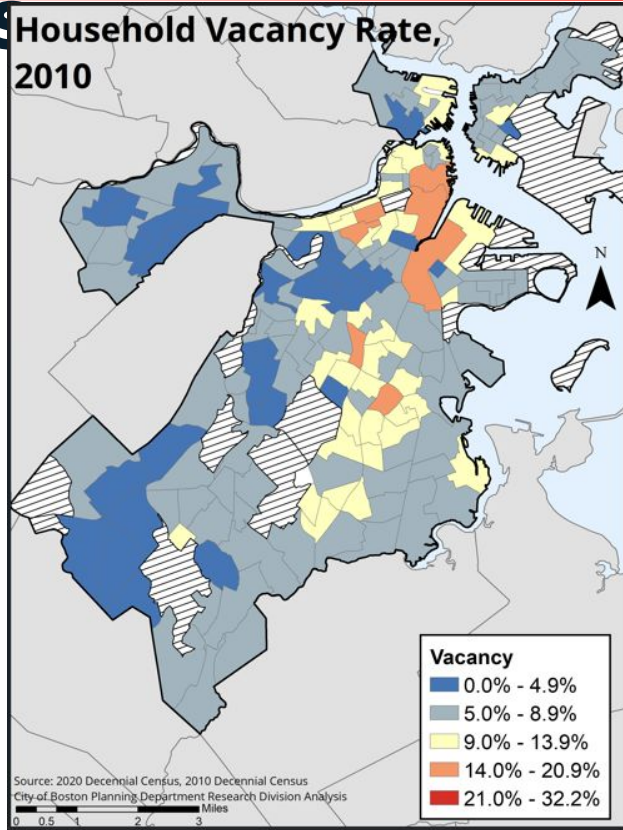


**EVEN AFTER
NONRESPONSE
FOLLOWUP OPERATIONS
IN 2020, SOME CENSUS
TRACTS IN ALLSTON,
DOWNTOWN, AND SOUTH
BOSTON WATERFRONT
HAD **DIRECT HOUSEHOLD
RESPONSES FROM LESS
THAN HALF OF UNITS****



THE 2020 CENSUS ASSIGNED HIGH VACANCY RATES TO TRACTS WITH LOW RESPONSE

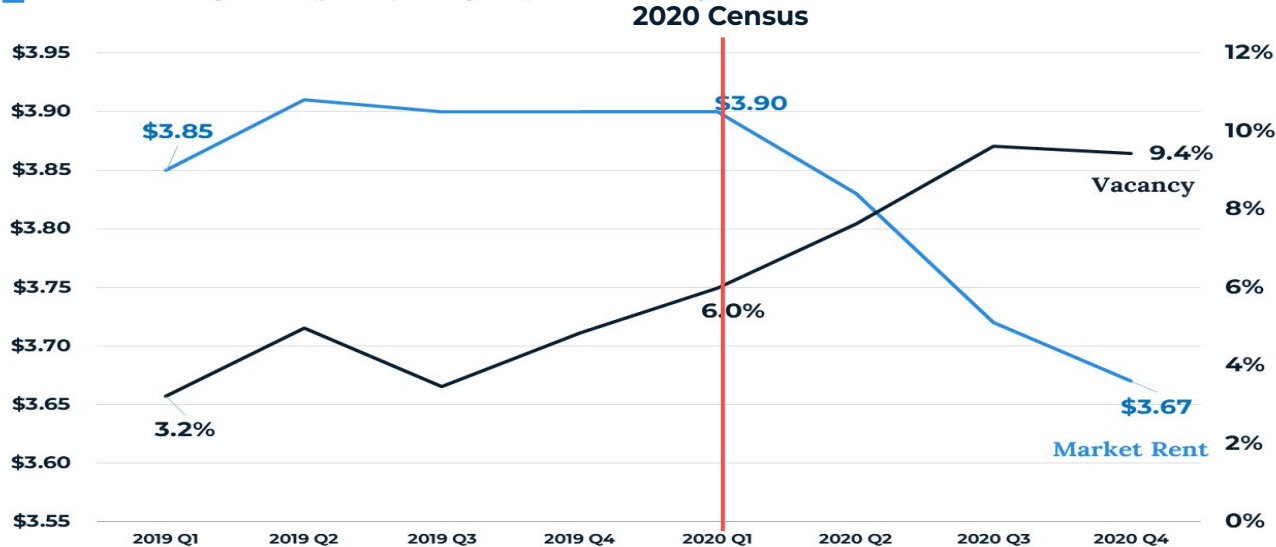
RATES



COSTAR DATA SHOW LOW VACANCY RATES IN BOSTON AT THE TIME OF THE 2020 CENSUS

MULTIFAMILY MARKET ASKING RENT AND VACANCY

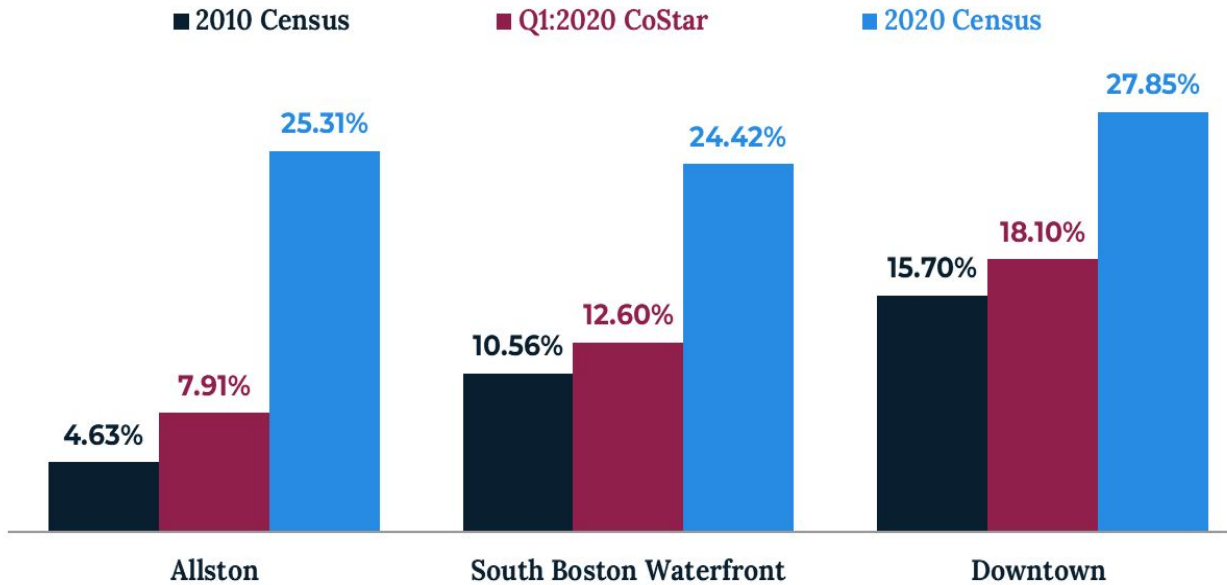
Market Asking Rent (per square foot) and Vacancy Rate



- Q1 2020 multi-family vacancy rate for Boston was 6.0%
- Vacancies rose through Q3 2020 and then began to fall

Source: CoStar, buildings with 5+ units, nominal dollars

THE 2020 CENSUS SHOWED MUCH HIGHER VACANCY RATES FOR CERTAIN TRACTS THAN EITHER THE 2010 CENSUS OR THE CONTEMPORANEOUS REAL ESTATE DATA

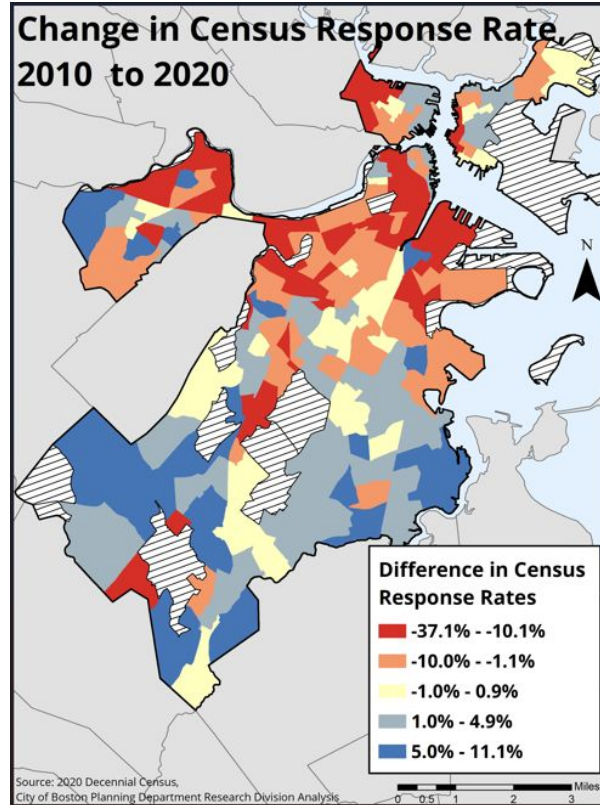
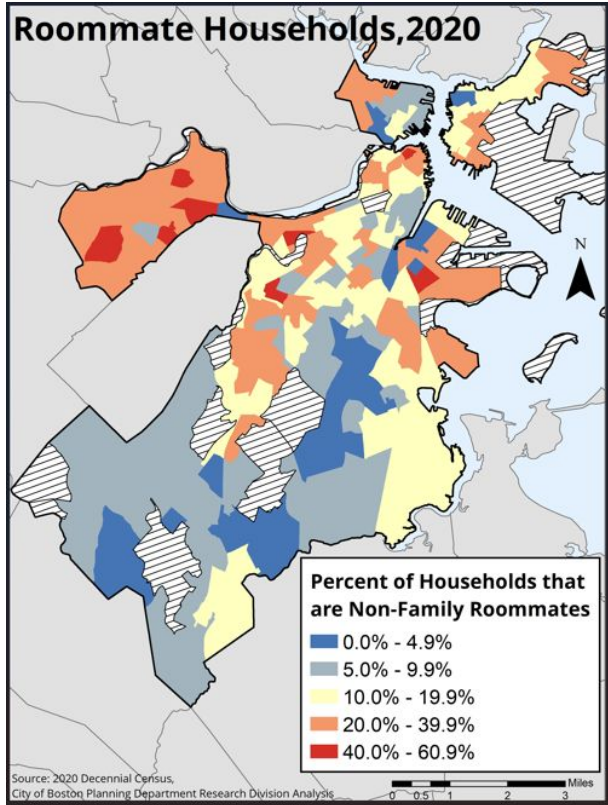


At 2010 Census tract vacancy rates, 2020 Census count of households would have been higher:

- 512 in tract 606.03 & 606.04 (South Boston Waterfront)
- 353 in tracts 303.02 & 701.02 (Downtown)
- 196 in tract 8.06 (Allston)

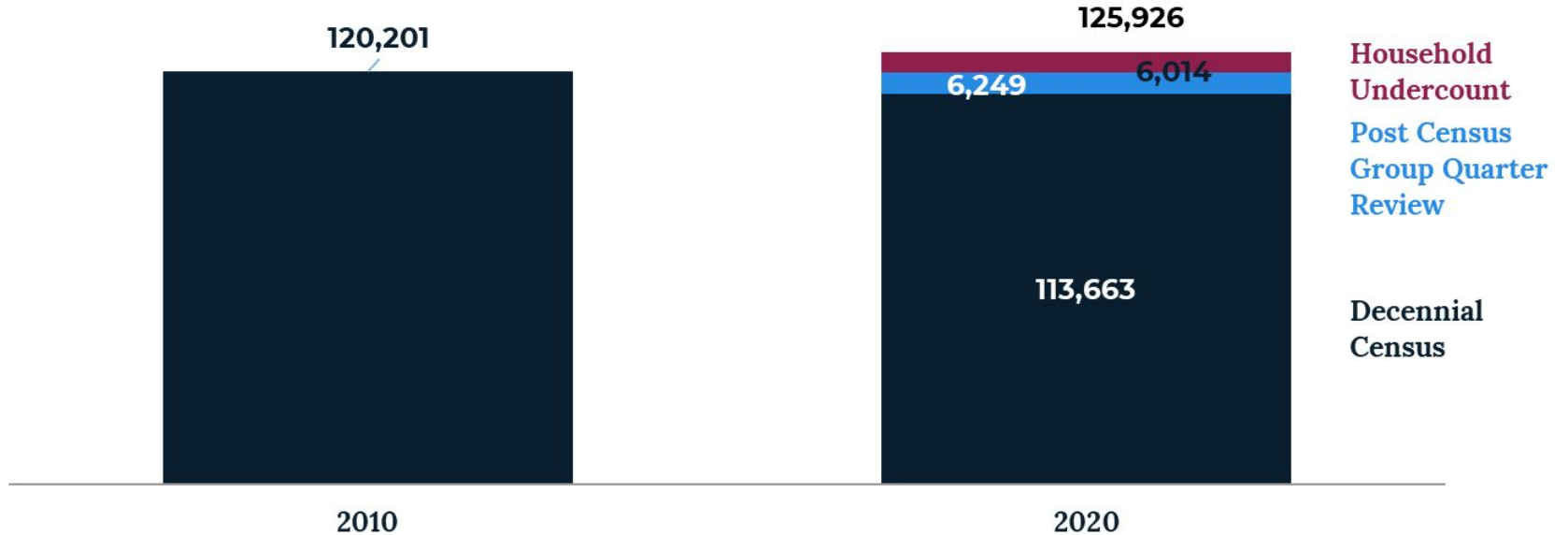
Submarkets in Allston, Downtown, and South Boston Waterfront are represented by Census Tracts 8.06; 303.02 and 701.02; and 606.03 and 606.04, respectively.

WHO MAY HAVE BEEN MISSED? THE 2020 CENSUS HAD LOWER SELF-RESPONSE RATES IN AREAS WITH HIGH SHARES OF ROOMMATE HOUSEHOLDS, COMMON WITH YOUNG ADULTS



THE RESEARCH DIVISION ESTIMATES THAT ABOUT 6,000 YOUNG ADULTS LIVING IN HOUSEHOLDS WERE MISSED BY THE 2020 CENSUS

18-TO-24 POPULATION

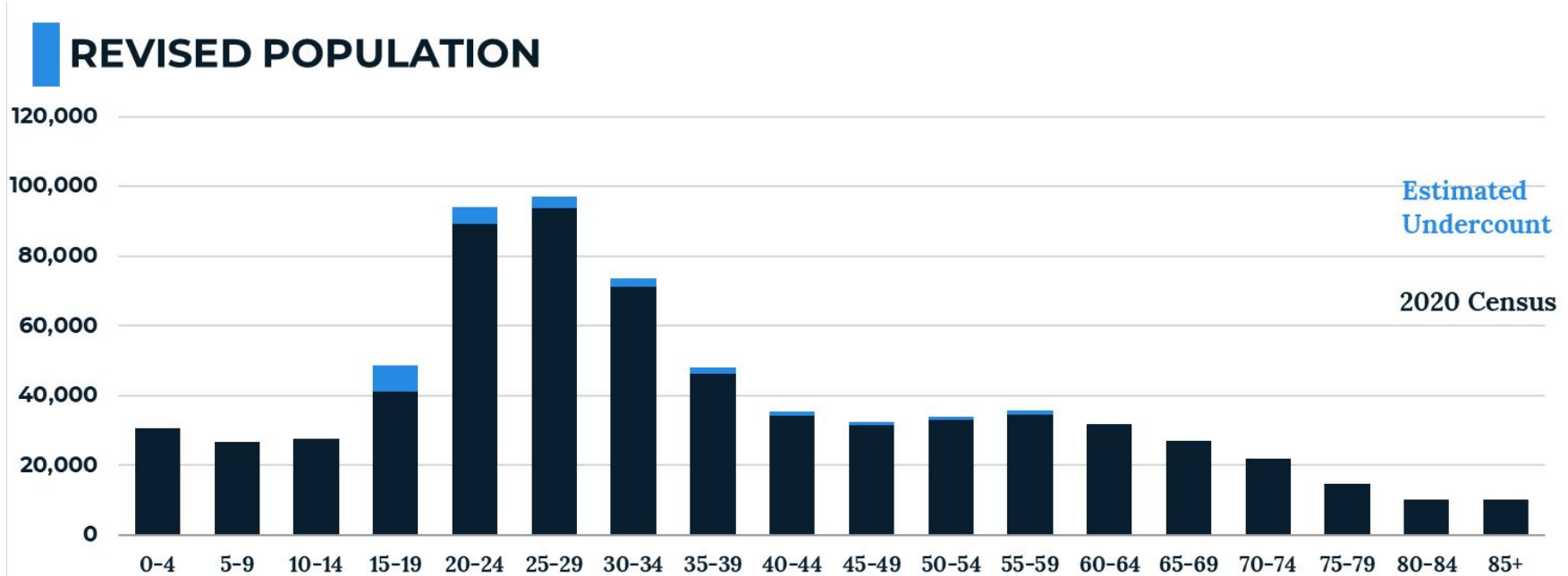


Source: 2010 & 2020 Decennial Census & Planning Department Estimate, City of Boston Planning Department Research Division Analysis



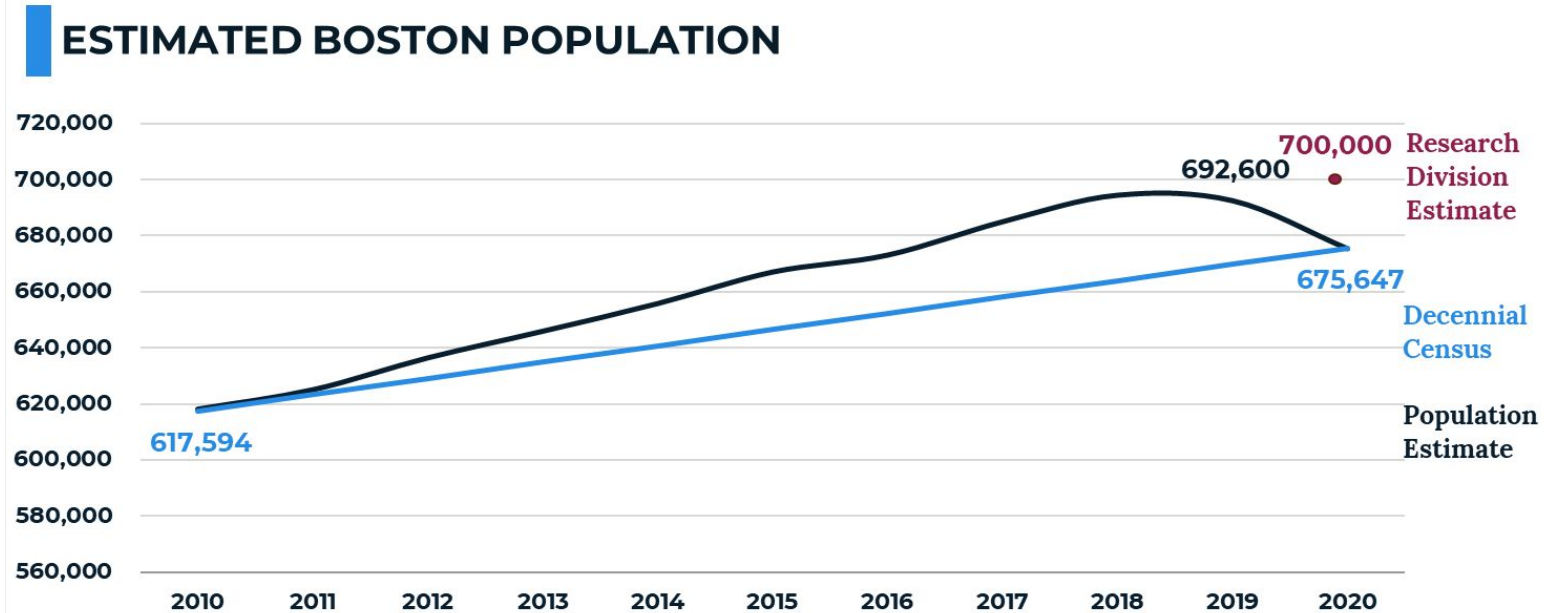
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THE RESEARCH DIVISION CREATED A 2020 BASE THAT INCORPORATES UNDERCOUNTED POPULATIONS



Source: 2020 Census & Planning Department Estimates, City of Boston Planning Department Research Division Analysis

ADJUSTING FOR UNDERCOUNT OF THE HOUSEHOLD POPULATION BRINGS BOSTON'S POPULATION IN 2020 TO ALMOST 700,000



Source: 2010 & 2020 Decennial Census, Vintage 2019 Population Estimates, 2020 Planning Department Estimates, City of Boston Planning Department Research Division Analysis



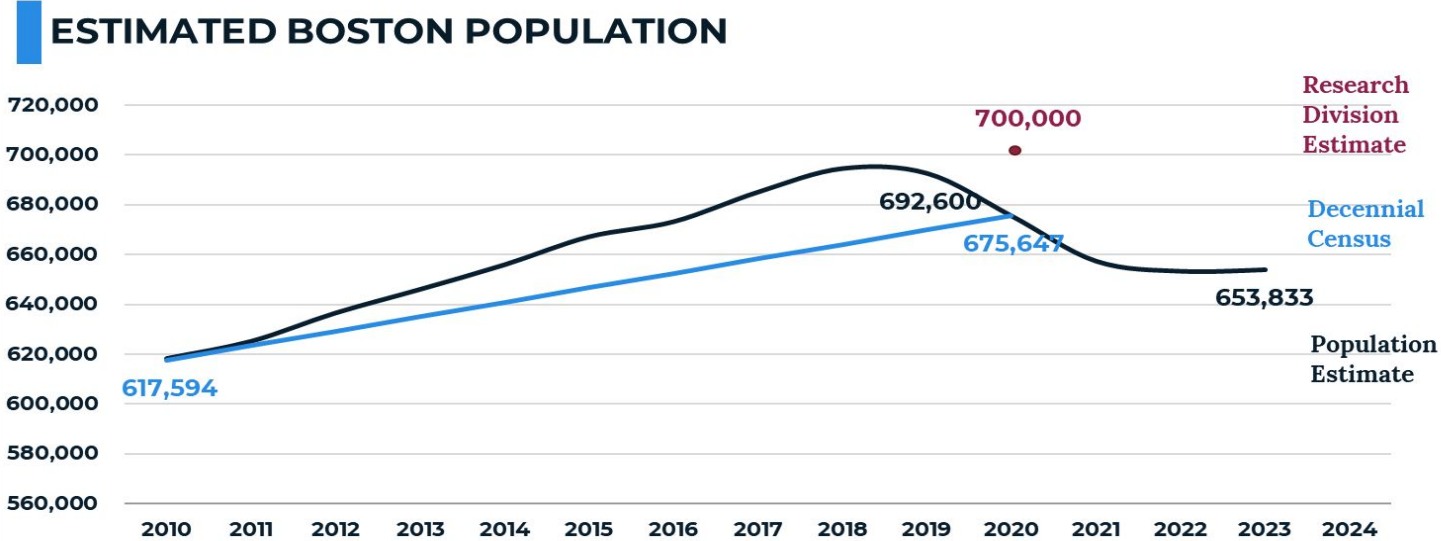
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WHAT HAPPENED TO BOSTON'S POPULATION **AFTER** **2020** ?



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THE 2021-2023 CENSUS POPULATION ESTIMATES SUGGEST THAT BOSTON'S POPULATION HAS FALLEN SIGNIFICANTLY AND NOT RECOVERED



Source: 2010 & 2020 Decennial Census & Vintage 2019 & 2023 Population Estimates Vintage 2019 & 2023 Population, City of Boston Planning Department Research Division Analysis



REAL ESTATE DATA
SHOW RECOVERED
RESIDENTIAL DEMAND

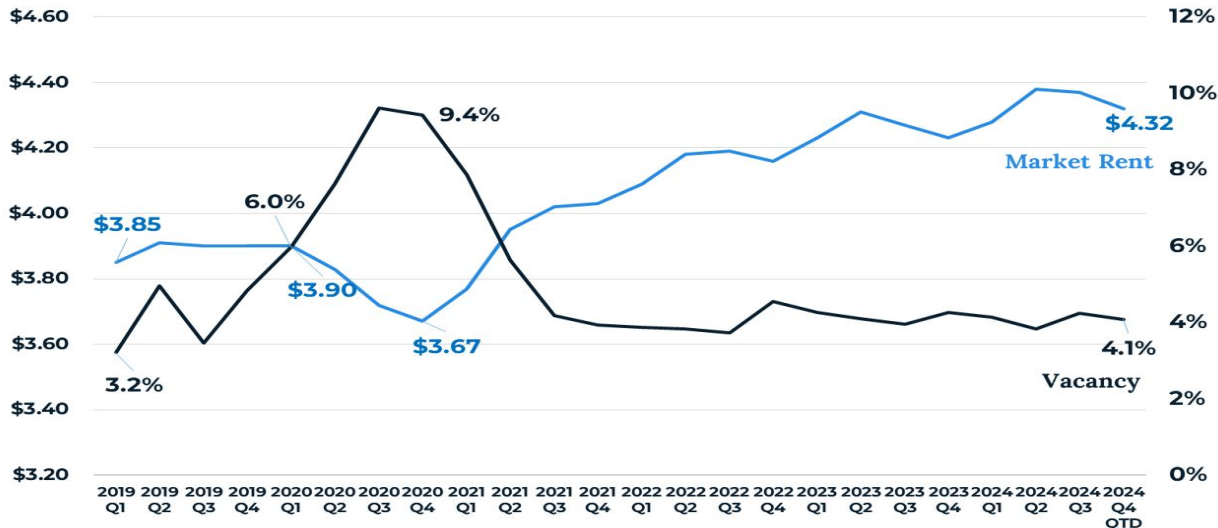


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REAL ESTATE DATA SHOW RECOVERED RESIDENTIAL DEMAND. VACANCY RATES IN 5+ UNIT MULTIFAMILY BUILDINGS RECOVERED PRE-PANDEMIC LEVELS BY Q2 2021 AND RENTS HAVE RISEN

MULTIFAMILY MARKET ASKING RENT AND VACANCY

Market Asking Rent (per square foot) and Vacancy Rate



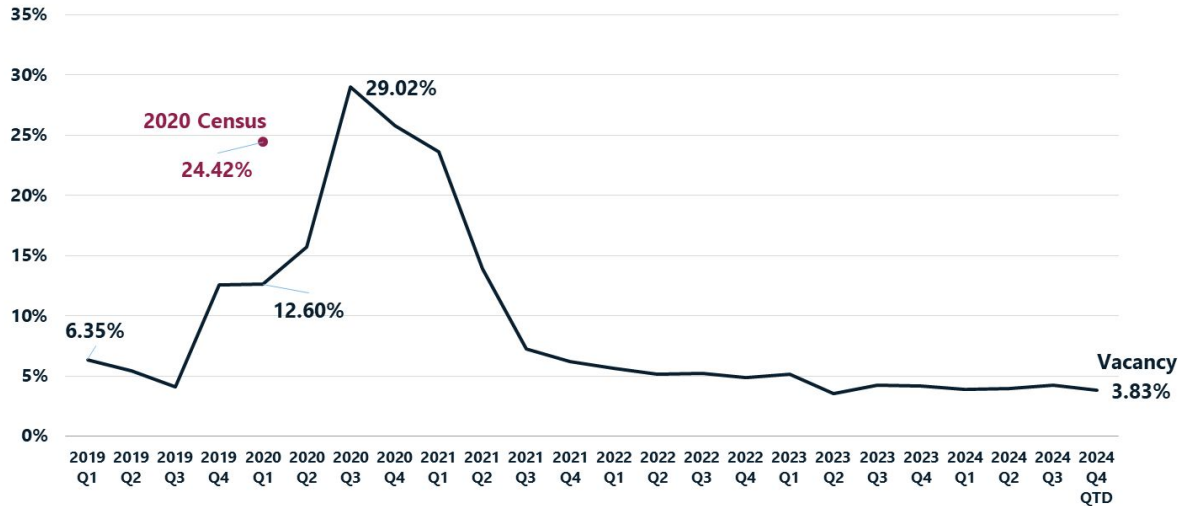
Vacancies are low despite construction of **over 14,000 net new housing units** since April 1, 2020.

Source: CoStar, buildings with 5+ units, nominal dollars

SOUTH BOSTON WATERFRONT TRACTS RECOVERED TO PRE-PANDEMIC VACANCY LEVELS BY Q3 2021. RECENT VACANCY RATES ARE BELOW 4%

MULTIFAMILY MARKET VACANCY

South Boston Waterfront Submarket* Vacancy Rate



Source: CoStar, 5+ unit buildings only, and 2020 Decennial Census, Tracts 606.03 and 606.04, City of Boston Planning Department Research Division

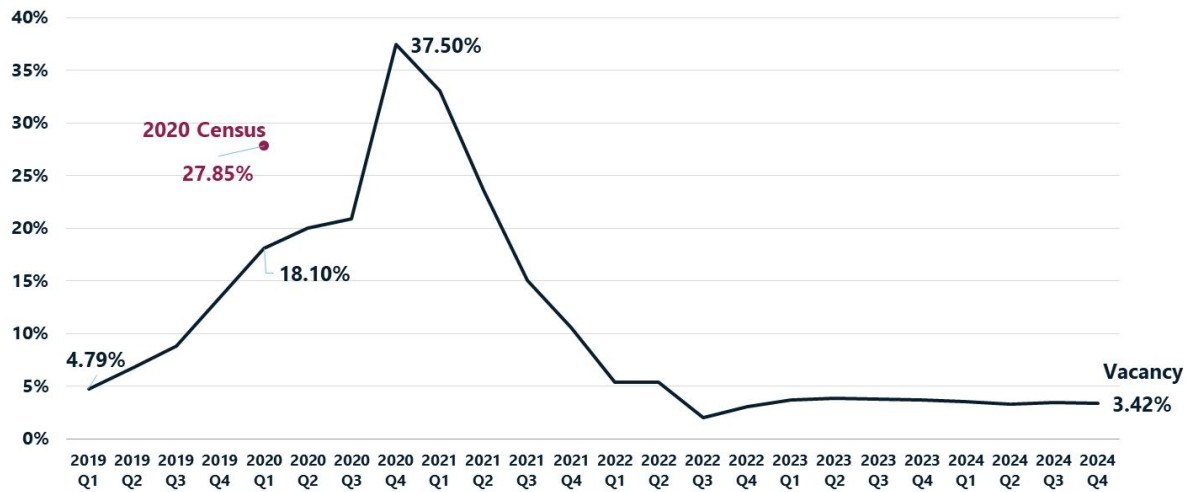
880 net new units of housing came online in the South Boston Waterfront in post-Census 2020.

Despite this housing growth, vacancy rates have fallen.

DOWNTOWN TRACTS RECOVERED TO PRE-PANDEMIC VACANCY LEVELS BY Q1 2022. RECENT VACANCY RATES ARE BELOW 4%

MULTIFAMILY MARKET VACANCY

Downtown Submarket Vacancy Rate*



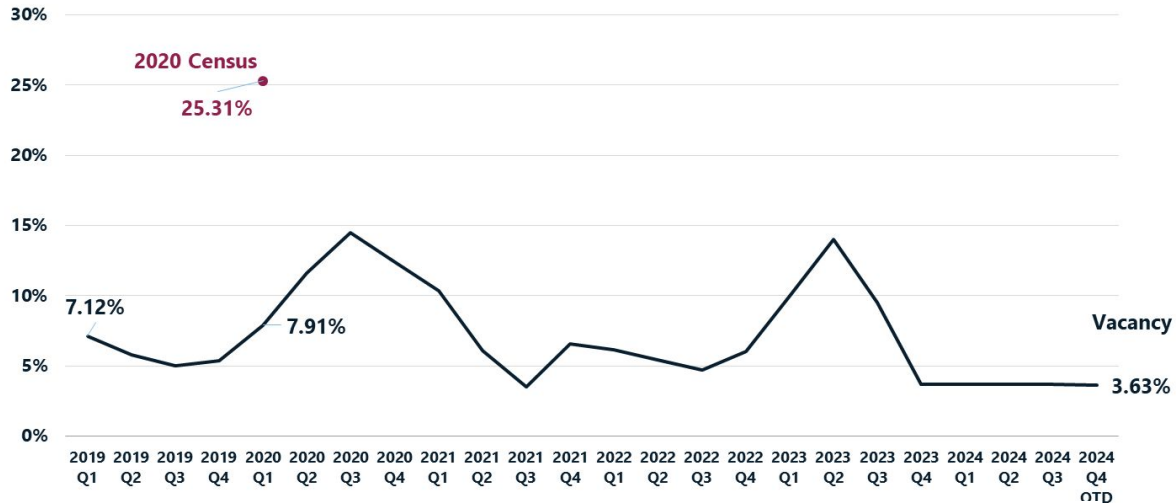
Source: CoStar, 5+ unit buildings only, and 2020 Decennial Census, Tracts 303.02 and 701.02, City of Boston Planning Department Research Division

Despite the construction of **433 net new units of housing** since April 1, 2020, vacancy rates have fallen in Downtown Boston tracts.

Allston tract 8.06 recovered to pre-pandemic vacancy levels by Q2 2021. Recent vacancy rates are below 4%

MULTIFAMILY MARKET VACANCY

Allston Submarket* Vacancy Rate



Source: CoStar, 5+ unit buildings only, and 2020 Decennial Census, Tract 8.06, City of Boston

— Planning Department Research Division

70% of tract population is enrolled in college or university (2018-2022 ACS) and highly influenced by campus shutdown and return to operations.

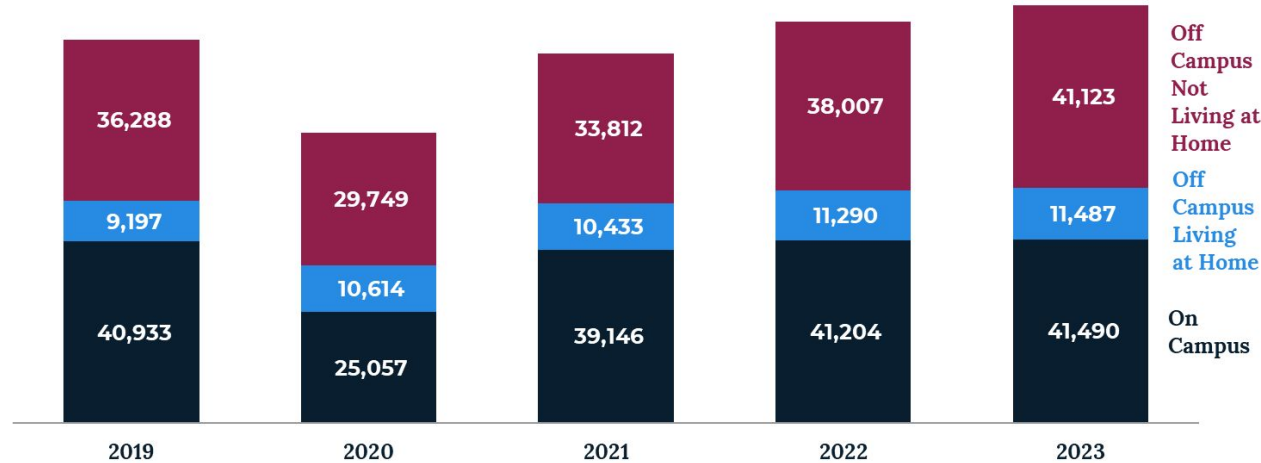
UNIVERSITY DATA
SHOW RECOVERED
STUDENT POPULATION



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COLLEGE DATA SHOW A DIP IN STUDENTS LIVING IN BOSTON IN FALL 2020 WHICH LARGELY RECOVERED BY FALL 2021

COLLEGE STUDENTS LIVING IN BOSTON



Source: University Accountability Ordinance, City of Boston Planning Department Research Division Analysis.

Colleges report fall enrollment to the City, but spring 2020 enrollment likely was similar to fall 2019.

COLLEGE DATA SHOW A RECOVERY AND GROWTH IN THE COLLEGE STUDENT POPULATION WHILE THE ACS SHOWS CONTINUED DECLINE

Boston Residents Enrolled in College or University indexed at 2014 levels



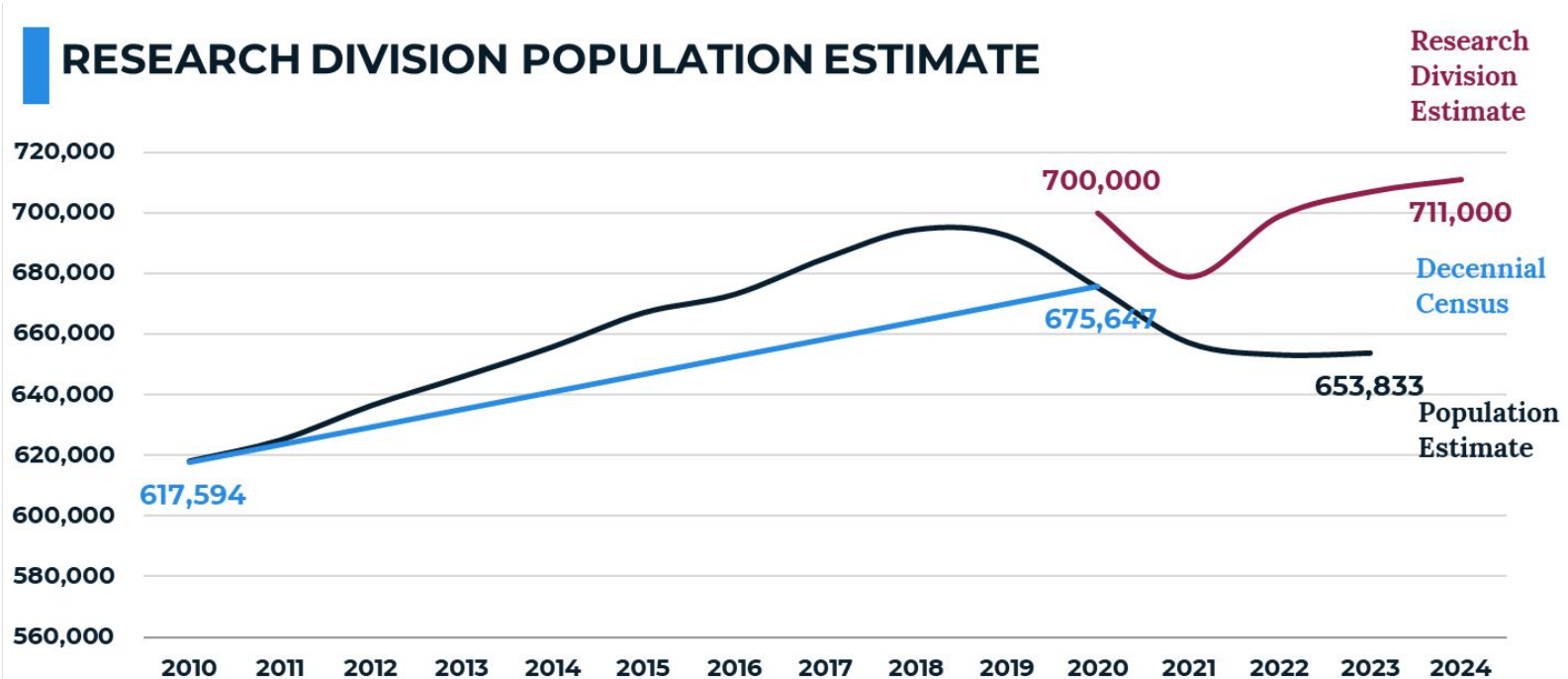
Source: UAO and ACS 2014-2023, City of Boston Planning Department Research Division Analysis

RESEARCH DIVISION
ESTIMATES OF
BOSTON'S POPULATION
RECOVERY AND
GROWTH



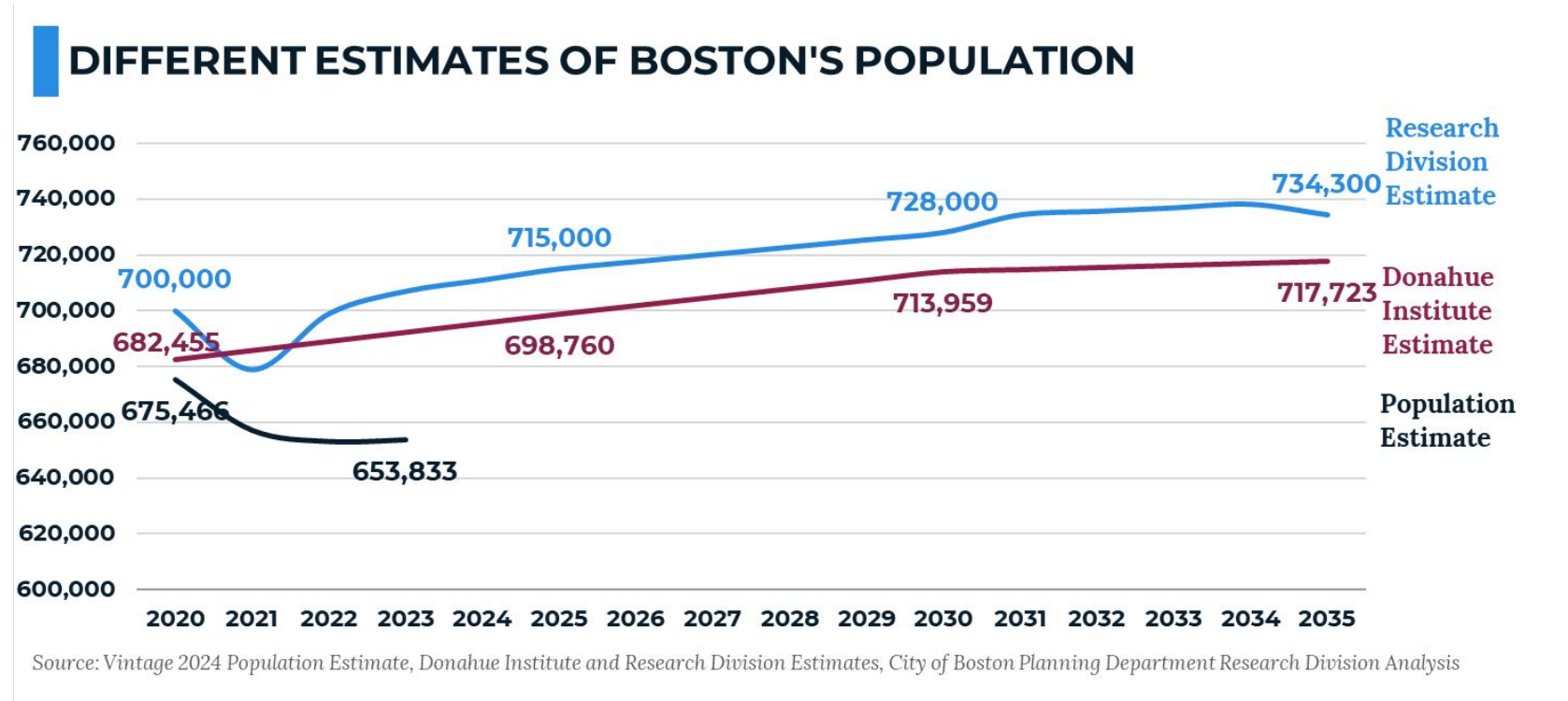
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BOSTON'S POPULATION WAS UNDERCOUNTED IN THE 2020 CENSUS, THEN FELL DURING THE PANDEMIC BUT REBOUNDED BY LATE 2021 - A RECOVERY THE CENSUS ESTIMATES HAVE NOT YET CAPTURED



Source: 2010 & 2020 Decennial Census & Vintage 2019 & 2023 Population Estimates & Planning Department Estimates, City of Boston Planning Department Research Division Analysis

BOSTON RESEARCH DIVISION & UMASS DONAHUE INSTITUTE PROJECTED POPULATION GROWTH TRENDS ARE SIMILAR, WHILE THE CENSUS POPULATION ESTIMATES SHOW A DIFFERENT TRAJECTORY



CONCLUSION AND NEXT STEPS

The City of Boston would like to ask the Census Bureau to reevaluate:

- The 2020 population base for Boston as well as
- The migration estimates for young adults 20-29 years old (college fix)

In the meantime, the City of Boston is developing population estimates based on the adjustments shown previously for planning, including housing policy, K-12 school planning, and public health epidemiology.