Priced Out
The Future of Graduate and Faculty Housing at Tufts

Tigran Aslanyan, Xinlei Lian, Connor Ring, Rajat Shrestha
UEP Field Projects 2019

The Office of the Dean of Student Affairs
The Campus Planning and Development Committee
ACKNOWLEDGEMENTS

Several Tufts community members have made important contributions to this report. We would like to thank Mary Pat McMahon and Nandi Bynoe for their support and guidance. We are also grateful to Michael Toogood for his help in securing data essential to our analysis and aiding in the planning and logistics of our survey. We are incredibly grateful to our Field Project advisors: Christine Cousineau for her wealth of knowledge of campus planning and development at Tufts, and Carolyn Meklenburg for her sage advice and encouragement throughout the semester. We appreciate Justin Hollander’s guidance and direction. Thanks to Lois Stanley and Heidi Sokol at Tufts Campus Planning and Development for generosity with their time and enthusiasm for connecting us with fellow campus planning professionals. We are grateful to Robert Chihade of Tufts Real Estate for his passion and willingness in giving us the lay of the land of Tufts properties, and to Rocco DiRico for helping us to understand the local political landscape. Thank you to Michael Skeldon for getting into the weeds of real estate development and touring potential development sites with us. We are grateful to Professor Cathy Stanton for sharing with us the work of her Anthropology Fieldwork Lab and for connecting us with Professor Barry Bluestone of Northeastern University. We are grateful to Brenna Gormally of the Graduate Student Council for her enthusiasm and support. We are thankful for Maureen Hickey of Northeastern Campus Planning and Development for sharing her experience with Northeastern’s private partnership with American Campus Communities. Thank you to Charlie Grab for sharing his knowledge of Tufts Shuttle service and to Tufts Trustee Brian Kavoogian of Charles River Real Estate for sharing his perspective on real estate development and student housing at Tufts.
# TABLE OF CONTENTS

**ACKNOWLEDGEMENTS**

List of Figures and Tables

Executive Summary

**Introduction**

<table>
<thead>
<tr>
<th>Project Background</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Background</td>
<td>18</td>
</tr>
<tr>
<td>Project Goals</td>
<td>19</td>
</tr>
</tbody>
</table>

**Methods**

<table>
<thead>
<tr>
<th>Literature Review</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey</td>
<td>21</td>
</tr>
<tr>
<td>Interviews</td>
<td>21</td>
</tr>
<tr>
<td>Spatial Analysis</td>
<td>21</td>
</tr>
<tr>
<td>Policy Matrices</td>
<td>21</td>
</tr>
</tbody>
</table>

**Literature Review**

| Student Housing Building Boom | 23 |
| Financial Constraints | 23 |
| Student Housing in Greater Boston | 23 |
| Housing International Students | 24 |
| Growth of Public Private Partnerships | 24 |
| Faculty Housing | 28 |

**Graduate Student Housing Patterns at Tufts**

| Spatial Analysis of Graduate Student Housing | 31 |
| Graduate Student Housing Survey Results | 36 |

**Graduate Student/Faculty Housing at Peer Institutions**

| Graduate Student Housing Policy Analysis | 45 |
| Faculty Housing Policy Analysis | 46 |

| Graduate Student Housing Policy Matrix | 47 |
| Faculty Housing Policy Matrix | 52 |

**Key Takeaways from Stakeholder Interviews**

| Graduate student housing IS not a priority | 57 |
| Institutional development climate | 57 |
| Reluctance to engage with a private developer | 57 |
| Private-partnerships as a way to deliver housing without impacting capital capacity | 58 |
| Potential development sites | 58 |

**Potential Sites for Graduate Student Housing Development**

| Walksheds Along Bus Routes | 61 |
| Site 1: Malden Hospital | 66 |
| Site 2: Medford Square | 71 |
| Site 3: Surface Parking Lots on Campus – Boston Ave and Cousens Lot | 73 |

**Key Findings**

| Current housing and transportation patterns | 77 |
| Real estate landscape in neighboring communities | 78 |
| Possible solutions to meet housing needs | 78 |

**Recommendations**

| References | 81 |
| Bibliography | 84 |
| Appendices | 88 |

**Appendices**

| APPENDIX 1: Survey Questions – Tufts Graduate Housing Survey | 94 |
| APPENDIX 2: BUS Routes Maps | 98 |
| APPENDIX 3: Interview Questions | 99 |
LIST OF FIGURES AND TABLES

Figure 1. Existing stock of off-campus graduate-student housing owned by Tufts. (Source: Connor Ring ArcGIS Map)
Figure 2. A typical room in Blakeley Hall, the major source of graduate student housing at Tufts. (Source: Tufts University)
Figure 3. A typical room in Blakeley Hall, the major source of graduate student housing at Tufts. (Source: Tufts University)
Figure 4. A typical room in Blakeley Hall, the major source of graduate student housing at Tufts. (Source: Tufts University)
Figure 5. Campus map showing off-campus properties owned by Tufts, Walnut Hill, and various Greek Life organizations. (Source: Tufts University)
Figure 6. Scheduled to open in late 2021, College Ave Station will enable a “one-seat ride” from the Medford Campus to downtown Boston. (Source: MassDOT)
Figure 7. Students by Housing Category and Degree Level in Greater Boston in the 2017-2018 Academic year. Off-campus Not in Private Housing refers to students who live with their parents or guardians, or were in study-abroad programs that year. (Source: DND, City of Boston, Student Housing Trends: 2017-2018 Academic Year, p. 4)
Figure 8. Stanford’s Escondido Village Graduate Residences. (Source: Stanford University)
Figure 9. MIT’s new mixed-use graduate student housing in Kendall Square will have 454 housing units. (Source: MIT)
Figure 10. A townhouse at Princeton’s Lakeside Apartments, developed by American Campus Communities. (Source: Stanford University)
Figure 11. Graduate student complex currently under construction at USC, developed with American Campus Communities. (Source: Urbanize LA)
Figure 12. Currie Hall graduate student residence at US’s Health Sciences campus, developed with American Campus Communities. (Source: Urbanize LA)
Figure 13. Tufts Graduate Student Population Density by Census Block Group. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)
Figure 14. Regional Distribution of Tufts Graduate Student Housing Units by Census Block Group. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)
Figure 15. Median distance from campus of current Tufts AS&E graduate students - by international status. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 16. Median distance from campus of current Tufts AS&E graduate students - by degree. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 17. Median distance from campus of current Tufts AS&E and Fletcher School students. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 18. Distribution of distances from campus (All AS&E Students). Histogram of the distance from campus of current Tufts AS&E graduate students. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 19. Distribution of distances from campus (Fletcher School Students). Histogram of the distance from campus of current Tufts Fletcher School graduate students. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 20. Proximity to campus (AS&E Students). Percentage of current Tufts AS&E graduate students within 1 mile from campus. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 21. Proximity to campus (AS&E Students). Percentage of current Tufts AS&E graduate students within 1 mile from campus. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 22. Proximity to campus (AS&E and Fletcher School Students). Percentage of current Tufts AS&E and Fletcher School Students within 1 mile from campus. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 23. Proximity to bus stations that connect to the Medford/Somerville Campus. Percentage of AS&E graduate students within walking distance of bus stations that connect to the Medford/Somerville Campus. (Source: Connor Ring and Rajat Shrestha spatial analysis)
Figure 24. Proximity to bus stations that connect to the Medford/Somerville Campus. Percentage of Master’s and PhD AS&E students within walking distance of bus stations that connect to the Medford/Somerville Campus. (Source: Connor Ring and Rajat Shrestha spatial analysis)

Figure 25. Tufts Graduate Student Housing within a Half-Mile of College Ave and Ball Square Stations. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)

Figure 26. “In general, how satisfied are you with the availability of housing?” (Source: Tufts Graduate Housing Survey)

Figure 27. “In general, how satisfied are you with the cost of housing?” (Source: Tufts Graduate Housing Survey)

Figure 28. “How satisfied are you with your current housing situation?” (Source: Tufts Graduate Housing Survey)

Figure 29. “How stressful did you find the process of obtaining housing?” (Source: Tufts Graduate Housing Survey)

Figure 30. “How did you find your current housing?” (Source: Tufts Graduate Housing Survey)

Figure 31. “Which city do you live in?” (Source: Tufts Graduate Housing Survey)

Figure 32. “Do you live with a spouse/significant other, a child/children, other biological family members, or a chosen family?” (Source: Tufts Graduate Housing Survey)

Figure 33. “How many people (other than yourself) do you live with?” (Source: Tufts Graduate Housing Survey)

Figure 34. “How many bedrooms are in your unit? (0 for studio/efficiency)” (Source: Tufts Graduate Housing Survey)

Figure 35. “How much do you currently pay in rent per month?” (Source: Tufts Graduate Housing Survey)

Figure 36. “What percentage of your income do you spend on housing?” (Source: Tufts Graduate Housing Survey)

Figure 37. “What percentage of your income do you spend on housing?” (Source: Tufts Graduate Housing Survey)

Figure 38. “What is the highest rent you would pay for your preferred housing option?” (Source: Tufts Graduate Housing Survey)

Figure 39. “How do you typically commute to campus?” (Source: Tufts Graduate Housing Survey)

Figure 40. “What is your typical commute time, in minutes, to campus?” (Source: Tufts Graduate Housing Survey)

Figure 41. “Which type of housing unit would you prefer to live in?” (Source: Tufts Graduate Housing Survey)

Figure 42. “How important were the following factors to you in your housing choice?” (Source: Tufts Graduate Housing Survey)

Figure 43. “Please rank the criteria according to their importance when considering your housing options (1 is most important, 5 is least important).” (Source: Tufts Graduate Housing Survey)

Figure 44. Existing land uses within a quarter-mile of a Tufts bus route, Medford and Malden. (Source: Connor Ring and Rajat Shrestha ArcGIS)

Figure 45. Multi-family properties within a quarter-mile of a Tufts bus route, Medford and Malden. (Source: Connor Ring and Rajat Shrestha ArcGIS)

Figure 46. Potential sites for graduate and faculty housing. (Source: Connor Ring)

Figure 47. Development Scenarios (Source: Xinlei Lian)

Figure 48. The abandoned Malden Hospital building, looking West. (Photo: Connor Ring)

Figure 49. The abandoned Malden Hospital building, looking West. (Photo: Connor Ring)

Figure 50. Aerial of the former Malden Hospital site, with existing vacant buildings. (Source: Google Maps)

Figure 51. Initial proposed plan for Malden Hospital Site showing an E-shaped main building (an expanded main building) in yellow and

Figure 52. Revised proposed plan for Malden Hospital Site showing less building and more open space. (Source: Fellsmere Housing Group)

Figure 53. Malden Zoning Code, showing the Malden Hospital site as zoned for residential development. (Source: City of Malden)
Figure 54. Parcels for potential development in Medford Square. Sites A and B are available for mixed-use development. (Source: Gamble and Associates)

Figure 55. Type of mixed-use development envisioned for Site A and Site B parcels in Medford Square: 4- to 6-story buildings, with housing above ground-level retail, above underground parking. (Source: Gamble and Associates)

Figure 56. Boston Ave parking lot and College Ave parking lot are Tufts-owned sites with development potential. (Source: Tufts University)

Figure 57. View of the proposed Aquatics Center and Ice Rink on the Cousens Lot. (Source: Tufts University)

Figure 58. Multifamily properties in Medford and Malden with more than 75 units, which can possibly become Tufts' pilot project (Source: Connor Ring ArcGIS Map)

Figure 59. MBTA 96 bus route from Medford Square to Tufts (Source: MBTA)

Figure 60. MBTA 99 bus route (Source: MBTA)

Figure 61. MBTA 101 bus route (Source: MBTA)

Figure 62. MBTA 108 bus route (Source: MBTA)

Table 1. Home values and rents in five cities surrounding Tufts’ Medford/Somerville campus (Sources: Zillow Home Value Indexes for Medford, Somerville, Arlington, Cambridge, and Malden. http://www.zillow.com/research/data/)

Table 2. Students by Housing Category and Degree Level in Greater Boston, 2017

Table 3. Policy comparison matrix of Tufts University’s peer institutions (graduate student Housing)

Table 4. Policy comparison matrix of local and other Tufts related institutions (graduate student housing)

Table 5. Policy comparison matrix of Tufts University’s peer institutions (faculty housing)

Table 6. Policy comparison matrix of local and other Tufts-related institutions (faculty housing)

Photos

Cover by Alonso Nichols/2013 Trustees of Tufts College

p3-p4 by 2013 Trustees of Tufts College

p7 by Connor Ring

p59 by Connor Ring

p76 by Alex S. MacLean

All other photos by Xinlei Lian
EXECUTIVE SUMMARY

Tufts University’s 150-acre campus straddles the border of Medford and Somerville. Most of its graduate students, and more than a third of its undergraduates, live in the wood-framed, two- and three-family homes that are ubiquitous in the neighborhoods surrounding campus. Historically, both towns have been working-class and middle-class communities where rents and housing prices were affordable. The prevalence of multi-family homes have provided Tufts’ students with cheap rents close to campus. Over the past 20 to 30 years, as housing preferences changed, both cities have become desirable places to live. Somerville, in particular, has seen some of the highest home value growth in the nation over this time period. Spurred in part by the extension of the Red Line in 1984, Davis Square has evolved from an economic backwater into a cultural hub with a thriving restaurant and nightlife scene. Rising home values and rents have also made the city untouchable for low-income and even middle-class renters and prospective homebuyers. What has this meant for Tufts graduate students and faculty?

By some measures, graduate students are relatively well-served by the private housing market today. About half of all graduate students are able to live within walking distance to campus. The average graduate student lives in a home with 3 or more bedrooms, lives with one or two roommates and pays about $900 in rent. For a three-bedroom unit, $2,700 is within the area’s Fair Market Rent. Other figures tell a different story: 57 percent of all graduate students are extremely housing cost-burdened, spending more than 50 percent of their income on rent, while 30 percent spend more on rent than they earn. Eighty percent were dissatisfied with the cost of housing and 92% found the process of securing housing stressful. To some extent, these numbers might not come as a surprise. The housing market is tight, and most students have limited incomes from part-time work. What is clear is that graduate students are stretched financially by the current housing market, and this when Tufts has not yet had its “Davis Square moment.”

Home prices and rents are expected to increase dramatically in the area when the Green Line Extension opens in Somerville in 2021. Today, 30 percent of graduate students live within a half mile of two of the new stations, Ball Square and College Ave. Rents in these areas are predicted to increase more than 30 percent as the Green Line will provide an important amenity to the region’s growing population. We know what this will mean for students - higher rents and more cost-burden. Many students are already living in apartments with more than 3 roommates, in violation of city ordinances in both Somerville and Medford, so there is little room left to double-up. The more important question is what does this mean for the University?

Most of Tufts’ peer institutions provide no more than a few hundred units of graduate student housing. The schools that do provide substantial amounts of housing do so because their rural location necessitates it, or their financial resources allow it. The availability of housing, so far, has not been a crucial feature in the competition to attract students, but that soon may change. Meanwhile, Schools with means – Stanford, MIT, Princeton – are all actively building, or have recently completed, graduate student housing projects. These schools recognize the importance of housing to the academic and personal success of their students, but also have significantly more financial capacity than Tufts. Institutions’ competing needs are tempered by their fiscal realities. After a decade of capital projects that have produced state-of-the-art academic buildings, and replaced a new power plant, but also tested the limits of its debt capacity, Tufts is probably not in a position to build graduate student residences. There is still a need for more undergraduate housing and a desire to turn a two-year residential experience into a four-year residential experience for undergrads.

Faced with its financial realities, what could the University do to address the housing needs of its graduate students? One option that we have explored is to partner with a private student housing developer. A private partnership
could produce cost-competitive apartments for graduate students at no cost to the University through a long-term ground lease to a developer who would build and operate the housing. A number of on-campus sites, such as the Cousens Lot or the surface parking lot on Boston Ave, could be used to build mixed-use graduate student housing. These sites are less than ideal for undergraduate housing. On-campus housing development would be the most politically-feasible option among the potential development sites we analyzed, as it would minimize concerns of institutional expansion. It could also be the most cost-effective and convenient for students. All new housing construction is expensive, and alternative plans to guarantee rooms in new off-campus developments does not guarantee that these units will be affordable to graduate students.

Another feasible option is for Tufts to lease units in an existing apartment building in Medford or Malden for graduate students and faculty, and guarantee a rental income stream to a landlord in exchange for control over rent levels. This could provide reasonable rental rates, help address the logistical challenges faced by international students, and enhance Tufts’ competitiveness in attracting the best graduate students and faculty.

Above all, what is clear from our analysis is the need for a campus master plan. While there was a housing study conducted recently that explored undergraduate housing, the campus has no campus master plan. A campus plan would allow the university to think strategically and set goals for its future, and ensure that future capital projects align with these long-term goals and objectives. We hope our analysis helps to shed light on graduate housing at Tufts today and provides the University with useful information to use in future analysis.
INTRODUCTION
INTRODUCTION

In January 2019, a group of Urban and Environmental Policy and Planning graduate students were tasked with assessing opportunities for Tufts to invest in new housing ventures in Medford or Malden. These cities were selected due to their proximity to the Tufts Medford/Somerville Campus, lower real estate values than in Somerville, and connections to the MBTA Green and Orange rapid transit lines. The aim of this study is to address the housing needs of graduate students and faculty, who face a lack of affordable options in the private housing market.

This project was born out of the dual concerns of the Campus Planning and Development Committee and the Faculty Work Life Committee, who have detailed the difficulty of recruiting and retaining faculty and graduate students given the increasing cost of living and the anticipation that the Green Line Extension will increase home values and rents even further.

Beginning in February of 2019, the Field Projects team conducted background conversations with campus planning and real estate officials to understand prospects for development and potential projects on the University’s radar as well as to get an understanding of the University’s criteria for evaluating such a development.

In March, the team developed matrices to compare housing policies for graduate students and faculty at two groups of colleges and universities: peer institutions, as identified by the Office of Institutional Research, and institutions in the Greater Boston area. These matrices inform the project’s final recommendations to see how Tufts’ policies compare to its peers.

In April, the Field Project Team conducted a Graduate Housing Survey to obtain baseline data for current housing conditions and better understand the nature of graduate student housing at Tufts, the vast majority of which is supplied by the private market.

In May, the Field Projects Team delivered the findings of the study to the Office of the Dean of Student Affairs at UEP’s Field Projects presentations. In the Fall of 2019, the team will present their findings to the Campus Planning and Development Committee, with policy recommendations to inform Tufts’ strategy for graduate student and faculty housing.

PROJECT BACKGROUND

Housing at Tufts

The housing needs of graduate students and faculty are part of the larger context of student housing, including undergraduate. Universities, faced with fierce competition to attract the best students, have chosen to use limited resources to prioritize the construction of core academic facilities. Coupled with overheated real-estate markets, this approach has led to the situation we are in today, in which students, both undergraduate and graduate, need to secure housing in an overheated real estate market.

Housing has become a politically-charged issue at Tufts. According to a university-commissioned study conducted by the Sasaki Associates, 75% of Juniors and Seniors lived in off-campus housing in 2015\(^2\). Most of these students would have preferred to live on campus, evidenced by a waitlist of more than 500 students for on-campus units\(^3\).

The lack of on-campus housing for undergraduates has led to bed-optimization and tiered pricing strategies that have sparked student protests. The Tufts Housing League, formed in response to these strategies, has called on the University to build a dorm to increase the number of undergraduates who can live on campus and reduce the demand pressures on surrounding communities’ residents threatened by displacement. Despite the lack of housing, Tufts plans to increase undergraduate enrollment, which may further aggravate current tensions.

As housing prices and rents in Somerville and Medford have increased dramatically during the past twenty years, Tufts’ lack of on-campus housing has gained the attention of community leaders. City Councilors in Somerville have called on Tufts to build more housing for undergraduates. In 2015, Somerville passed
an ordinance stipulating that no more than four unrelated individuals live in rental units, and requiring the University to report the addresses of all undergraduate and graduate Tufts students living in off-campus housing. Medford followed suit in 2017, passing a similar ordinance, with no more than three unrelated individuals living in rental units, and also required Tufts to identify apartments occupied by more than three students. A report detailing input from the community submitted to the city about the Somerville-Tufts Community Partnership Agreement states, “Tufts should build significantly new student housing on campus and should be allowed to build vertically beyond standard zoning limits to provide as much housing as possible.”

These pressures affect housing for graduate students and faculty as well. While the University is asked to house more of its students on-campus, neighbors have balked at Tufts’ plans to acquire new buildings and expand the capacity of existing wood-framed houses surrounding campus. Efforts to provide more housing for graduate students and faculty have been viewed as signs of University encroachment into the neighborhoods. Tufts’ attempt to acquire a 40-unit apartment building blocks from campus was rebuffed by Somerville officials. They felt that the acquisition would remove housing stock from the private market, which would be inconsistent with the city’s goals of increasing its housing stock. The city’s sentiments were echoed by City Councilor Katjana Ballantyne: “Tufts University should house more students on their existing campus instead of expanding into the community and taking housing away from residents.”

Demand for off-campus housing near the University has led to overcrowding in the community’s multi-unit, detached houses, as landlords take advantage of a tight housing market and students’ desire to live close to campus. According to University surveys administered to Juniors and Seniors between 2014 and 2017, 22 percent of housing units occupied by Tufts students in Somerville were noncompliant with the occupancy limit of four unrelated persons per household, while 54 percent of the units in Medford were non-compliant with its three-person limit. Juniors and Seniors forced into off-campus housing report an erosion in the sense of community among students as well as difficult situations created by absentee landlords and conflicts with neighbors.

Graduate Student Housing

While the undergraduate housing shortage has garnered the most attention, graduate students and faculty face the same tight off-campus housing market, with even fewer options provided by the university. Around 65% of undergraduates have on-campus housing options, but there are only enough beds for 6 percent of graduate students. This figure is slightly below the 9.8% of Boston-area graduate students who live in on-campus housing. The majority of Tufts-owned graduate housing is in Blakeley Hall, an on-campus dorm reserved for students of the Fletcher School. Blakeley consists of two- to three-bed suites, each bedroom seven by ten feet in dimension. In 2018-2019, Blakeley residents paid $6,942 to stay for the nine-month academic year (late August to early May), or approximately $771 per month.

The remaining beds are scattered among ten wood-framed houses on streets adjacent the campus. First preference for these limited units are given to international students who apply for housing, and then via a lottery system. Rooms range from $9,202 per academic year for a small to $9,794 for a standard and $11,410 for a premium. Assuming a 9 month academic year, this calculates to $1,022 per month for a small, $1,088 for a standard, to $1,267 for a premium room.

“We don’t have sufficient graduate and faculty housing, and a lot of other institutions do.”

For Boston-area universities, providing housing for graduate students is not a priority. Campus planners from Tufts and other Boston-area institutions expressed this sentiment in our conversations. While they recognize that housing is a basic need and can support the University’s core mission by attracting and retaining the best
Figure 1. Existing stock of off-campus graduate student housing owned by Tufts. (Source: Connor Ring ArcGIS Map)
students, the institutions are faced with limited resources and limited supply that cannot even meet the demand of its undergraduates.

It makes sense that with limited resources, the University would prioritize housing its undergraduates, at least its Freshmen and Sophomores. Graduate students tend to be older, economically independent, and have experience in the private housing market. Unlike undergraduates, graduate students are not considered by community neighbors to be immature, noisy groups that require supervised housing. In this way, graduate students tend to blend into the neighborhood better. Politically, municipalities have pushed Boston-area universities to house a greater portion of their undergraduate population, but this push has not extended to graduate students. This is in spite of the fact that graduate students in Greater Boston, by their sheer number, have a greater impact on the private housing market: the number of graduate students living off campus who were not previously established in the region is 38,500 compared to only 35,400 undergraduates.

“But the real pressure on the Boston housing market is now coming from graduate students who make up an ever-larger share of university enrollments.”

This calculation may have to change. Undergraduate enrollment at the 30 universities in the City of Boston declined between 2013 and 2016 by 440 students, but graduate enrollment increased by more than 3,000. During this period (2013 to 2016), Northeastern increased undergraduate enrollment by 261, but also added 2,801 graduate students. Boston University reduced undergraduate enrollment by 68 but added 450 graduate students, and the Mass College of Pharmacy and Health Sciences enrolled 794 fewer undergraduates while enrolling 792 more graduate students. Adding the year 2017 to these figures, total enrollment in Boston universities had increased by 2.8% since 2013, for a total of 147,689 students. This enrollment increase is comprised of graduate students, a cohort that has grown by nearly 4,000 (7.7%) since 2013, while the number of undergraduate students has remained flat.

It’s unclear if these figures are part of a broader trend. The US Department of Education projected (in 2018) that total undergraduate enrollment would increase by 14% between 2015 and 2026 and graduate enrollment to increase by 12%. These figures would be a levelling-off of rapid growth for both groups, which saw undergraduate enrollment increase by 24% between 2001 and
Figure 5. Campus map showing off-campus properties owned by Tufts, Walnut Hill, and various Greek Life organizations. 
(Source: Tufts University)
2015, and graduate student enrollment grow by 33% during this time period.

**Faculty Housing**

Faculty members face a similarly daunting task in their search for housing. The University currently provides 54 market-rate units of rental housing for faculty and staff in Tufts-owned wood-frame houses surrounding campus and in the Hillside School property, a former schoolhouse purchased from the City of Medford in 2001. These units are owned and managed by Walnut Hill Properties, a 501(c)(3) property ownership and management company which operates as a non-profit subsidiary of Tufts. The University’s acquisition of these houses over decades, starting in the 1970s, was intended to provide a buffer between the campus and the residential neighborhoods, with a mix of academic offices and housing units for faculty and staff. But as on-campus student housing demands have increased, a number of wood-framed homes have been renovated and repurposed to house Juniors and Seniors. This new development of repurposed wood-frames, called Community Housing, or “Co-Ho,” is expected to provide housing for more than 140 undergraduate students when fully complete in 2019.  

Unfortunately, a number of faculty and staff had to leave the houses to make room for the undergraduate development. While their displacement was not ideal, the University felt that the need to house undergraduates was a greater priority than providing housing to faculty and staff. Walnut Hill now offers its units as housing for new faculty and staff for a limited occupancy period of three years. Existing residents not displaced by Co-Ho have been allowed to remain. While their displacement was not ideal, the University felt the need to house undergraduates was a greater priority than providing housing to faculty and staff. While some faculty had long-occupied the units, for faculty and staff who have recently relocated, for a limited period of three years.  

“Walnut Hill Properties performs an incredibly valuable service to a university community situated in [one of the] most expensive rental market[s] in the country, and I have felt more comfortable working with them than striking out on the larger real estate market.”

Outside of the limited number of temporary units offered to faculty and staff, the private housing market poses significant challenges to faculty looking to buy or rent in the communities surrounding campus. Both home prices and rents have risen throughout the Greater Boston region, as has the share of renters and homeowners who are housing cost-burdened. More than 52% of all renter-occupied households in Greater Boston spent more than 30% of their income on rent according to the latest census data, up from 39.2% in 2000.  

The number of homeowners spending more than 30% of their income on mortgages has increased to more than 35%, up from 26% in 2000. Housing supply has not kept pace with population growth in the region and the increased competition has driven up prices.

The increase in home prices has led to a decline in the homeownership rate in the region, from 66% in 2010 to 58% in 2016. This decline has been particularly pronounced among young first-time homebuyers, who face high barriers to entry. The real estate research site Zillow’s Home Value Index, measured historical increases in home values in the five cities surrounding the Medford/Somerville campus. Between 2011 and 2019, home values increased by 89% in Medford, 108% in Somerville, 71% in Arlington, 94% in Cambridge, and 91% in Malden. As of the end of March 2019, stated that the median home value was $601,100 in Medford, $717,400 in Somerville, $756,000 in Arlington, $808,100 in Cambridge, and $471,700 in Malden. All of these communities are expected to see home values rise by more than 8% in 2019, as of March 2019. Median listed rents stand at $2,690 in Medford, $3,000 in Somerville, $2,225 in Arlington, $3,000 in Cambridge, and $2,000 in Malden. While Malden remains comparatively affordable with a median home value of $471,700,
and a median rent of $2,000, the city’s center is experiencing a construction boom and an influx of new market-rate rental housing. These developments will likely increase property values and rents.

Together with the cost of childcare, which in Massachusetts is the second most expensive in the country, housing costs prohibit new faculty from living close to the Medford/Somerville Campus, especially lower-paid full-time and part-time lecturers. Faculty who live further away are typically less available to students and are less able to participate in campus events and activities outside of the classroom. While it is difficult to quantify if the increased cost of living has affected hiring or retention – there is anecdotal evidence only – it is clear that a more proactive approach is needed to ensure that Tufts attracts the best faculty and graduate students by helping them to secure affordable housing near campus in the future.

### Green Line Extension

Looming over the already precarious housing situation is the Green Line Extension. This long-planned rapid transit project in Somerville is expected to exacerbate the current housing situation even further despite the benefits it will provide. The extension of the MBTA’s Green Line from its current terminus at Lechmere in East Cambridge to College Avenue in Medford will reduce travel times and improve transportation connections between the Medford/Somerville campus and downtown Boston. It is also projected to raise rents and home prices in areas of Somerville and Medford that are now unserved by rapid transit. By increasing rents and property values, the long-planned Green Line Extension is likely to reduce the number of housing units affordable to graduate students and faculty. Currently, more than one third of Tufts graduate students live within a half-mile of the Green Line Extension stations (see Figure 25). There is a high concentration of graduate student housing units near the stations closest to campus: Ball Square in Somerville close to the Medford line, and College Ave on campus in Medford. The Metropolitan Area Planning Council (MAPC) projects that rents for units within a half-mile of the Ball Square station will increase between 29% and 34%, and those of units within a half-mile of the College Ave station will increase between 35% and 37%. For the typical Tufts graduate

| Table 1. Home values and rents in five cities surrounding Tufts’ Medford/Somerville campus |
|---------------------------------|------------|------------|------------|------------|-----------|
|                                | Medford    | Somerville | Arlington  | Cambridge  | Malden    |
| Median home value 2019         | $601,000   | $717,400   | $756,000   | $808,100   | $471,700  |
| Increase over 2018             | 5.1%       | 4.9%       | 5.8%       | 4.4%       | 7.4%      |
| Estimated increase in 2020     | 3.8%       | 4.2%       | 3.7%       | 3.9%       | 4.1%      |
| Median list price per square foot | $404     | $612       | $440       | $810       | $356      |
| Median listing price           | $599,900   | $821,300   | $744,000   | $899,000   | $390,000  |
| Median sale price              | $567,300   | $634,200   | $683,200   | n/a        | $438,400  |
| Difference between list and sale | -5.7%     | -29.50%    | -8.90%     | n/a        | +12.4%    |
| Increase in home value, 2011-2019 | 89%        | 108%       | 71%        | 94%        | 91%       |
| Median listed rent price        | $2,690     | $3,000     | $2,225     | $3,000     | $2,000    |
| Median list rent per square foot | $2.07     | $2.67      | $2.39      | $3.34      | $2.05     |

student, who currently pays a median rent of $900 and a mean rent of $1,105, the Green Line Extension could cause median rental prices to increase to more than $1,200 a month for a significant number of graduate students.

While the urban renaissance that has transformed Somerville and the communities surrounding Tufts has had many benefits, increasing rents and housing prices now threaten to undermine the University’s core academic mission. The Green Line Extension will improve mobility and access to Boston, for Tufts as well as for Medford and Somerville as a whole, but will also serve to drive up land values, increasing the cost of housing for faculty and students. If the private market can no longer provide convenient and affordable housing options to the Tufts community, a more proactive approach may be required. But who will make this decision? One of the primary challenges to addressing graduate and faculty housing is that “the problem doesn’t quite live anywhere.”

The decentralized academic structure at Tufts means that there is no one office that can take ownership of the issue, but one administrative office and one faculty committee that are beginning to think proactively about housing are Student Affairs and the Planning and Campus Planning Committee.

**PARTNER BACKGROUND**

Mary Pat McMahon has served as the Dean of Student Affairs for the School of Arts and the School of Engineering (AS&E) since 2014. Before coming to Tufts, she was the Associate Dean of Student Affairs/ Director of Residential Life at Bowdoin College from 2008 to 2014, where she oversaw Bowdoin’s residential living and learning community. At Tufts, Dean McMahon and The Division of Student Affairs coordinate different developmental, leadership, health and safety resources for AS&E students, including residential life and learning.

The Tufts Campus Planning & Development Committee (CPDC) advises the university administration on matters concerning the physical character and development of the Medford/Somerville campus. Additionally, the committee reviews the physical development needs of the campus and recommends facilities and priorities for capital investment. Project partner Justin Hollander, Professor in the Department of Urban and Environmental Policy and Planning, co-chairs the committee while Dean McMahon is an ex-officio committee member.

At the beginning of every semester, the University’s Vice President of Operations delivers a written summary of all future campus planning...
and development projects on the Medford campus to the CPDC. All members of the CPDC meet two or three times every year and review those plans and development projects. Through these meetings, the CPDC compiles a set of concerns and aspirations of all the Arts, Sciences and Engineering faculty for each set of plans and development projects.

Throughout the 2017-2018 academic year, the CPDC meetings discussed the challenges graduate students and faculty are likely to face due to high living costs, which threaten the recruitment of both graduate students and faculty. Due to the current and anticipated increases in property values and rents in Medford and Somerville, the CPDC joined forces with the Tufts School of Arts and Sciences and School of Engineering (A&SE) Faculty Work/Life Committee (FWLC) to make graduate student and faculty housing a priority for the university.

In May 2018, the FWLC issued a report incorporating CPDC’s concerns to emphasize the importance of addressing graduate and faculty housing in order to maintain Tufts’ ability to attract and retain both graduate students and faculty. Both committees declared that further study is needed to assess the possible strategies and opportunities for Tufts to invest in new housing projects in Medford or Malden, due to their strategic location on the Orange Line and proximity to the Tufts Medford/Somerville Campus.

**PROJECT GOALS**

The goal of this Field Project is to examine strategies the University could pursue to better meet the housing needs of graduate students and faculty who study and work on the Medford/Somerville campus of Tufts University. We explore the potential for private housing development partnerships, transportation initiatives, and policies to alleviate the cost burden of graduate students and faculty housing.

To achieve our project goals, we asked the following research questions:

**Current housing and transportation patterns**

- What is the spatial distribution of housing for graduate students and faculty who study and work on the Medford campus?
- How much do students and faculty pay for housing?
- What percentage of students housing cost-burdened?
- What are the physical characteristics of the housing where Tufts graduate students reside?
- How do demographic differences affect housing needs and choices among graduate students?
- What are the particular housing needs of graduate students and faculty?
- How satisfied are graduate students with their housing?

**Real estate landscape in neighboring communities**

- What are the current patterns in rents, home sales prices, and housing stock in nearby areas?
- Where are available parcels of land/sites for future development projects?
- What are the development costs of recent student housing?
- What are the political/regulatory barriers to the development of graduate student and/or faculty housing in the neighboring communities?

**Possible solutions to meet housing needs**

- What are the current best practice models for graduate student housing development?
- What are the political challenges or opportunities for private partnership housing models?
- What are other universities doing to alleviate the cost burden of housing for graduate students and faculty?
- What criteria should the university use to evaluate development models?
- How could Tufts transportation services be enhanced to expand housing opportunities?
- Are there any Tufts-owned properties that could be developed or repurposed for graduate and/or faculty housing?
- Are there available sites in Medford and Malden for partnerships with private developers?
- Are there existing rental properties in Medford and Malden in which Tufts could lease units?
METHODS

LITERATURE REVIEW

We conducted a literature review of student housing trends in the U.S. and Greater Boston to better understand how universities are addressing this issue. We also explored the growing field of public-private partnerships in student housing development to better understand how different models for development operate and the benefits and drawbacks that they create for universities.

SURVEY

Using Qualtrics Survey software, we have conducted a comprehensive survey of 2,000 graduate students in the School of Arts and Sciences, Engineering, and Fletcher School of Law and Diplomacy. This online housing survey helped to identify the current housing patterns of Tufts graduate students and gather baseline data of graduate student housing patterns. Specifically, the survey addressed:

- Satisfaction rates of students about their current housing situation, costs and availability in general
- Rent rates
- Commute to campus, including distance, mode and time
- Housing attributes such as number of bedrooms and roommates
- Housing preferences and needs such as price, proximity, safety, and convenience
- Demographic information such as age, gender, origin and international status

INTERVIEWS

We conducted interviews with campus planners and project managers at Tufts and Northeastern, real estate developers, a former Tufts trustee, and Tufts professionals in real estate, government relations, and transportation management. From those interviews, we learned about:

- Tufts’ perspective on graduate student housing
- The existing stock of graduate and faculty housing at Tufts
- Faculty’s housing needs and expectation from the University regarding housing
- Political hurdles to development and community pressure to house students
- Financial constraints on new housing development
- Northeastern’s experience with private development partnerships and American Campus Communities
- Parcels and properties that could be built, developed, repurposed or sold to third parties for graduate and/or faculty housing

SPATIAL ANALYSIS

Using ArcMap GIS software, we conducted a spatial analysis of existing graduate student housing patterns and of potential areas for graduate student housing development in Medford and Malden.

Sites available for development were identified through analysis of existing land use patterns and access to public transportation. We examined the spatial characteristics of sites to evaluate whether they would be suitable for future graduate housing development. Proximity to transit, likely commute times to campus, parcel size and existing zoning, and availability of grocery stores and other amenities are the factors that used to analyze possible future development sites.

POLICY MATRICES

To understand how peer and local universities address graduate student and faculty housing, we created two comparative policy matrices, one for policies toward graduate housing, and one for faculty housing. Peer institutions are the ones used by the Office of Institutional Research, and local universities are non-peers that share the same Greater Boston housing market. We looked into factors that may influence university housing policies, such as location, student enrollment, and faculty size. We also collected information on the existing stock of graduate and faculty housing at these institutions, including their current housing capacities, rent rates, and housing types. Based on this analysis, we found common challenges and practices among them, which helped to place Tufts’ housing issues in a broader perspective.
LITERATURE REVIEW
LITERATURE REVIEW

The lack of affordable student and faculty housing are not an issue unique to Tufts. This section puts graduate and faculty housing into the broader context of student housing to understand the reasons for shortages and looks into how institutions are responding to this challenge.

STUDENT HOUSING BUILDING BOOM

Providing student housing is both a necessity in high-cost housing markets and serves as a competitive advantage in universities’ competition for high-achieving students. Demand for housing close to campuses remain strong, especially at well-known universities, which are looking for new ways to expand. Many universities have gone through a building boom in recent years. UC Davis is building the largest student housing development in the nation, nearly 3,300 beds, in The Green at West Village. In 2017, Texas A&M University built 3,000 beds and Florida State University added 2,500 beds. The University of Southern California built the 15-acre USC Village, a $700 million mixed-use facility with retail space, a dining hall, a 30,000-square-foot fitness center, and housing for 2,500 students. While less common, universities are also building graduate student housing. Stanford is currently building a graduate student village with more than 2,400 beds, scheduled to open in 2020.

For many urban universities in high-cost metro regions, land has become increasingly scarce and expensive. Private student housing developers face a similar shortage of land. “With so much of what’s being built and developed in core urban areas closer to campuses, it’s harder to find land for these projects,” says Taylor Gunn, the Student Housing Analytics Leader of Axiometrics, a real estate market research firm. “Land cost and availability may have contributed to a 24% falloff in off-campus bed deliveries, to around 47,000, in 2015, according to Axiometrics.” Nevertheless, developers have continued their push to build more student housing. The international student housing developer Scape has recently set up U.S. headquarters in Boston and has acquired two parcels in the Fenway neighborhood. They have filed plans for a 533-bed, privately-run dorm and the second parcel would give them the potential capacity to construct nearly 2,000 beds.

FINANCIAL CONSTRAINTS

Despite the boom in student housing at some schools, many universities struggle to meet housing demand. Universities’ desire to maintain their debt capacity, their future ability to borrow for expansion, coupled with the growing cost of housing development, has exacerbated the shortage of university-supplied housing. Public institutions have traditionally financed new student housing by issuing bonds, which contributed to the state or the university’s debt. Too much debt can lead credit rating agencies to downgrade their bond rating and make it more difficult and costly to borrow money for other purposes in the future. Public institutions, facing pressure to increase enrollments while experiencing a decrease in public funding, have chosen to utilize their debt capacity for academic, rather than residential, projects. While student housing can serve as an amenity to market to prospective students, faced with limited resources, have prioritized academic expansion over non-revenue generating projects, like student housing.

STUDENT HOUSING IN GREATER BOSTON

There were 33,210 undergraduate students and 32,303 graduate students living in units in the private housing market in 2017; a total of 65,513 students exerting pressure on the area’s private housing market. In Greater Boston, the gap between enrollment and planned beds is of at least 39,468. Undergraduate students are perceived to have a greater impact on housing markets, because graduate students are generally financially independent working adults and may have resided in the region prior to matriculation. However, both undergraduate and graduate
students who move to the region compete with local residents for housing resources. In sheer numbers, graduate students have an equal, if not larger, impact on local housing markets, depending on the figures used. The Greater Boston Housing Report Card 2017 tallied nearly 3,000 more graduate students than undergrads living in the private market in Boston. This does not include students living at home with parents or those who already resided in the city. Graduate student enrollment has actually outpaced undergraduate enrollment in recent years.\textsuperscript{40}

Increasing enrollment means more students seeking housing in communities near university campuses, which drives up demand. The overall undergraduate and graduate enrollment at colleges and universities in the Boston area was 147,689 in the 2017-2018 academic year. This represents a net growth of just under 4,000 (2.8%) students since 2013, and a 2,300+ (1.6%) student increase over the previous year.\textsuperscript{41}

**HOUSING INTERNATIONAL STUDENTS**

While the lack of university-owned graduate housing options affects all graduate students, it is important to give special attention to groups that face additional challenges. At Tufts’ Medford/Somerville campus roughly 30% of graduate students are international students. International students are generally unfamiliar with the US housing market and often must secure housing before moving to the US. Many do not have the ability to make the deposit required to secure housing, to visit the house before moving in or connect with other students looking for housing. Certain students, due to their visa status, are subject to strict federal laws that regulate any additional income they could receive from employment. Often times they have to minimize their food and leisure expenses to afford living in the cheapest housing options.

**GROWTH OF PUBLIC PRIVATE PARTNERSHIPS**

Universities’ residential expansions have been increasingly fueled by the private sector. Public-private partnerships (P3s) in higher education housing development have increased rapidly over the past ten years. Over three-hundred private student housing projects were completed in the U.S. between the late 1990s and 2011, totaling over $9.3 billion and 214,000 beds.\textsuperscript{42} For public institutions, the trend was born out of necessity, as many were barred by state legislatures from taking on debt to finance housing construction.
The need to increase enrollments has escalated increased competition among colleges for the highest-achieving students in order to boost reputation and rankings, which attracts more applicants and allows universities to remain both academically competitive and financially solvent.

Stuck between trying to attract top students and not being able to take on debt to finance residential construction projects, higher education institutions have turned to P3s to “quickly and cheaply construct new housing without contributing to the university’s debt.”

Both public and private universities have entered into private partnerships to build housing for undergrads, graduate students and faculty. Princeton, USC, Northeastern, the University of California Berkeley, the University of Colorado Boulder; Northeastern, Drexel, and Temple are just a few examples of universities who have partnered with private developers to construct on- and off-campus housing in recent years.

There are three established models of P3s in higher education student housing: university land lease, non-profit private foundation, and equity financing.

**University Land Lease**

In a land lease agreement, the university owns the land and leases it to a private developer. The developer finances, constructs, and manages the housing. The developer can then turn over the housing to the university (turn-key development), or keep managing the housing for a long-term ground lease, that can range from 30 to 99 years. The university maintains ownership of the land, but rents go to the developer. Most student housing properties built using the land lease model do not pay property taxes to the city because the university retains ownership of the land.

**Non-profit private foundation model**

In this development model, an institution employs a non-profit foundation, affiliated with the university, to issue tax-exempt bonds to finance construction. Funds from the bonds are used to pay a developer fee. Student rents are used to service the debt, then go back to the university for operating revenue.

**Equity financing**

In the equity financing model, the institution either leases land or a building to the developer in exchange for the institution having an equity stake in the housing facility. The developer finances the project and assumes the construction risk. The majority of the revenue goes to the developer; but a percentage goes back to the university. This model has been employed more frequently by Real Estate Investment Trusts (REITs), like American Campus Communities.

Northeastern used the equity financing model for their Lightview Apartments, an on-campus 21-floor tower of 825 beds in one to 4-bedroom apartments for undergraduate students, set to open in the fall of 2019. The land on which the building sits is leased to ACC for 45 years, while the building is owned by ACC. At the end of this period, ACC has two 15-year options to renew. If they are not exercised, ownership of the building reverts to the university.

**Trade-offs**

The models of public private partnerships offer trade-offs based on a university’s financial commitment. While P3s appear to meet a pressing university need by supplying housing quickly, it is unclear whether the cost savings experienced by universities are transferred to students. Publicly-traded REITs like American Campus Communities serve their investors and must provide a promised return on investment to shareholders. Allowing a private developer to set rents for student housing means that students will pay the highest rents
supported by the market and thus may not prove an affordable option. The market, however, may be defined as existing on-campus residence halls. In the case of Northeastern’s Lightview Apartments, the 825-bed project developed by American Campus Communities, the units are currently priced competitively compared to on-campus dorms. A twelve-month lease costs $16,008 per year ($1,334/mo) for a shared room and $19,068 ($1,589/mo) for a single. The most expensive on-campus dorm at Northeastern is $12,504 for a shared room ($1,389 mo) and $14,698 ($1,633/mo) for a single for the nine-month academic year. As of March 2019, all units had been leased.

The total development cost is $116.3 M for 320,000 square feet and 825 beds, or $363/sq. ft. and $141,000 per bed.45

“This novel approach means the university didn’t have to spend in excess of $100 million to build a new residence hall. Those funds can now be invested in our core mission of teaching, research, and providing even more financial aid.”46

At UC Berkeley there is an acute shortage of on-campus housing; in 2017 the campus had housing for only 22 percent of undergraduates and 9 percent of graduates. Through an equity financing partnership with ACC, the university built David Blackwell Hall in 2018, a 775-student 8-floor residence for freshmen, built one block away from campus. Ground-floor retail subsidizes the cost of the housing. Beds are priced the same as on-campus doubles ($15,406).

The project contains 186,000 gross square feet and was built for $97.8 million, or $186,000 per bed and $825 per gsf.47 While it is unclear as with Northeastern’s Lightview Apartments, if the rent is also a result of an agreement between ACC and UC Berkeley, both of these examples show that public-private partnerships can produce undergraduate housing that is competitively-priced compared with existing on-campus residence halls.

APPROACHES TO GRADUATE HOUSING

Tufts is not alone in facing problems in supplying graduate student housing. Many other institutions around the country face housing shortages and rising rents and have taken steps to address them.

Ease Demand by Housing More Undergrads (Cornell)

A housing study conducted by Cornell University in 2016 determined that there was a shortage of on-campus housing for graduate students.48 Only 6% of Cornell’s graduate and 48% of undergraduate students lived on-campus. Over the previous two decades, the median rent of private off-campus housing in Ithaca had nearly
doubled, causing many students to become housing-cost burdened, meaning that they spent more than 30% of their income on housing. To address their student housing issues, Cornell University chose to prioritize undergraduate housing and build a new campus expansion which would help them house all their first-year and sophomore students. The University believes that this project will improve the conditions and affordability of off-campus housing for the rest of the students, as relatively less demand for off-campus housing will stabilize rents in the surrounding neighborhoods of Ithaca’s private market.

**Build Graduate Housing Near or on Campus (Stanford and MIT)**

Stanford University is located in the heart of the Silicon Valley, the most expensive real estate market in the country. Wedged between tech giants in Palo Alto, Menlo Park, and Mountain View, housing affordability and availability is a primary concern for the university. Stanford’s academic campus is governed by a community plan and a general use permit, which sets a long-term framework for how the university can use its lands for academic purposes and housing. The plan must be approved by the County Board of Supervisors, with input from the community. The governance structure means the university must plan ahead and be held accountable to concerns of the local community. To address the ongoing housing issues, Stanford is building a new graduate student housing complex, the Escondido Village Graduate Residences, set to open in the fall of 2020, which will increase the percentage of graduates housed by the university to more than 75 percent. The project is a complex of four 10-story buildings, with wings ranging from six to 10 stories, that will house 2,431 graduate students.

MIT is also in the process of building new housing for its graduate students. In the heart of Kendall Square, directly adjacent to the Kendall MBTA station, construction has begun on a mixed-use building that will include 454 housing units (studios, 1 and 2-bedroom units), ground floor retail and two floors of academic office space. Completion date is set for 2020.

The project aims to create a bridge between MIT and Cambridge. Completely renovating two existing buildings (E-38 and E-39), and adding a new tower, the development will feature ground floor retail throughout, innovation forums and meeting spaces open to the Cambridge community, and MIT’s admission office, in addition to the graduate housing units.

**Partner with developer to build graduate housing (Princeton, USC)**

Princeton University partnered with American Campus Communities to build the on-campus Lakeside Apartments, a 329-unit, 715-bed graduate residential complex built in 2015. The project emerged from the university’s Housing Master
Plan in 2005 and the Campus Plan, begun in 2006. The plan set a goal of housing 70% of graduate students. Lakeside consists of 255 1, 2 and 3-bedroom apartments as well as 743- and 4-bedroom townhouses.

At Lakeside, the diverse housing options accommodate many different types of students. The complex has a suburban character, with twelve mid-rise and two-story buildings built on 14 acres on the banks of Carnegie Lake. It was built on campus and is served by Princeton’s shuttle service. Prices range from $700/person for a 4-bedroom unit to $1,376 for a 1 bedroom apartment. Lakeside was developed and is managed by ACC, but is owned by the university. In this case, Princeton wanted to leverage ACC’s development experience while maintaining ownership of the buildings. Princeton chose to finance construction themselves because they had fewer financial constraints and wanted greater control.

“We’re making significant progress toward our goals of better meeting the needs of our graduate students, faculty and staff as well as improving the condition and sustainability of our buildings, while limiting our impact on the surrounding neighborhood. And we’re accomplishing this by leveraging the expertise of the residential development sector.”

Prices at Lakeside Apartments for 2019-2020:

- 1 bedroom: $1,361-$1,376
- 2 bedroom: $1,764-1,796 ($882 - 898 per person)
- 3 bedroom: $2,391-$2,493 ($797 - 831 per person)
- 4-bedroom: $2,804-$3,336 ($701- 834 per person)

The University of Southern California’s (USC) Health Sciences Campus is currently building a 95-unit, 174 bed graduate housing facility developed with American Campus Communities. While the project was not envisioned in the campus master plan of 2011, a growing lack of housing in the neighborhood caused administrators to change course:

“We never thought about building student housing in 2011 … [but] our students are commuting in, they can’t find any housing in the neighborhood. We don’t want to displace the neighborhood, so after this master plan, we changed course and we opened up student housing projects.”

USC also completed Currie Hall in 2016, another graduate housing project with ACC: a 177-unit, 456-beds residence for medical students. The project contains 136,034 square feet and cost $50.2 million to complete, or $349 per square foot, and $110,000 per bed. It was developed with the American Campus Equity (ACE) financing model, the same used by Northeastern for the LightView Apartments.

Prices per person at Currie Hall for 2019-2020:

- Studio: $1,779/mo
- 1 bedroom: $1,869
- 2 bedroom: $1,339
- 3 bedroom: $1,219
- 4 bedroom: $1,169.

FACULTY HOUSING

The Boston housing market is expensive in relation to most other areas of the country. Both the School of Arts and Sciences and the School of Engineering have either lost new faculty candidates to other institutions, or lost existing faculty, for this reason. The current rise in living costs in neighboring communities including Somerville, Medford, Arlington, and Cambridge coupled with the likely increase in property values and rents along the new Green Line Extension have created a need for a set of strategies and policies to address faculty housing, particularly for incoming faculty who may be new to the area.

Rising housing costs, along with childcare and preschool costs, significantly impact the cost of living, especially for families with more than one child. For a family, housing costs (rent or mortgage) in the vicinity of Tufts are roughly
$2,500/month, infant child care is around $3,000/month, and preschool cost is around $2,000/month. Depending on the number of children, childcare and housing together can range from $4,000 to $9,000/month.\textsuperscript{61}

The increasing living cost in the Boston area often forces new faculty at Tufts to purchase their first home in areas far from campus. Increased commute times can be detrimental for faculty as it can affect their productivity, decrease the amount of time they spend on campus with students, and reduce the time they allocate to university activities outside of the classroom.

Longer commute distances for faculty because of high housing costs in nearby areas can also impact the effectiveness of commuting benefits and incentives that Tufts currently offers. If faculty are forced to find housing in areas far from campus, then commuting benefits that incentivize carpooling and using public transit may no longer be helpful.

In 2012, Tufts’ AS&E faculty Task Force on Work/Life Balance investigated how Tufts’ peer institutions and other Boston-area universities addressed faculty housing. According to the task force’s report, Brown, Columbia, Harvard, MIT, UCLA, and Washington University programs provided more help with mortgages compared to Tufts, committed to re-purchasing housing from faculty, and/or awarded housing supplements to certain faculty.\textsuperscript{62}

The 2012 report explained the services offered by the Real Estate Advantage Program (REAP) at Harvard and Faculty Housing Assistance Program (FHAP) at MIT and also highlighted Boston University’s cash-back offerings for faculty on home purchases and sales.

In 2018, Tufts’ AS&E faculty Work/Life Committee (FWLC) again examined the state of faculty housing strategies across 20 institutions to underline the different approaches other universities have taken to address faculty housing. According to the FWLC, mortgage assistance programs and university-owned housing close to campus were common forms of assistance offered to faculty.

The FWLC noted that mortgage assistance programs across the 20 institutions they studied took different forms. Harvard’s mortgage assistance program consists of partnerships with Mortgage Network Inc. and Citizens Bank which offer Harvard faculty mortgages at reduced rates and/or closing costs.\textsuperscript{63} Additionally, through a partnership with Coldwell Banker Residential Brokerage, Harvard also offers its faculty cash rebates on home purchases and sales and connects its faculty with real estate brokers for reduced fees. The FHAP at MIT primarily aims to support newly hired junior and senior faculty as well as recently tenured faculty.\textsuperscript{64} FHAP’s mortgage assistance is based on a tax-efficient, minimum interest, second mortgage program and is applicable to residential properties purchased within a 50-mile radius of the MIT campus (an area that reaches into New Hampshire to the north, Rhode Island to the south, and west of Worcester in Massachusetts). Likewise, Brown also offers mortgages at reduced rates through partnerships with Mortgage Network Inc, Citizens Bank, and Santander Bank. Amongst other Boston-based institutions, Boston University also offers mortgage assistance through mortgage credits; Northwestern, Dartmouth, and Washington University are other institutions with faculty mortgage assistance programs.\textsuperscript{65}

According to the FWLC, mortgage assistance amounts currently offered at Tufts are not substantial and are unlikely to alleviate the burden of housing costs as home prices continue to rise.

In addition to recommending that Tufts create more partnerships that can improve the mortgage assistance the university currently provides, the FWLC also stressed the importance of supporting faculty who face long commute times. Increased commuter MBTA benefits and carpooling are some options. Additionally, the FWLC highlighted that the development of “crash pads” – a shared space for commuters to rest, study, work, and occasionally stay overnight – can help faculty spend more time on campus and offset the difficulties faculty with long commutes face.\textsuperscript{66} Tufts currently offers such a facility for students at the Hillside House, located at 32 Dearborn Road in Somerville to sophomores who commute to campus from home.\textsuperscript{67}

The Hillside House offers amenities such as a shared kitchen, study spaces, common rooms, and bedrooms for overnight stay.
GRADUATE STUDENT HOUSING PATTERNS AT TUFTS
In order to recommend solutions that meet the needs of graduate students, we wanted to better understand where graduate students currently live. We analyzed 1,733 graduate student addresses, provided to us by the Office of Student Affairs and the Fletcher School. Our analysis captured approximately 86 percent of all graduate students on the Medford/Somerville campus. The 14% not included in our analysis had out of state or international addresses. This spatial analysis helped us to understand student housing preferences, where graduate students are choosing to live, and where the housing market is providing options that meets those needs. As can be seen from Figure 14, the number of graduate student housing units is highest in the neighborhoods directly adjacent to campus. The concentration of graduate student housing units extends fairly symmetrically from campus into the neighboring towns of Somerville, Medford, Arlington, Cambridge, Revere, and Malden. Other cities and towns contain graduate student housing units, but at an insignificant concentration (<4 per block group).

It should be noted that there is a small but not-insignificant number of graduate students that live beyond the maps displayed below. In order to best display the maps at a readable scale, we decided not to show these block groups. There are also a number of students whose local address is listed outside Massachusetts. These addresses (<20) were not included in the analysis. Some of these addresses are in neighboring states like Rhode Island and New Hampshire, while others are out of state addresses that are more likely home addresses collected before a local address was established. Both of these groups of addresses were excluded from the analysis so they would not skew the results.

**SPATIAL ANALYSIS OF GRADUATE STUDENT HOUSING**

To gain a better understanding of how far students are currently living from the Medford/Somerville campus and to identify some key spatial trends, we conducted a spatial analysis of housing address data. Key findings from our analysis are listed below. All figures in the text are rounded, and precise in the graphs. For the purposes of our analysis, the center of campus was 160 Packard Ave. This location was chosen because it is located near the center of campus geographically.

**Proximity to Campus**

Our analysis reveals that the median distance from the center of the Medford/Somerville campus of current AS&E graduate student addresses is 1.16 miles. The median distance from campus for international students is 0.98 miles which is 40% lower than the median distance from campus for domestic students. The median distance from campus for Master’s and PhD students is 1.10 and 1.28 miles respectively. The median distance from campus for Fletcher School students is 0.71 miles which is 55% lower than the median distance from campus for AS&E students.

A majority of graduate students in the AS&E and the Fletcher School live approximately one mile away from campus while some students who are outliers, live in areas that are very far away from campus - a pattern that can be seen in Figure 18 and Figure 19 below. It should be noted that these figures are for the graduate students who live in Massachusetts only.

Further analysis reveals that 42.3% of AS&E graduate students are currently living within one mile of campus. 37% of domestic graduate
Figure 13. Tufts Graduate Student Population Density by Census Block Group. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)
Figure 14. Regional Distribution of Tufts Graduate Student Housing Units by Census Block Group. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)
The median distance from campus for all AS&E students: 1.16 miles

The median distance from campus for International AS&E students: 1.21 miles

The median distance from campus for Domestic AS&E students: 1.08 miles

The median distance from campus for Master’s AS&E students: 1.10 miles

The median distance from campus for PhD AS&E students: 1.28 miles

The median distance from campus for AS&E students: 0.71 miles

The median distance from campus for Fletcher School students: 1.16 miles

The median distance from campus for Domestic AS&E students: 1.19 miles

The median distance from campus for International AS&E students: 1.21 miles

The median distance from campus for Fletcher School students: 1.16 miles

Figure 15. Median distance from campus of current Tufts AS&E graduate students - by international status. (Source: Connor Ring and Rajat Shrestha spatial analysis)

Figure 16. Median distance from campus of current Tufts AS&E graduate students - by degree. (Source: Connor Ring and Rajat Shrestha spatial analysis)

Figure 17. Median distance from campus of current Tufts AS&E and Fletcher School students. (Source: Connor Ring and Rajat Shrestha spatial analysis)

Figure 18. Distribution of distances from campus (All AS&E Students). Histogram of the distance from campus of current Tufts AS&E graduate students. (Source: Connor Ring and Rajat Shrestha spatial analysis)

Figure 19. Distribution of distances from campus (Fletcher School Students). Histogram of the distance from campus of current Tufts Fletcher School graduate students. (Source: Connor Ring and Rajat Shrestha spatial analysis)
students are within one mile from campus while this percentage is 57% for internationals (53% higher).

Additionally, the housing address data reveals that a higher percentage of Master’s students live within one mile of campus compared to PhD students. 48% of Master’s students live within one mile of campus while this percentage is 44% for PhD students.

Likewise, a higher percentage of Fletcher School students live within one mile of campus. According to our analysis, 56% of Fletcher School students are currently living within one mile of campus—which is 32% higher than the percentage of all AS&E students living within one mile from the Medford/Somerville campus.

**Proximity to bus stations that connect to Campus**

This analysis reveals that overall, 51% of students live within walking distance of bus routes that serve the Tufts campus. Sixty-six percent of international students are currently living within walking distance of such bus stations while this percentage is lower for domestic students (46%).

The analysis also revealed that a higher percentage (60%) of PhD students are living within walking distance of such bus stations compared to Masters students (48%).

42.3%
The number of AS&E graduate students who live within 1 mile from campus

57.1%
The number of international AS&E students living within 1 mile from campus

37.3%
The number of domestic AS&E students living within 1 mile from campus

47.5%
The number of Master’s AS&E students who live within 1 mile from campus

44.0%
The number of PhD AS&E students who live within 1 mile from campus

42.3%
The number of AS&E graduate students who live within 1 mile from campus

55.8%
The number of Fletcher School students who live within 1 mile from campus
51.0%
The number of AS&E graduate students who live within walking distance of bus stations that connect to campus

65.6%
The number of international AS&E students who live within walking distance of bus stations that connect to campus

46.0%
The number of domestic AS&E students who live within walking distance of bus stations that connect to campus

47.6%
The number of Master’s AS&E students who live within walking distance of bus stations that connect to campus

59.6%
The number of PhD AS&E students who live within walking distance of bus stations that connect to campus

Likely Impacts of Green Line Extensions
As part of our analysis, we wanted to better understand the extent to which the Green Line Extension could impact the housing market for graduate students. To do this, we analyzed the number of housing units currently occupied by graduate students that are within a half-mile of the Ball Square and College Ave stations. Our analysis revealed that 30% of all housing units occupied by graduate students are within a half-mile of the College Ave and Ball Square Stations. This figure does not include Tufts-owned housing units, which were excluded from the analysis because they presumably will not be subject to private-market rental pressures. Of the 1,733 addresses analyzed, 517 are within a half-mile of these two stations (29.8%). According to MAPC projections, these stations are expected to see significant price increases between 29-37% upon completion.

GRADUATE STUDENT HOUSING SURVEY RESULTS
In addition to mapping the current landscape of where graduate students live, we distributed a survey to 2,000 students in the Graduate School of Arts, Engineering, and the Fletcher School of Law and Diplomacy. The goal of the survey was to better understand the characteristics of graduate student housing, including rent, number of roommates, commuting patterns, and questions about housing preferences.

Our survey, distributed over 12 days from April 3rd to April 15th, received 345 completed responses (17% response rate). In this section, we summarize the results of our survey. All figures in the text are rounded, and precise in the graphs.
Figure 25. Tufts Graduate Student Housing within a Half-Mile of College Ave and Ball Square Stations. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)
Section 1. Demographic information

The respondents come from diverse backgrounds in terms of department, degree status, gender, international status, race and ethnicity. Coming from 29 departments, 66% of our respondents are pursuing masters degrees at Tufts and 32% PhD degrees (Fletcher students are counted as from one department). Fletcher and Urban and Environmental Planning and Policy (UEP) contributed the most responses, as 26% respondents were from Fletcher, 15% from UEP. By gender, 56% of the respondents were female, and 41% are male. Nineteen percent of the respondents were international students. Approximately 70% of respondents were white; 15% were Asian; 6% were Hispanic, Latino, or of Spanish origin; and 3% were Black or African American.

Section 2. Satisfaction with housing

Out of 345 respondents, only 3% were very satisfied with the current availability of housing. Overall, 54% of respondents were dissatisfied (from very to slightly) with the housing availability around the Medford/Somerville campus and 18% were indifferent, leaving only around a quarter of the respondents who were satisfied with housing availability. International students were generally more dissatisfied with their housing. On average, international students were more dissatisfied than domestic students.

More than half of the respondents, 59%, were satisfied with their current housing situation and only 27% of the students were dissatisfied to a certain extent. This is an indication that students generally are happy with their housing condition if ignoring the price factor. However, while on average domestic students were satisfied with housing, the majority of international students were dissatisfied.

Ninety-two percent of the students found that searching and securing housing was stressful. Almost half of the students (49%) found this process to be very or extremely stressful. This could be an indication of information asymmetry among graduate students where only a small proportion of students have access to
information about housing availability.

**Section 3. Current housing situation**

Twenty-five percent of the students found their current housing on Craigslist, and 24% secured their housing via friends. The third and fourth most common way was through real estate brokers and other online housing resources (mostly Zillow and Trulia). Notably, only 9% of students obtained housing through the Tufts housing website, which reflects the underuse of this resource.

A smaller percentage of international students, only 18%, found their housing via Craigslist. This may indicate a major difference in accessing real estate listing resources between international and domestic students. This may indicate a major difference in the knowledge of resources between international and non-international students. Friend networks are an important source of housing for international students: 21% of international students find housing through friend networks, while only 7% of non-international students found housing this way. Considering that some international students were not able to be in the country for their housing search, social media is an important tool.

Ninety-two percent of those surveyed live in off-campus housing. Among the 17 respondents who live on campus, 11 live in Blakeley Hall, which is for Fletcher students, and 6 live in Tufts-owned houses. Most students live either in Somerville (34%) and Medford (43%).

Thirty-one percent of graduate students live with a spouse/significant other, a child/children, other biological family members, or a chosen family. The majority (60%) of students live with one (30%) or two (30%) roommates. The students who live with three roommates make up 19.05% of our responses and students with four or more roommates around 14.58%. Only 5.95% of the students live alone. Given the fact that the cities of Somerville and Malden passed ordinances stipulating that no more than four and three unrelated individuals can reside in the same unit, we can see many students could be violating these standards.
Section 4. Rents

The median rent paid by graduate students is $900, while the mean rent is $1,105. We find that only 9.4% of students pay more than $1,500. The highest rent paid by students is $3,500 per month. International students spend approximately $100 less on housing than domestic students on average, while the median was $75 less.

The most common amount that students had to pay upfront to secure housing (with brokers’ fees, security deposit, first and last month rent), was between $1,500 and $2,500. Twenty-one percent of students had to pay more than $3,500, while 23% had to pay less than $1,500 and 22% had to pay between $2,500-$3,500. These figures make sense - with a median rent of $900, if a landlord charged first and last months’ rent, it would cost students $1,800. Only 9% of international students are able to pay more than $3,500 to secure housing which potentially restricts their options in the current market.

Ninety-two percent of all graduate students are housing-cost burdened (spending more than 30% of their income on rent). Within this overall category 57% are extremely cost burdened (more than 50% of their income) and 33% spend more on rent than they earn. International students are more likely to be housing-cost burdened, and to pay more in rent than they earn. Only 4% of internationals pay less than 30% of their income on their rent compared to 8% of domestic students. International students are more likely to pay more in rent than they earn. International students are more likely to be cost burdened: only 3.7% of internationals pay less than 30% of their income on their rent compared to 8.4% of domestic students.

The average highest rent that students would be willing to pay for their preferred housing option is $1,240. The median highest rent that students would be willing to pay is $1,000. Eighteen percent of the respondents would be willing to pay $1,500 or more for their preferred housing option.
Our findings show that while the median rent that graduate students pay for housing is $900, most would be willing to pay up to $1000 for their ideal housing option. This willingness to pay seems to contradict students’ housing cost burdens.

Section 5. Commute

Walking is the most common way for graduate students to get to campus. 56% of all graduate students walk to campus, 20% drive, 11% bike, and 10% take public transit. Only 0.9% students commute with the Jumbo Shuttle, which indicates that for most graduate students it is not a convenient or useful option. These figures are consistent with the annual Rideshare Survey administered to all students living off-campus at Tufts, which found that in 2018, 66% of students living off-campus chose to walk or bike, 22% drove, 9% took public transportation, and just 0.5% used the campus shuttle.

It takes graduate students on average 19 minutes to commute to campus, with a range of 1 to 150 minutes. Two percent of students’ commute time exceeds 40 minutes.

Section 6. Housing Preferences

For this section we identified ten factors that are taken into consideration when choosing housing: distance from campus, cost, desire to live alone, access to public transportation, proximity to grocery stores, safety, proximity to restaurants, ability to choose roommates, family-friendly units, and pet-friendly units. The responses from four of these factors are displayed below (see figure 42 on next page).

We also asked students to rank five factors from most to least important in choosing housing: price, proximity, privacy, floor plan/size of apartment, and amenities and services. Price was the most important factor when considering housing (39% of respondents ranked it 1), followed by proximity to campus (26% ranked it as 2). Privacy was ranked third in importance, and floor plan/size of unit was fourth. The least important factor was amenities and services (see figure 43 on next page).

Over a third of students, 36%, would prefer to live in a one-bedroom apartment; 28% students would prefer to live in a two-bedroom, 17% in a three-bedroom, and 13% would like to
88% find the cost of housing either very or extremely important.

69% of respondents find distance to campus an extremely or very important factor in their housing decision.

65% do not consider family- and pet-friendly units as important factors when choosing housing.

61% ranked safety as extremely or very important.

57% found it very or extremely important to be able to choose roommates.

55% find access to public transportation is extremely or very important factor.

47% ranked proximity to grocery stores as very or extremely important.

19% ranked proximity to restaurants or entertainment venues as very or extremely important.

16% think that living alone is a very or extremely important factor.

Figure 42. “How important were the following factors to you in your housing choice?” (Source: Tufts Graduate Housing Survey)
live in an efficiency or studio unit. Only 2% of students preferred to live in a dormitory.

Section 7. Suggestions for Tufts to improve graduate housing experience

In the last question of the survey, we asked respondents to write down their suggestions for Tufts to improve graduate housing experience. A total of 177 suggestions were received. This section organizes these responses by themes.

Measures to ease cost burden on graduate students

- Advocate for rent control to prevent rents from further increases.
- Subsidize graduate students more (financial aid; pay more for on-campus jobs).
- Subsidize students’ brokers fees.
- Partner with local brokers/landlords to provide more affordable and flexible (9-10 months contracts) housing, and negotiate a discount in broker fees for Tufts students.

Tufts-provided housing

- Lobby for change in the zoning around campus to allow higher-density buildings and house graduates there.
- Build or partnership with new off-campus developments and provide affordable housing.
- Build on-campus housing below market rates.
- Buy local houses and rent to students below market rates.
- Integrate a mix of uses (grocery stores, gym) in new housing construction for graduate students.
- Provide unit types to meet the needs of graduate students with families.

Existing on-campus housing

- Open on-campus housing to master students, PhD students, and domestic students; open Blakeley Hall to non-Fletcher students.
- Improve the existing on-campus housing in terms of wifi connection, air conditioning, better furniture, larger rooms, and privacy.
- Make more on-campus housing information publicly available (floor plans, pictures, a tour).

Commute

- Lower on-campus parking costs.
- Improve public transit to increase accessibility to campus (work with MBTA; increase the Jumbo Shuttle frequency).

Information on housing resources

- Centralize resources by creating a housing database that includes all available housing.
- Create a portal for rating apartments by address, including information on home quality, landlord, safety, etc.
- Provide workshops on finding housing in the area, dealing with housing legal issues, and informing students on the rights they have as tenants.
- Be honest with incoming students about the high housing costs and low accessibility to campus through public transit.
- Publicize the Tufts housing website and the Facebook housing group to make more people utilize them.
- Update the Tufts housing website, the google spreadsheet of housing and roommate listings more frequently and take down properties that have been taken in time.
- Connect incoming graduate students to search for roommates.
GRADUATE STUDENT/FACULTY HOUSING AT PEER INSTITUTIONS
GRADUATE STUDENT/ FACULTY HOUSING AT PEER INSTITUTIONS

To understand how Tufts compares to its peer institutions in graduate and faculty housing policies, we created policy matrices to analyze the policies side by side. Our matrices compare housing policies at 12 peer institutions identified by the Tufts Office of Institutional Research (OIR) and five Boston-based universities.

Through the graduate student housing matrices, we identify which universities house their graduates and what kind of housing they provide. If they provide housing, we compare their housing prices with market rate prices in their area and examine the attributes of the provided housing. We specifically pay attention to the proximity to campus and amenities, whether utilities, laundry services and internet access are included in rent, and whether they provide family- and pet-friendly housing options.

Through the faculty matrix, we examine which universities are helping faculty with housing through mortgage programs, and how they fund them. We also identify what other faculty housing policies are in place at these institutions.

GRADUATE STUDENT HOUSING POLICY ANALYSIS

Among the 12 peers and six local universities in the matrix, 11 are located in an urban area, five in a suburban area, and two in a rural area.

Northeastern has the largest student enrollment of 36,918 students, while Brandeis has the smallest, at 5,801 students. Tufts ranks 15th in student enrollment among the 18 universities, with 11,155 students. Graduate students comprise 67.7% of Harvard’s student body, making it the school with the largest proportion of graduate students. Seven universities have significantly fewer graduate students than undergraduates; six out of the 18 institutions, including Tufts, have nearly equal numbers of graduate and undergraduate students.

Harvard has the largest endowment, at $38.8 billion, followed by MIT with $16.4 billion. The lowest endowment is Northeastern’s $0.795 billion. Tufts ranks 15th among the 18 institutions with a $1.85 billion endowment.

Five out of 18 institutions provide both on-campus and off-campus housing in university-owned properties for their graduates (Dartmouth, Harvard, MIT, Tufts, and UPenn). Three provide only on-campus university-owned graduate housing (Cornell, Georgetown, and Northwestern), and six provide only off-campus housing (Boston University, Brown, George Washington, Northeastern, Wake Forest, and Washington U in St. Louis). Four do not house their graduate students (Boston College, Brandeis, Emory, and Vanderbilt). All of the universities provide third-party housing options. Most universities have dedicated off-campus housing websites, while a few others such as Brown and Dartmouth have listings directly posted on their university housing page.

Of Tufts’ peer institutions, only Dartmouth College and the University of Pennsylvania provide both on- and off-campus housing options for graduate students. Boston University, Brown, Cornell, Georgetown, Northwestern, Wake Forest and Washington University in St. Louis have either on- or off-campus graduate housing options available, but not both.

Several peer institutions provide housing for only a fraction of their graduate students. Georgetown University, with almost 10,000 graduate students, has housing for only 200. Similarly, George Washington University has around 16,000 graduate students but can house around 100 students, less than 1%. Washington University in St. Louis houses 1.3% of its graduate students. It offers 100 units of various off-campus options through Quadrangle Housing, a school-
owned property ownership and management company, similar to Walnut Hill Properties at Tufts. There is no correlation between endowment and graduate housing availability. Even though UPenn and Northwestern have the highest endowments among Tufts’ peers, with $13.8 billion and $11 billion respectively, they fall behind in graduate housing capacity. They only offer housing to 5% of their graduate students. Wake Forest University, while being the last among its peers with only a $1.32 billion endowment, is still able to house 5% of its graduate students off-campus with below market-rate rents. Vanderbilt University with a $4.6 billion endowment, does not provide any form of university-owned graduate housing. Tufts houses 6% of its graduate students, providing 120 housing units (84 beds in Blakeley Hall and 36 bedrooms) on and off campus for 2,000 students from AS&E and the Fletcher School.

Among Tufts’ peer institutions, the leaders in graduate housing provision are Emory, Dartmouth and Cornell. While the institution is fourth in size of endowment ($7.31 billion), Emory houses 100% of its 7,370 graduate students in an off-campus, third-party-owned luxury housing complex Dartmouth and Cornell house 30% and 10% of their graduate students respectively. In addition to their large endowments, both of those universities are located in rural areas and thus face a greater obligation to provide higher rates of university-owned housing.

Among the six local universities, endowment and student size do not have a consistent influence on whether institutions provide housing. Institutions with the largest endowments (Harvard and MIT) provide both on- and off-campus housing. However, Northeastern, which has the smallest endowment but largest number of students, also provides off-campus graduate housing. Boston College, with mid-range endowment and student size, and Brandeis, small student size and small endowment, both do not provide housing for graduate students. Among local institutions, MIT is leading with their ability to house 35% of their graduate students.

**Faculty Housing Policy Analysis**

Five out of the 12 peer institutions we studied offer university-owned off-campus housing for faculty. Three peer institutions offer on-campus housing through their Faculty in Residence Program. Four out of the 12 peer institutions and three out of six local institutions offer some form of mortgage assistance for faculty. Mortgage assistance at such institutions is offered in the form of either mortgage at discounted rates, or cash rebates on home purchases. Out of the 12 peer institutions, Georgetown University and Northwestern University offer faculty discounted mortgage rates. Vanderbilt University supports its faculty through the Faculty Home Purchase Plan – a support system that offers tenured and tenure-track faculty one-time funding of up to one-half of one percent of the value of the mortgage (up to a maximum of $2,500). Washington University in St. Louis offers its faculty forgivable loans (ranging from $8,500 to $12,000) for purchasing homes in selected neighborhoods through its Live Near Your Work program. Harvard University and MIT are the two local institutions that offer discounted mortgage rates.

Other types of housing assistance can also be seen. Boston University (BU) waives broker-fees for faculty who wish to secure a BU-owned apartment. Brown University sets the sale prices of apartments it offers to faculty at 80% of market appraisal value and also offers to repurchase an apartment at 80% of the market appraisal value through the Brown to Brown Home Ownership Program. Emory University and George Washington University have Faculty-in-Residence programs while Northwestern University and Vanderbilt University provide funds to cover moving expenses. Among the local institutions, Harvard, MIT, Northeastern, and Tufts offer either mortgage assistance or moving expenses assistance, and Boston College and Brandeis University do not.
Table 3. Policy comparison matrix of Tufts University’s peer institutions (graduate student housing)

<table>
<thead>
<tr>
<th>University/College</th>
<th>Campus locations</th>
<th>Number of Students</th>
<th>Endowment</th>
<th>Local Median Rent, % increase from previous year</th>
<th>Grad/Undergrad Split</th>
<th>University owned on-campus housing</th>
<th>University owned off-campus housing</th>
<th>Graduate housing capacity (units)</th>
<th>Units types and monthly rents per person</th>
<th>Housing attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston University</td>
<td>Urban</td>
<td>33,355</td>
<td>$2.18 billion (2018)</td>
<td>Boston, MA $2,616 1.7% (2018)</td>
<td>45.8%/54.2% (2018)</td>
<td>yes no yes</td>
<td>Medical students: 208 other students: 358+</td>
<td>-easy access to public transit -nearby BU fitness center -utilities included -WIFI not included</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown University</td>
<td>Urban</td>
<td>9,336</td>
<td>$3.8 billion (2018)</td>
<td>Providence, RI $1,523 3.6% (2018)</td>
<td>27.7%/72.3% (2018)</td>
<td>yes no yes</td>
<td>Depends on availability: 100-175</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cornell University</td>
<td>Rural</td>
<td>23,600</td>
<td>$7.2 billion (2018)</td>
<td>Ithaca, NY $1,830 1% (2018)</td>
<td>35.7%/64.3% (2018)</td>
<td>yes yes no</td>
<td>847</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- single room: $1,000+ 
- studio: $1,750+ 
- one-bedroom: $1,900+ 
- two-bedroom: $1,250+

- lightly furnished 
- utilities included 
- wired for cable and internet access 
- available parking for a monthly fee

- close to campus 
- mostly furnished 
- access to university internet 
- parking with a monthly fee 
- includes family friendly

---

Table 3. Policy comparison matrix of Tufts University’s peer institutions (graduate student housing)
<table>
<thead>
<tr>
<th>University/College</th>
<th>Campus locations</th>
<th>Endowment</th>
<th>Local Median Rent, % increase from previous year</th>
<th>Grad/Undergrad Split</th>
<th>Third-party housing website or similar</th>
<th>University owned on-campus housing</th>
<th>University owned off-campus housing</th>
<th>Graduate housing capacity (units)</th>
<th>Units types and monthly rents per person</th>
<th>Housing attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dartmouth College</td>
<td>Rural</td>
<td>$5.5 billion (2018)</td>
<td>Hanover, NH $1,396 (Yardi Matrix Average Rent)** 2%</td>
<td>32.7%/67.2% (2018)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>on-campus: 111</td>
<td>Off-campus: 527</td>
<td>On-campus: studio: $1,230</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Off-campus: one-bedroom: $1,300 -</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>two-bedroom: $512 -</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>three-bedroom: $375 -</td>
<td></td>
</tr>
<tr>
<td>Emory University</td>
<td>Suburban</td>
<td>$7.31 billion (2018)</td>
<td>Atlanta, GA $1,614 5.3%</td>
<td>47.7%/52.3% (2018)</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>-</td>
<td>-</td>
<td>Off-campus third party housing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>one-bedroom: $1,524-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>two-bedroom: $888-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>three-bedroom: $818-</td>
<td></td>
</tr>
<tr>
<td>George Washington University</td>
<td>Urban</td>
<td>$1.73 billion (2017)</td>
<td>Washington D.C. $2,593 1.1%</td>
<td>55.1%/44.9% (2018)</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>119</td>
<td>single room: $1,145</td>
<td>-fully furnished with a kitchen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-WIFI included</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-close to campus</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-close to grocery stores</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-free laundry</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-air-conditioning</td>
<td></td>
</tr>
<tr>
<td>Georgetown University</td>
<td>Urban</td>
<td>$1.66 billion (2017)</td>
<td>Washington D.C. $2,593 1.1%</td>
<td>57.9%/42.1% (2018)</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>third-party: 44 university-owned for law students: 163</td>
<td>one-bedroom: $2,418</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>two-bedroom: $1,595-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$1,790</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-wired for cable and internet</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-air-conditioning</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-fully furnished with a kitchen -fitness center</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-laundry rooms</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-free shuttle service</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-24-hour security</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Policy comparison matrix of Tufts University’s peer institutions (graduate student housing) (continued)
<table>
<thead>
<tr>
<th>University/College Number of Students</th>
<th>Campus locations</th>
<th>Endowment</th>
<th>Local Median Rent, % increase from previous year</th>
<th>Grad/Undergrad Split</th>
<th>University owned on-campus housing</th>
<th>University owned off-campus housing</th>
<th>Graduate housing capacity (units)</th>
<th>Units types and monthly rents per person</th>
<th>Housing attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanderbilt University 11,864</td>
<td>Urban</td>
<td>$4.6 billion (2018)</td>
<td>Nashville, TN $1,577 1.7% (2018)</td>
<td>42.8%/57.2% (2018)</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wake Forest University 8,116</td>
<td>Suburban</td>
<td>$1.32 billion (2018)</td>
<td>Winston-Salem, NC $1,066 3.5% (2017)</td>
<td>37.1%/62.9% (2017)</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>149</td>
<td>full year: $615-$717 semester: $747-$800</td>
</tr>
<tr>
<td>Washington University in St. Louis 15,396</td>
<td>Suburban</td>
<td>$7.5 billion (2017)</td>
<td>St. Louis, MO $935 4.9% (2017)</td>
<td>49.9%/50.1% (2017)</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>100+</td>
<td>studio one-bedroom: two-bedroom: three-bedroom: $610-$1,800</td>
</tr>
</tbody>
</table>

*Table 3. Policy comparison matrix of Tufts University's peer institutions (graduate student housing) (continued)*
<table>
<thead>
<tr>
<th>University/College Number of Students</th>
<th>Campus locations</th>
<th>Endowment</th>
<th>Local Median Rent, % increase from previous year</th>
<th>Grad/Undergrad Split</th>
<th>Third-party housing website or similar</th>
<th>University owned on-campus housing</th>
<th>University owned off-campus housing</th>
<th>Graduate housing capacity (units)</th>
<th>Units types and monthly rents per person</th>
<th>Housing attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston College 14,513</td>
<td>Urban</td>
<td>$2.6 billion (2018)</td>
<td>Chestnut Hill, MA $2,616 1.7%</td>
<td>32.6%/67.4% (2018)</td>
<td>yes no no</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Brandeis University 5,801</td>
<td>Suburban</td>
<td>$1.04 billion (2018)</td>
<td>Waltham, MA $2,509 0.2%</td>
<td>37.3%/62.7% (2018)</td>
<td>yes no no</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MIT 11,574</td>
<td>Urban</td>
<td>$16.4 billion (2018)</td>
<td>Cambridge, MA $2,571 -0.1%</td>
<td>60.2%/39.7% (2018)</td>
<td>yes yes yes</td>
<td>Single students: 2059 Students with families: 413</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>close to campus -includes family housing but not furnished -mostly fully furnished</td>
</tr>
<tr>
<td>University/College Number of Students</td>
<td>Campus locations</td>
<td>Endowment</td>
<td>Local Median Rent, % increase from previous year</td>
<td>Grad/Undergrad Split</td>
<td>Third-Party Housing Website or Similar</td>
<td>University owned on-campus housing</td>
<td>University owned off-campus housing</td>
<td>Graduate housing capacity (units)</td>
<td>Units types and monthly rents per person</td>
<td>Housing attributes</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-----------------------------------------------</td>
<td>----------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------</td>
<td>------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Northeastern University 36,918</td>
<td>Urban</td>
<td>$0.80 billion (2018)</td>
<td>Boston, MA $2,616 1.7% (2018)</td>
<td>45.0%/55%</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>around 50 limited spaces</td>
<td>studio: $1,585 one-bedroom: $1,195</td>
<td>-around the campus -no family housing -fully furnished with a kitchen -WIFI, telephone and cable not included -free laundry services</td>
</tr>
<tr>
<td>Tufts University Urban $1.85 billion (2018)</td>
<td>Medford $2,405 -1.2% Somerville $2,438 -0.3% Malden $2,226 1.2%</td>
<td>50.1%/49.9% (2017)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>Fletcher School: 84 Other programs: 36</td>
<td>single room: $1022-1267 two-bedroom &amp; three-bedroom suites: $781</td>
<td>- close to campus - easy access to public transportation - basic furnishing in on-campus suites - off-campus apartments in wood-frame houses not furnished</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### FACULTY HOUSING POLICY MATRIX

**Table 5. Policy comparison matrix of Tufts University’s peer institutions (faculty housing)**

<table>
<thead>
<tr>
<th>University/College Number of Students</th>
<th>Campus locations</th>
<th>Number of Faculty</th>
<th>University provided on-campus housing</th>
<th>University provided off-campus housing</th>
<th>Unit Type</th>
<th>Rents per month per person</th>
<th>Mortgage Assistance</th>
<th>Mortgage Assistance Eligibility</th>
<th>Mortgage Assistance Description</th>
<th>Other Housing Assistance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston University Urban 4,021 yes yes</td>
<td>Urban</td>
<td>4,021</td>
<td>yes (apartments, single rooms, studios, one bed-room, two-bedrooms)</td>
<td>single rooms: $1,000 and up Studios: $1,750 + one bed-room: $1,900+ two bed-room: $2,500+</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>No broker fee required to secure a BU owned apartment</td>
</tr>
<tr>
<td>Brown University Urban 816 no yes</td>
<td>Urban</td>
<td>816</td>
<td>yes (Brown to Brown Home Ownership Program)</td>
<td>single family apartments with 2-3 bedrooms</td>
<td>market values range from $480,000 - $900,000</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Cornell University Rural 1,648 no yes</td>
<td>Rural</td>
<td>1,648</td>
<td>yes (luxury apartment available to faculty members from Weill Cornell Medicine)</td>
<td>studio: $2,471 - $2,898 one-bedroom: $3,152 - $3,887 two-bedroom: $3,575 - $6,385</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
</tr>
<tr>
<td>Dartmouth College Rural 952 no yes</td>
<td>Rural</td>
<td>952</td>
<td>yes (apartments, duplexes, and single family homes)</td>
<td>two-bedroom: $2,130+</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
</tr>
<tr>
<td>University/College Number of Students</td>
<td>Campus locations</td>
<td>Number of Faculty</td>
<td>University provided on-campus housing</td>
<td>University provided off-campus housing</td>
<td>Unit Type</td>
<td>Rents per month per person</td>
<td>Mortgage Assistance</td>
<td>Mortgage Assistance Eligibility</td>
<td>Mortgage Assistance Description</td>
<td>Other Housing Assistance?</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
<td>-----------</td>
<td>---------------------------</td>
<td>-------------------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Emory University</td>
<td>Suburban</td>
<td>1,400</td>
<td>yes (Faculty in Residence Program)</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>- Full time faculty eligible to apply for the Faculty in Residence Program - Relocation assistance available for newly-hired faculty</td>
</tr>
<tr>
<td>George Washington University</td>
<td>Urban</td>
<td>2,363</td>
<td>yes (Faculty in Residence Program)</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>Full time faculty eligible for the Faculty in Residence and Faculty Guides program</td>
</tr>
<tr>
<td>Georgetown University</td>
<td>Urban</td>
<td>1,670</td>
<td>yes (Faculty in Residence Program)</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>yes</td>
<td>all full-time faculty eligible to apply</td>
<td>Georgetown Federal Credit Union: offers mortgage programs through a partnership with Credit Union Mortgage</td>
<td></td>
</tr>
<tr>
<td>Northwestern University</td>
<td>Suburban</td>
<td>3,300</td>
<td>no</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>yes</td>
<td>not listed</td>
<td>Moving Expense Reimbursement: All full-time faculty are eligible to apply for moving expense reimbursements</td>
<td>First Northern Credit Union: offers 50% discount on appraisals, 0.25% rate discount on all fixed rate second mortgages, and application fee waivers</td>
</tr>
</tbody>
</table>
### Table 5. Policy comparison matrix of Tufts University’s peer institutions (faculty housing) (continued)

<table>
<thead>
<tr>
<th>University/College Number of Students</th>
<th>Campus locations</th>
<th>Number of Faculty</th>
<th>University provided on-campus housing</th>
<th>University provided off-campus housing</th>
<th>Unit Type</th>
<th>Rents per month</th>
<th>Mortgage Assistance</th>
<th>Mortgage Assistance Eligibility</th>
<th>Mortgage Assistance Description</th>
<th>Other Housing Assistance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Pennsylvania</td>
<td>Urban</td>
<td>4,793</td>
<td>no</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
</tr>
<tr>
<td>Vanderbilt University</td>
<td>Urban</td>
<td>4,726</td>
<td>no</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>yes</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Faculty Home Purchase Plan: offers tenured and tenure-track faculty one-time funding of up to one-half of one percent of the value of the mortgage (a maximum of $2,500)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Moving expenses: offers moving expenses according to the policy of each school or college</td>
</tr>
<tr>
<td>Wake Forest University</td>
<td>Suburban</td>
<td>6,281</td>
<td>no</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>Temporary housing: a furnished apartment that provides temporary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington University in St. Louis</td>
<td>Suburban</td>
<td>3,819</td>
<td>no</td>
<td>yes</td>
<td>Single family apartments with 1-3 bedrooms</td>
<td>Range from $1,020-$2,010</td>
<td>yes</td>
<td>Full-time employees or part-time employees working 20 or more hours per week</td>
<td>Live Near Your Work: offers forgivable loans for purchasing homes in selected neighborhoods (range from $8,500-$12,000)</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

54
<table>
<thead>
<tr>
<th>University/College Number of Students</th>
<th>Campus Locations</th>
<th>Number of Faculty</th>
<th>University provided on-campus housing</th>
<th>Number of Faculty</th>
<th>University provided off-campus housing</th>
<th>Unit Type</th>
<th>Rents per month</th>
<th>Mortgage Assistance</th>
<th>Mortgage Assistance Eligibility</th>
<th>Mortgage Assistance Description</th>
<th>Other Housing Assistance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston College</td>
<td>Suburban</td>
<td>821</td>
<td>no</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Brandeis University</td>
<td>Suburban</td>
<td>361</td>
<td>no</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Harvard University</td>
<td>Urban</td>
<td>2,400</td>
<td>yes</td>
<td>yes</td>
<td>condominiums</td>
<td>21% below fair market value</td>
<td>yes</td>
<td>not listed</td>
<td>Real Estate Advantage Program: -mortgages at reduced rates through Preferred Mortgage Lenders -cash rebates on home purchases</td>
<td>Moving services: Coldwell Banker Residential Brokerage Relocation Division provides relocation support for Harvard faculty</td>
<td></td>
</tr>
<tr>
<td>MIT</td>
<td>Urban</td>
<td>1,047</td>
<td>no</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>yes</td>
<td>not listed</td>
<td>Faculty Housing Assistance Program (FHAP): reduced mortgage rates for home purchases</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>Northeastern University</td>
<td>Urban</td>
<td>2,997</td>
<td>yes (Faculty in Residence Program)</td>
<td>no</td>
<td>NA</td>
<td>NA</td>
<td>yes</td>
<td>not listed</td>
<td>Real Estate Advantage Program: Cash rebates on home purchases</td>
<td>Home sale assistance: assists in the sale of homes by providing property condition evaluations, recommending pricing and developing a personalized marketing strategy</td>
<td></td>
</tr>
<tr>
<td>Tufts University</td>
<td>Suburban</td>
<td>1,556</td>
<td>no</td>
<td>Yes (for up to three years)</td>
<td>Wood-frame houses</td>
<td>Market rate units</td>
<td>yes</td>
<td>not listed</td>
<td>Mortgage Discount Program</td>
<td>Relocation Services: moving expenses paid according to rank; Real Estate Advantage program offered by Coldwell Banker.</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Policy comparison matrix of local and other Tufts-related institutions (faculty housing)
KEY TAKEAWAYS FROM STAKEHOLDER INTERVIEWS
KEY TAKEAWAYS FROM STAKEHOLDER INTERVIEWS

Throughout our background interviews with Tufts professional staff in campus planning, real estate, transportation, and government relations, several key themes have emerged from the discussions. We have categorized them as follows.

- Graduate student housing not a priority
- Institutional development climate
- Reluctance to engage in a private development model
- Private partnerships as a way to deliver beds without impacting capital capacity
- Potential development sites
- Costs of shuttle service

GRADUATE STUDENT HOUSING IS NOT A PRIORITY

The administration does not view graduate student housing as a priority. This theme permeated each of our discussions; with campus planners, a Trustee Emeritus, and administration officials. From the administration’s cost-benefit perspective, it is difficult to quantify the effect of not providing housing. Housing options are not considered to be a key factor in students’ decision-making process for graduate school. The Graduate School expressed the opinion that housing conditions do indeed factor in graduate students’ decision to come to Tufts. One of the factors that makes graduate student housing development difficult is that, according to campus planners, Tufts doesn’t get many major gifts that could address capital needs. Donors are more willing to provide funding for either financial aid or athletic facilities and services.

INSTITUTIONAL DEVELOPMENT CLIMATE

All of our Tufts interviewees have expressed an openness to exploring further the issue of graduate student housing, while acknowledging that at the moment, it is not a priority for Tufts. The institution has long wanted to address the undergraduate housing issue at Tufts, which has not built a dorm since Sophia Gordon Hall was completed in 2006. Interviewees pointed to current or recent developments such as the Science and Engineering Complex (SEC), the Collaborative Learning and Innovation Complex (CLIC) at 574 Boston Ave, the Central Energy Plant, and the (yet to be built) Cummings Building as having stretched the University’s financial capacity, limiting the potential for short-term investment in graduate student housing. At the same time, interviewees have recognized the need for proactive planning and the value of long-term investment in housing development.

RELUCTANCE TO ENGAGE WITH A PRIVATE DEVELOPER

All of the interviewees we spoke to expressed in some way a reluctance to engage in a partnership with a private developer. The following reasons were cited:

- Lower-borrowing costs for Tufts-financed projects mean higher potential for long-term savings.
- Projects on university-owned land are longer-term investments.
- Buildings built by developers are perceived to be of lower quality.
- Some models of private partnerships would still count against Tufts balance sheet, negating the financial benefits of such an arrangement. Any partnership that would be “on the books,” such as guaranteeing units in a private development for graduate students, or a non-profit partnership through Walnut Hill properties, would lead to a higher debt ratio and would thus limit the University’s future borrowing capacity.
- Private partnerships can be complicated, and there is a perception that only a small percentage of proposed partnerships (20%) actually get built.
- Tufts has a lack of experience with private partnerships.

While all expressed a reluctance, many expressed
a willingness to explore all available options to meet the University’s housing needs. Many encouraged us to speak to campus planners who have engaged in private partnerships, specifically Northeastern, to understand their reasons for entering into such an agreement and their experience with the process and result.

**PRIVATE-PARTNERSHIPS AS A WAY TO DELIVER HOUSING WITHOUT IMPACTING CAPITAL CAPACITY**

Campus planners at Northeastern explained that their motivation for entering into a private-partnership to build student housing was born out necessity. The City of Boston had asked the university to deliver 600 beds within the first half of their institutional Master Plan approved in 2013. With limited financial capacity (their $795 million endowment is less than half of Tufts’ and only 2% of Harvard’s), the University looked to a private partnership to deliver the beds within the timeframe set forth in the plan. For years Northeastern was primarily a commuter-school but spent significant capital in the late 1990s and early 2000s to build dorms. The University now wanted to redirect capital spending to academic resources. For this reason, the University decided against issuing a tax-exempt bond for housing because it would have affected their balance sheet.

**POTENTIAL DEVELOPMENT SITES**

In our initial phase of interviews, several potential development sites were identified for graduate student housing. These include:

- The former site of the Malden Hospital;
- Two parcels in Medford Square, owned by the City of Medford, which currently serve as surface parking;
- The Boston Avenue surface parking lot adjacent to the Dowling Hall Parking Lot, and the Cousens parking lot on College Ave.
POTENTIAL SITES FOR GRADUATE STUDENT HOUSING DEVELOPMENT
POTENTIAL SITES FOR GRADUATE STUDENT HOUSING DEVELOPMENT

In addition to recommendations gathered from stakeholder interviews, we conducted a spatial analysis to identify the areas of Medford and Malden most suitable for development. These two communities were picked because of their proximity to Tufts and the Orange Line, which could enable connections to the Boston campus as well, and because land values are much lower than in neighboring Somerville and Cambridge.

WALKSHEDS ALONG BUS ROUTES

The initial spatial analysis began by identifying the current public transportation bus routes that serve the campus. Five bus routes, the 80, 89, 94, 96, and 101 all serve Tufts. The 80, 94, and 96 all pass directly adjacent to the campus. The 89 goes as close as Powder House Square and the 101 runs along Main Street in Medford. The closest stop of the 101 is Main St/Hancock St, a ten-minute walk from the intersection of College Ave and Boston Ave. Although one could argue that the 101 does not directly serve the campus, we believe it is close enough to include it for the purpose of our analysis.

We then created a quarter-mile buffer around these routes, which is a standard measure of walking distance to transit. Next, we added a land-use layer from MassGIS, which uses aerial imagery and zoning to give a close estimation of existing land use patterns. The goal was to find areas that are potentially most suitable for development, including multifamily residential, commercial and industrial. Existing low-density residential was excluded, because these areas are the least-suitable for a high-density residential project. The resulting map shows areas of existing multifamily residential (represented in yellow), commercial (red), and industrial (gray) land uses.

The limitations of this analysis are that it is based on aerial images, which can paint areas with a broad brush. For example, the entire areas of Medford Square and Malden Center are labeled as commercial, although there are multiple high-density residential developments in both centers. Another limitation is that the most-recent MassGIS aerial images are from 2005, so there are some areas, like in Malden Center, which have since been developed.

A secondary analysis was conducted to identify existing multifamily properties within (these areas) the bus route walksheds that Tufts could either partner with or acquire in order to provide housing to graduate students. While an outright acquisition of a property may be politically infeasible given the dire need for housing in the communities, the map serves as an exercise to identify existing medium to high-density residential development, which, coupled with the land-use map, shows the areas within our target area most suitable for future housing development.
Figure 44. Existing land uses within a quarter-mile of a Tufts bus route, Medford and Malden. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)
Figure 45. Multi-family properties within a quarter-mile of a Tufts bus route, Medford and Malden. (Source: Connor Ring and Rajat Shrestha ArcGIS Map)
Figure 46. Potential sites for graduate and faculty housing (Source: Connor Ring)
Figure 47. Development Scenarios (Source: Xinlei Lian)
SITE 1: MALDEN HOSPITAL

Size: 17.6 acres

The first development site is the former Malden Hospital, a large abandoned hospital located on a 17.6-acre tract of land less than three miles away from the Medford/Somerville Campus, and a mile from the MBTA Malden Center Orange Line Station.

The site’s large size (17 acres), proximity to campus (2.7 miles), and proximity to the Orange Line (1 mile) make the site attractive for student and/or faculty housing development for Tufts. However, the site also comes with many constraints. Plans to subdivide the lot were rejected by the City of Malden Planning Board in 2017, and plans to develop the site have faced opposition from both politicians and neighbors, many of whom would prefer to see it converted to open space. Despite its relative proximity to campus, the site poses transportation complications. It is located in a low-density residential area, relatively isolated from commercial amenities or public transit, both at a 15-minute walk from the site. Any plan for development of graduate or faculty housing at the site would have to include a shuttle to campus. Existing shuttle services are hardly used by graduate students: less than 1 percent of grad students commute via the shuttle.

What’s more, half of all graduate students live within 1.16 miles of the campus and 2/3rds walk or bike to campus. The Malden Hospital site is more than twice as far from campus and would encourage more private vehicle use among students. Students living here would be unable to walk to campus. Biking would be feasible, but far from ideal for the 11 percent of students who currently bike to campus. Route 60 is narrow and lacks any bike infrastructure. The route would also require passing through a dangerous roundabout that doubles as an on- and off-ramp for I-93. The closest bus stop that connects to campus is a 5-10-minute walk away and would require another 10-minute walk from the closest stop to campus. While the site is currently served by MBTA bus service, it is an infrequent route that does not provide reliable headways outside of peak commuting hours.

Site Background

The original owner, Hallmark Health System, renamed Melrose Wakefield Healthcare in 2018, closed the hospital in 1999. An ambulatory medical center operated within the buildings for five years, and the site has been abandoned since 2004. Many efforts to redevelop the site since then have been unsuccessful due to stakeholder conflicts.

Melrose Wakefield would be happy to cede the land to the City at no cost if it could afford the significant costs ($5-6million) of demolishing the buildings, but the City of Malden currently does not have enough funds to acquire the site.
Figure 50: Aerial of the former Malden Hospital site, with existing vacant buildings. (Source: Google Maps)
On the other hand, Melrose Wakefield could spend their own funds to demolish the current site and increase the land value accordingly when selling it, but given their current financial condition they cannot afford to do it at the moment.

In 2014, the Fellsmere Housing Group, formed by local developer Tony Green, entered into a purchase-and-sale agreement with Hallmark Health System to redevelop the site. The original proposal included 18 single-family cottages all along Hospital Road on the south border of the site, and 72 condominiums and 224 apartments on the former hospital site (Figure 51). However, the plan faced opposition from a community group called Friends of Fellsmere Heights (FOFH). They are opposed to development because of concerns about traffic and a perceived lack of community open space, despite the fact that the site is adjacent to the 40-acre Fellsmere Park and Pond. The Fellsmere Housing Group proposed a new plan which would decrease the number of housing units by 70, reduce the building footprint, and eliminate rental units in favor of condominiums. The revised plan also incorporates a privately-managed public walking trail on the site, would donate two acres land abutting Fellsmere Park to the city, and would preserve seven acres of woodland area.

According to the Fellsmere Housing Group, private investment in the project would be close to $100 million and would generate $1.2 million per year in tax revenues for the city. The project will also provide close to $500,000 to the community and the City of Malden for community improvements such as upgrading Fellsmere Park.
Zoning

Zoning on the site is also a constraint. The site is currently zoned for Residential A. This zoning includes group dwellings, which can include dorms by-right, which is why the idea of student housing is attractive to Fellsmere. The rest of the site would require a zoning overlay, as the proposal is four times the density currently allowed. It would be advantageous to have Tufts as a development partner, because as a university the project would be exempt from certain zoning restrictions. The Dover Amendment, which is the common name for Massachusetts General Law (MGL) Chapter 40A, Section 3, exempts agricultural, religious, and educational corporations from certain zoning restrictions. Using this amendment, Tufts could propose a by-right development of studio-style units and single-family housing options for graduate students and faculty.

Fellsmere Housing Group Project Manager Michael Skeldon, who is also a long-time partner of Tufts, believes that this site offers an opportunity for Tufts to partner with Fellsmere. Should the development be designed solely for graduate student and/or faculty housing, then two optimal options present themselves. The first would be using only a smaller parcel on the east of the property to build a three-story building that could house 280 students (calculated on the basis of the number of units allowed per acre). The second option would be developing also on the larger parcel, which could potentially add another 400 housing units, including micro-units, while keeping unit cost relatively low. According to a market analysis completed in 2016, studio units at the site could be expected to rent for $1,900, one-bedrooms $2,400 and two-bedrooms $2,900. These prices would be out of reach for most Tufts graduate students. It is unclear how much the rent for a micro-unit would be, but unless they were significantly cheaper than the studio units, they

Priced Out
would not offer an affordable option for most students.

**Amenities**

The site is a 15-minute walk away from a shopping center in Haines Square, Medford that contains a Target store, a Starbucks, two pharmacies, a gym, hair salon, Dollar Store, and liquor store. In addition, Salem Street in Haines Square offers a number of restaurants and coffee shops. Malden Center is a 20-minute (1.1 mile) walk from the Malden Hospital site and contains a number of supermarkets including a Stop & Shop and Super 88, as well as a large selection of small grocery stores that specialize in Chinese, Indian, and Halal products. The 99 bus would provide a 13-minute round trip by transit to the Stop & Shop, but as discussed below, the frequency is too low to be considered a reliable option. Students could also catch the 101 and 108 bus into the center. This trip would take about 20-25 minutes.

**Transit Access**

The site is served by the MBTA 99 bus route (see Figure 60 in Appendix 2), which provides a 6-minute trip to Malden Center. This route currently operates with headways that are too infrequent to provide a reliable connection to downtown Malden. It operates with 20-minute headways before 7am, 28-minute headways from 7 to 9am, and 43-minute headways between 9am and 1:30pm. Between 1:30pm and 6:30pm, headways are between 24 and 32 minutes, then climb to 58 minutes after 6:30pm. Any large-scale development project would have to coordinate with the MBTA to increase the frequency of the bus service at this site.

The site is also a 5-10-minute walk from the 101 bus (see bus route in Figure 61 in Appendix 2), which provides a connection to Tufts, though potential commuters would have to walk another 10 minutes from the closest stop to (Main St @ Stearns Ave) to the campus. The 101 operates at more frequent headways than the 99, between eighth and 26 minutes until 6:30pm. Total trip time via the 101 bus between the Malden Hospital site and campus during the weekday would be about 25-30 minutes, including 16 minutes walking and a nine-minute bus ride.

**Transportation Options**

Any off-campus housing development project that may occur on sites that are more than walking distance away from campus will have to consider the options students will have to commute to campus. According to Charlie Grab, who oversees logistics, parking, and the shuttle service at Tufts, lowering shuttle operating costs per passenger remains the main priority for Tufts.

The different class schedules of students result in a low passenger count in a shuttle trip and creates inefficiencies in running a shuttle. Additionally, traffic can cause delays and prevent students from getting to Tufts on time. To prevent delays, Tufts would have to add more shuttles – an option that is unlikely due to budget constraints.

Currently, it costs roughly $120 per hour to run a Tufts campus shuttle. Considering that it would take approximately 30 minutes to reach the Malden Hospital site by shuttle, the wait time for a shuttle would be one hour. Hence, Tufts would need to use two shuttles to offer a shuttle every 30-minutes that could take students from the Malden site to campus and vice versa. Arranging such a service for 10 hours a day would mean that the overall cost to run the shuttle service for seven days a week would be approximately $876,000 per year.

Rather than allocating this amount for student transportation purposes and still facing the various inefficiencies surrounding shuttle services, Tufts might consider giving Lyft credits to students, for a more meaningful and beneficial impact. A Lyft credit system is currently offered to SMFA students. All SMFA students who choose to enroll in this system, receive $200 per month to get home from campus at night using Lyft. The University could implement a pilot that allocates $200 per month for a semester and adjust this amount depending on the actual use. The Lyft
credit option potentially offers more flexibility for students since they can use Lyft rides according to their unique individual schedules and would be more efficient overall. The budget allocated by the AS&E for transportation purposes would ultimately determine if such a Lyft credit system can be offered to graduate students in the future.

**Development Scenarios**

**Acquiring the site from Melrose Wakefield Healthcare**

Tufts acquires the land from Melrose Wakefield Healthcare and develops a housing project with its own resources and funds. Of all the scenarios, this would require the highest initial capital investment. However, Tufts could benefit in the long term given the expected rising value of the land and development. The development costs could be offset by the future revenues from rents. By owning the property, Tufts would have control over rental prices and decisions regarding the design and construction.

Tufts could also buy the land and partner with a developer like American Campus Communities (ACC), while retaining ownership. Tufts could also lease the acquired land to a private developer who could then develop the housing and manage it until the lease ends.

This option would require Tufts to incur the acquisition cost only. In this scenario, Melrose Wakefield Healthcare would sell their land at a price more or less equal to the cost of tearing down the old structures ($5-6 million). Until the lease expires, Tufts could make up for the initial investment by collecting rent from Fellsmere.

**Leasing from Fellsmere Housing Group**

Fellsmere could develop the property and lease it to Tufts after completion. In this scenario, Tufts could either reserve a number of units for graduate student and faculty or lease the whole property and guarantee to pay for the rents if the demand is not met. Financially, these units would count against Tufts’ balance sheet. However, Tufts could eventually acquire the property from the developer, if funds become available. This would give them control over rental prices and the benefits from the collected rents. Given the distance from campus, Tufts would also probably have to run a campus shuttle or offer a Lyft credit system which would incur in additional costs.

**SITE 2: MEDFORD SQUARE**

Two of three city-owned parcels in Medford, labeled below as Site A, B, and C, have also been identified as potential sites for future development of Tufts graduate and faculty housing. The City of Medford identified the sites in the Medford Square Master Plan (2017) as having the most potential for redevelopment. They are currently used as surface parking, with more than 450 spaces between the three sites. The plan calls for the city to begin a land disposition process to invite developer interest. Such a process involves the City deeming the sites surplus property, soliciting proposals through a Request for Proposals (RFP), and choosing a proposal that best meets the city’s goals and community needs for the sites.

These parcels are attractive for a number of reasons. Their location in Medford Square provides walkable access to a number of shops, restaurants and amenities that are sought by graduate students. Secondly, the parcels are just over a mile from campus, providing a reasonably short distance to walk or bike, and they are currently served by two MBTA bus routes, the 94 and the 96 (see Figure 59 in Appendix 2), with stops at Tufts. Given Medford's willingness to redevelop the parcels and their desire to attract graduate students to the shops and restaurants of Medford Square, a project involving graduate student housing could be viewed favorably. At the presentation of the plan, community members voiced a desire to bring more Tufts' students to the square to encourage economic development. But while Medford would like to see more Tufts' engagement in the square, it has expressed a desire to stay away from “recommendations that would be dependent on Tufts.”

83
Tufts’ inability in 2014 to develop the Powder House School within a three-year period as stipulated by the city of Somerville provides insight into the complications of any project involving Tufts as a development partner. Although the City of Somerville selected Tufts’ bid among a total of six developer proposals to buy and develop the property, it rescinded its acceptance when Tufts informed the city that it did not plan to develop the property for another 15 years. Ultimately, the city accepted another proposal in 2015 and sold the parcel for $2 million.

Medford’s reluctance to partner with Tufts could be out of fear that the University would be unable to deliver a project within a reasonable time frame.

A more feasible approach might be Tufts’ partnering with a private developer to reserve a certain number of units for Tufts’ graduate students and faculty and guarantee their rents, including covering any vacancies. In such a scenario, however, Tufts would have no control over the rental price of the units. It is likely that the market rate of a newly-constructed unit in a desirable downtown location would be more than what a graduate student would be willing to pay. While this approach would be more financially feasible for the University, it might not be effective at providing affordable units to graduate students.
SITE 3: SURFACE PARKING LOTS ON CAMPUS – BOSTON AVE AND COUSENS LOT

Size:
• Cousens: 2.45 acres (apprx. 100,000 sq. ft.)
• Boston Ave: 0.93 acres (apprx. 40,000 sq. ft.)

In considering potential sites for graduate student housing development, there are significant advantages to building on university-owned land. On-campus development would be advantageous for its proximity, allowing students to be close to the resources and student life. The University could also leverage the land in a partnership with a developer in order to deliver housing without utilizing capital. University-owned land could be exempt from property taxes, which could provide savings to students. From a developer's perspective, students would be willing to pay higher rents to live close to campus. Politically, on-campus development would be the ideal option because it would reduce demand pressure on existing units in the neighborhood. With the College Ave Station set to open a few hundred feet away, on-campus housing development could have significant value for ground-floor retail because of increased foot traffic. This could enhance access to amenities like restaurants for the campus community.

Two sites at Tufts currently utilized as surface parking lots could be developed for graduate student housing. The Cousens Lot, across from the Cousens Gymnasium, and the Boston Avenue parking lot on the western edge of campus site have both been identified for potential future development. The Boston Ave site was identified in the Tufts University Master Plan created by Rawn Associates in 2006 and the Cousens Lot was identified in the Tufts Athletics Master Plan as an ideal location for a new swimming pool and ice hockey arena. The Cousens lot is approximately 2.45 acres, just over 100,000 square feet. The Boston Avenue Lot is just under one acre, with a surface area of approximately 40,000 square feet. Given the need for undergraduate housing, it could be unwise to use on-campus land suitable for undergrad housing for graduate housing. However, both sites are seen as unsuitable, or less than ideal, for undergraduate housing. The Cousens Lot is seen as too far from the rest of campus for undergraduate housing development. The Boston Ave Lot, while less separated from campus than the Cousens Lot, is also less than ideal for undergraduate housing. The 2016 Tufts Housing Study concluded that new housing should attempt to improve the connection between the upper and lower regions of campus.
As part of a long-term strategy, they recommended building an addition to Miller Hall and a new dorm to replace Lane Hall, which sits on the hill above the lot. However, the University’s willingness to develop on-campus land for graduate housing may not be as strong as for other uses. Because of its location across from the gym and adjacent to Huskins Field, Ounjian Field, Spicer Field, and Field F, the site is seen as an ideal location for development of an athletics complex. According to administration officials, the swim teams have outgrown the Hamilton pool, and they must currently rent pool time from MIT. The men’s ice-hockey team rents rink time at an off-campus rink in Malden, as there is no on-campus facility.

- Projected costs for the ice-rink: $22-28 million
- Projected costs for the aquatics center: $28-36 million
- Total costs: $50-64 million
Assuming construction costs of housing of approximately $130,000 per bed, if this money were put towards graduate student housing Tufts could build between 384 and 492 beds for graduate students, housing 20-25% of all graduates on the Medford Campus.

Using a higher construction cost estimate of $140,000 (total cost of the Lightview Apartments), Tufts could still deliver between 357 and 457 beds for graduate students. This could still provide housing for 17 - 22% of all graduate students.

These estimates are based on assumption that Tufts could build with similar efficiency as ACC, the nation’s largest developer of students housing. ACC’s experience means that most universities would probably not be able to match their costs.

Tufts’ most recent housing project, Sophia Gordon Hall, cost $22.16 million to build and produced 126 beds, for a per-bed cost of $176,000. Including shared meeting/social space, the project cost $374 per gross square foot. These figures however, are more than a decade old. Campus planners expressed the view that the project, while needed, was relatively inefficient in terms of cost-per bed. Construction costs since then have increased, meaning that any Tufts-built project might be expected to cost even more today.

Even if we assume a per-bed construction cost estimate of $200,000, using the money allocated for the aquatics center, Tufts could produce 180 beds and increase the capacity of university-owned graduate housing more than 160%.
KEY FINDINGS
KEY FINDINGS

CURRENT HOUSING AND TRANSPORTATION PATTERNS

• Graduate students drive enrollment growth in Boston-area universities. Since 2013, graduate student enrollments have increased by 4,000 (7.7%), while undergraduate enrollments have remained flat.

• 90% of graduate students at Boston-area universities, and 94% at Tufts’ Medford/Somerville campus, live off campus in the private rental housing market.

• Between 2011 and 2019, home values in the five cities near the Tufts Medford/Somerville campus have increased by 89% in Medford, 108% in Somerville, 71% in Arlington, 94% in Cambridge, and 91% in Malden. (Zillow)

• 2019 median listed rents in these cities are $2,690 in Medford, $3,000 in Somerville, $2,225 in Arlington, $3,000 in Cambridge, and $2,000 in Malden. (Zillow)

• Graduate students living in existing housing off campus pay a median rent of $900, and a mean rent of $1,105 per month.

• 2,000 graduate students attend Tufts’ Medford/Somerville campus in the schools of Arts and Sciences, Engineering, and Fletcher. Of those, 1,880 live off campus.

• 92% of graduate students living off-campus are housing-cost burdened, paying more than 30% of their income on rent; among them, 57 percent are extremely housing-cost burdened, paying more than 50% of their income on rent, and 33% spend more on rent than they earn.

• 30% of graduate students at Tufts’ Medford/Somerville campus are international students, who face additional challenges. They do not know the housing market in advance, have to pay large sums upfront to secure housing, and are limited by federal guidelines on the income they can earn outside of university work.

• 30% of off-campus graduate students live within a ½ mile of the future Ball Square and College Ave Green Line stations.

• Rents are expected to rise between 29% and 37% around these two stations after they open (MAPC).

• The median distance from campus for graduate students who live off campus is 1.16 miles: 0.98 miles for international students, and 1.21 miles for domestic students. Among all students, 56% walk, 11% bike, and 10% take public transit to campus.

• Current services and assistance (housing website and the Jumbo Shuttle) that Tufts provides are not being well used by graduate students.

• International students at Tufts are more dissatisfied with the availability, cost and the current situation of their housing than non-international students. They also find the process of searching for housing more stressful.

• Four out of Tufts’ 12 peer institutions and three out of five local institutions offer some form of mortgage assistance for faculty.

• There is no strong correlation between the size of a university’s endowment and its provision of graduate housing. In general, universities with less endowment have less housing options for graduate students, but there are several exceptions.

• Most of the universities that provide some kind of university owned graduate housing can house only between 1-10% of their graduate students, with the exception of Emery University which houses 100% of its graduate students. Among local institutions, MIT houses 35% of its graduate students. Tufts’ AS&E and Fletcher provide housing for 6% of their graduate students.
REAL ESTATE LANDSCAPE IN NEIGHBORING COMMUNITIES

• We have identified three parcels in Medford and Malden that could potentially become graduate or faculty housing developments in the future. Given Tufts’ current financial constraints, public-private partnerships are potentially feasible options.

• Another option would be for Tufts to lease units within existing apartment buildings. There are 48 multifamily buildings in Medford and Malden with at least 75 units, 10 of which are within a quarter mile of a bus route that serves the University. One of these buildings could serve as a pilot for Tufts to judge demand and feasibility for off-campus graduate student or faculty housing.

POSSIBLE SOLUTIONS TO MEET HOUSING NEEDS

• According to our survey responses, more than half of the students would prefer to live in one- or two-bedroom apartments and on average are willing to pay more than $100 from their current rent to get the housing they prefer.

• There has been no previous research by the University into the issue of graduate student or faculty housing. Local institutions like MIT conduct an annual graduate in order to assess current trends and demand for graduate housing.

• Exit surveys and interviews are other possible ways to collect more information that can be vital for Tufts to create effective housing policies in the future. Exit interviews should focus on examining how the cost of housing affects the decisions of students and faculty to come to Tufts.
RECOMMENDATIONS
RECOMMENDATIONS

CONTINUE RESEARCH AND ANALYSIS OF GRADUATE STUDENT HOUSING

The University should conduct an annual graduate student survey to understand the effects of the Green Line Extension. This survey could be conducted by a Graduate Student Housing Working Group established within the Graduate Student Council, in conjunction with AS&E and Fletcher. The University should ask about the impact of housing in faculty exit interviews and student exit surveys. These interviews could be conducted by the Dean’s Office for faculty and the Graduate School of Arts and Sciences for graduate students.

FORM A GRADUATE STUDENT HOUSING WORKING GROUP

The University should form a Graduate Student Housing Working Group, in conjunction with the Graduate Student Council and the Campus Planning and Development Committee, to centralize decision-making and ownership of the housing situation for graduate students.

CONDUCT A CAMPUS MASTER PLAN

In order to articulate a vision for the future of the Somerville/Medford campus that takes into account the Green Line Extension and the housing needs of graduate students and faculty, the University should undertake a campus master plan. In particular, the Cousens Lot is one of the few undeveloped parcels left on the campus. Its proximity to the College Ave stop could make the site a valuable spot for mixed-use development. Any future use of the site should consider the opportunity cost of a single-use development, such as an aquatics center.

BUDGE THE INFORMATION GAP FOR INTERNATIONAL STUDENTS

Only 9% of grad students found their housing through the Tufts website. The University should continue to develop this resource by working to allow students verify or rate landlords. Such a system would increase international students’ confidence when securing housing and allow them to access a greater number of listings.

SECURE HOUSING UNITS IN AN OFF-CAMPUS APARTMENT FOR GRADUATE STUDENTS AS A PILOT PROJECT

One short-term step that the University could take would be to reach an agreement with an off-campus apartment to secure housing units for graduate students and/or faculty. There are a number of larger (75+ multifamily properties in Medford and Malden that could serve as sites for a pilot program. Included below is a map of all large, privately-owned properties that could potentially serve as locations for a pilot program.
Figure 58. Multifamily properties in Medford and Malden with more than 75 units, which can possibly become Tufts' pilot project (Source: Connor Ring ArcGIS Map)
REFERENCES

1 Fair Market Rent is the 40th percentile of gross rents for a typical rental unit, used by the federal government for affordable housing subsidies.


3 Figure quoted by Matt Austin, Associate Director of Housing Operations in Tufts Daily, May 9, 2018.


8 Podolsky, 5.

9 Jonah O’Mara Swartz. Presentation to the Campus Planning and Development Committee on 2/28/19.


13 Ibid.

14 Department of Neighborhood Development, “Student Housing Trends: 2017-2018 Academic Year” (City of Boston, November 2018).


19 Ibid.


25 Graduate Student Housing Survey, Tufts UEP Field Project, April, 2019.

26 Housing Graduate Students: An ethnographic study by students in ANTH 161 (Fieldwork Lab), Tufts University Fall 2018

27 Interview with Professor Cathy Stanton. 3/13/19.


31 Gail Kalinoski, “Largest US Student Housing Project Breaks Ground.”


35 Ibid.


38 Department of Neighborhood Development, “Student Housing Trends: 2017-2018 Academic Year” (City of Boston, November 2018).


41 Department of Neighborhood Development, “Student Housing Trends: 2017-2018 Academic Year” (City of Boston, November 2018).


44 “Student Housing & Student Apartments - Portfolio - American Campus Communities,” April 19, 2019, https://www.americancampus.com/about-us/portfolio/results?state=boston&owned=0&managed=0&acquired=0&sustainable=0&developed=0&oncampus=1&offcampus=1&sortBy=&sortDirection=.
45 American Campus Communities Annual Report. April 2018.
50 Ibid.
56 Brian League, Executive Director; Land Use and Planning, USC.
60 Faculty Task Force on Work/Life Balance, Tufts University. “Report of the Tufts University Arts, Sciences and Engineering;” February 2012.
61 Faculty Work Life Committee, Tufts University. “Recommendations for the Management and Development of Tufts Faculty Housing Resources;” April 2018.
62 Faculty Task Force on Work/Life Balance, Tufts University. “Report of the Tufts University Arts, Sciences and Engineering;” February 2012.
65 Faculty Task Force on Work/Life Balance, Tufts University. “Report of the Tufts University Arts, Sciences and Engineering;” February 2012.
66 Ibid.
71 Ibid.
74 Ibid.
75 Ibid.
76 Ibid.
81 Interview with Charlie Grab, 4/1/19.
82 Medford Square Public Presentation. 3.28.19
86 Athletics Master Plan, Tufts University, Elkus Manfredi Architects in Association with Stantec. July 2016.
BIBLIOGRAPHY


Cole, Bruce. “Building Social Infrastructure Through Public-Private Partnerships: the case of student housing in public higher education” https://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=2056&context=all_dissertations


com/2019/03/04/belmont-village-goes-big-on-intergenerational-living-with-university-mixed-use-projects/.


APPENDICES

APPENDIX 1: SURVEY QUESTIONS – TUFTS GRADUATE HOUSING SURVEY

Graduate students at Tufts face an increasingly tight rental housing market. The Green Line Extension, scheduled for completion in 2021, is expected to increase demand for housing in the neighborhoods surrounding the Medford/Somerville campus and could reduce the availability of housing affordable to graduate students. This survey is designed to collect data on current graduate student housing characteristics and identify graduate students’ housing needs. It will take approximately 3 minutes to complete. All of your answers will remain confidential. We will not be collecting any personally identifiable information. Some of the questions will ask you about potentially sensitive information such as the closest intersection to your house and the percent of income spent on housing. If you prefer, you may simply skip these questions. Survey data will be stored in the Tufts Box and is only accessible to the research team and the Faculty Advisor. It will be deleted three years after the project ends. Survey results may be shared outside of the research team including with the Tufts Social, Behavioral & Educational Research Institutional Review Board (Tufts SBER IRB). If you have any questions or concerns about the research, please contact Rajat Shrestha, Principal Investigator, at rajat.shrestha@tufts.edu.

Tufts Graduate Housing Survey
Start of Block: Tell us about yourself

1.0 Do you consent to take this survey?
O Yes
O No
Skip To: End of Survey If Do you consent to take this survey? = No
Start of Block: Tell us about yourself

1.1 What is your status at Tufts?
O Master’s student
O PhD student
O Postdoc
O other ________________________________

1.2 Which department/program are you in? _____________________________

1.3 What is your race or origin?
O Hispanic, Latino, or Spanish origin
O Black or African American
O White
O American Indian or Alaska Native
O Asian
O Native Hawaiian or Pacific Islander
O Another race or origin ________________________________

1.4 What is your gender?
O Female
O Male
1.5 Are you an international student?
- Yes
- No

1.6 In general, how satisfied are you with the availability of housing?
- Very satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Very dissatisfied

1.7 In general, how satisfied are you with the cost of housing?
- Very satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Very dissatisfied

1.8 How satisfied are you with your current housing situation?
- Very satisfied

1.9 How stressful did you find the process of obtaining housing?
- Extremely stressful
- Very stressful
- Moderately stressful
- Slightly stressful
- Not stressful

1.10 How much do you currently pay in rent per month? ____________

1.11 How did you find your current housing?
- Craigslist
- Social media (please specify) _____________________________
- Tufts housing website
- Real estate broker
- Other online housing resource ___________________________
- Word of mouth / friend

1.13 Where do you currently live?
- On-campus housing
- Off-campus housing
- (Other) _____________________________

Display This Question:
If Where do you currently live? = On-campus housing
1.14 Which residence did you live in?
- Blakeley Hall
- Tufts-owned house

Display This Question:
If Where do you currently live? = Off-campus housing

1.15 Which city do you live in?
- Medford
- Somerville
- Cambridge
- Malden
- Arlington
- Boston
- Other __________________________________________

Display This Question:
If Where do you currently live? = Off-campus housing

1.16 What is the nearest intersection to your residence? (i.e. Boston Ave and North St) __________________________________________

Display This Question:
If Where do you currently live? = Off-campus housing

1.17 Do you live with a spouse/significant other, a child/children, other biological family members, or a chosen family?
- Yes
- No

1.18 How many people (other than yourself) do you live with?
- 0
- 1
- 2
- 3
- 4 or more

Display This Question:
If Where do you currently live? = Off-campus housing

1.19 How many bedrooms are in your unit? (Please put 0 for studio/efficiency).
- 0
- 1
- 2
- 3
- 4 or more

Display This Question:
If Where do you currently live? = Off-campus housing

1.20 How much, in total, did you have to pay to secure your housing? (This includes brokers fee, security deposit, first month, last month, key fee, etc.)
- Less than $1500
- Between $1500 and $2500
- Between $2500 and $3500
- More than $3500

Display This Question:
If Where do you currently live? = Off-campus housing

1.21 What percentage of your income do you spend on housing?
- Less than 30%
- Between 30 and 50%
O more than 50%
O my rent is greater than my current income
End of Block: Describe your current place
Start of Block: How do you get around?
1.12 How do you typically commute to campus?
O walk
O bike
O motor vehicle
O public transportation
O campus shuttle
O other _________________________________________________
Display This Question:
If Where do you currently live? = Off-campus housing
1.22 What is your typical commute time, in minutes, to campus (one way)?
____________________________________________________________
Display This Question:
If Where do you currently live? = Off-campus housing
1.23 How many days per week do you normally commute to campus?
O 1
O 2
O 3
O 4
O 5
O more than 5 days

End of Block: How do you get around?
Start of Block: What are your needs and expectations?
Display This Question:
If Where do you currently live? = Off-campus housing
1.25 How important were the following factors to you in your housing choice?

<table>
<thead>
<tr>
<th></th>
<th>Not at all important</th>
<th>Slightly Important</th>
<th>Moderately Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from Campus</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Cost</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Desire to live alone</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Access to public transportation</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Proximity to grocery stores</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Safety</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Proximity to restaurants,</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>entertainment venues, outdoor</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>spaces, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to choose roommates</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Family-friendly unit</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Ability to have pet(s)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
1.26 Which type of housing unit would you prefer to live in?
- Efficiency / Studio
- One bedroom
- Two bedroom
- Three bedroom
- Dormitory
- Other ________________________________________________

How much more than your current rent would you be willing to pay to get your ideal housing option?_________________________________

1.27 What is the highest rent you would be willing to pay for your preferred housing option?_________________________________

Display This Question:
If Where do you currently live? = Off-campus housing

1.28 Would you prefer to live in housing provided by Tufts?
- Yes
- Maybe
- No

1.29 Do you have any suggestion for how Tufts could improve the housing experience of its graduate students?_________________________________

End of Block: What are your needs and expectations?
APPENDIX 3: INTERVIEW QUESTIONS

Tufts University Officials

Lois Stanley, Capital Renewal and Campus Planning Director, Tufts University

• How does the University view the current housing landscape for graduate students and faculty?
• Does the University have experience with partnerships with non-Tufts entities in housing or other large scale development?
• Which development companies, if any, has the University worked with?
• How do you view the current financial situation of the University and their willingness to invest in graduate or faculty housing, either monetarily or through use of campus land?
• Are there any University-owned parcels that have been identified as housing development opportunities?
• Does the University have a campus master plan?
• How would the trustees conduct a capital campaign for graduate housing?
• What would be your criteria for determining the optimal location for possible graduate housing development?
• Do you have any estimates for the cost of the development of on-campus and off-campus development?
• What were the construction costs and total development costs of recent on-campus housing development (CoHo, Sophia Gordon)? Costs per square foot?
• Do you see any risks or drawbacks associated with partnerships between private developers and universities?
• What are the main distinctions between private-private partnerships and public-private partnerships?
Rocco DiRico, Public Relations

- How do you see the potential for graduate student housing development in the surrounding communities?
- Do you think any communities would be open to a graduate student housing development?
- Would any communities be vehemently opposed?
- What are the political barriers to university housing development surrounding the Medford campus?
- Have there ever been discussions between the City of Medford and Tufts regarding off-campus housing developments?
- During the development of the Medford Square Master Plan, were any development opportunities identified that could be suitable for off-campus student housing?

Charlie Grab, Assistant Director, Logistics & Operations, Public Safety

- How did the University develop the routes for its shuttle service?
- Do you collect data on ridership?
- If the University wanted to create a new route to off-campus student housing, what would be your best estimate of the cost to the University? How do cost out a shuttle route (per mile, per hour of operation)? What are the cost components of bus, drivers, fuel and maintenance? What would be a minimum number of potential riders to decide to establish a route? How would you decide how many runs a day?
- Has the University had discussions about how the Green Line Extension might affect the shuttle service routes?

Faculty Housing

Robert Chihade, Director of Real Estate

Anne Fernald, Operations Officer, Walnut Hill Properties

- What is the existing stock of University-owned faculty housing?
- How is University-owned faculty housing allocated?
- What are the housing challenges that faculty currently face?
- What are the costs associated with the University-owned faculty housing?
- Does the existing stock of faculty housing break-even financially?
- Do you see an opportunity to expand the stock of faculty housing?
- How do you think the University could better meet the housing needs of faculty?

Campus Planners at Local Universities

Maureen Hickey, Director of Strategic Initiatives in Campus Planning & Development, Northeastern University

- How does Northeastern address the housing needs of its graduate students?
- Would you partner with the same developers to have a graduate housing development or process differently?
- Would you consider supporting housing for faculty?
- Why did Northeastern decide to enter into partnerships with private development companies?
- What were the benefits of these partnerships to the university? Were there any drawbacks?
- How do the privately-funded developments compare to the university-owned properties?
- How have these developments been received by students?
- What partnership models have the University used (i.e. land-lease, equity financing, etc.)?
- Were these developments built on Northeastern-owned land?
- How are tax assessments handled on these developments?
- What is the range of rent at Northeastern’s privately-built student housing?
developments?

- How do these rents compare to the cost of housing at recently built on-campus dorms like Buildings A, B, C, E, & F?
- Does the university have any plans for future student housing construction?

Local Real Estate Professionals

What are the currently available parcels that may be suitable for student housing development by Tufts?

**Local Developers / Developers who specialize in student housing**

Brian Kavoogian, Trustee Emeritus, Tufts University and Founder and President, Charles River Realty Investors

- Do you see the potential for the University to develop graduate student housing?
- If such development were off-campus, what development models would be appropriate?
- Without the ability to develop University-owned land, would a developer be able to provide housing at affordable prices to students?