A HOUSING PROGRAM TAILORED TO TUFTS

Heidi Sokol, Senior Campus Planner
Lois Stanley, Campus Planning Director
Gretchen Von Grossmann, Capital Programs Director

SCUP
March 12, 2019
Rochester, NY
AGENDA

1. 2016 HOUSING STUDY
2. HOUSING PROGRAM
   - Bed Optimization
   - Wood Frame Conversions
   - Major Renovations
3. LESSONS LEARNED
4. QUESTIONS & ANSWERS
2016 HOUSING STUDY: HISTORY OF HOUSING DEVELOPMENT

1853-1900
2016 HOUSING STUDY: HISTORY OF HOUSING DEVELOPMENT

1900-1950
2016 HOUSING STUDY: HISTORY OF HOUSING DEVELOPMENT

1950-2000
2016 HOUSING STUDY: HISTORY OF HOUSING DEVELOPMENT

2000-2016
2016 HOUSING STUDY: FACTS & FIGURES

FACTS IN 2016

• On-campus housing required for 1st and 2nd years
• Mixture of housing: “corridors,” suites, apartments, theme houses, Greek
• Mixture of occupancy: 1st years only, all class years, seniors only
• 2 tiers of housing prices: $7,100-7,600 per bed per year

FIGURES IN 2016

• 5,400 undergraduates
• 50 residential facilities | 1.05M gross square feet
• 3,450 on-campus beds | 66% on-campus residency
• 25% buildings constructed since 1970
• 30,000 GSF average building size
• > 0.20 FCI for housing facilities
2016 HOUSING STUDY: WHY AND WHAT’S NEXT

DRIVERS
• Students: avert steep rent increases in off-campus rental market
• Student Affairs: improve the residential experience for all class years
• Host communities: reduce the number of students living off campus
• Advancement: create life-long connections to campus for all students

RECOMMENDATIONS
• Add 600+ beds in 5 years through a multi-pronged approach
• Leverage Tufts-owned portfolio of wood-framed houses
• Link housing assignments to class year
• Modify housing lottery process to reduce stress
• Establish housing program governance
2016 HOUSING STUDY: PROGRAM PROGRESS

OUTCOMES

440 new beds

760 improved beds in 15 renewed residential halls

5,000 additional square feet

Fall 2017  Clusters of first-year housing
+90 beds

Fall 2018  +150 beds

Fall 2019  +200 beds
8 tiers of housing prices: $8,200-10,200/bed/year

BUILDING INVESTMENT

• $51.5M total capital spending, 2016-19
• $24.6 total deferred maintenance spending, 2016-19
• $32,000 per improved bed
• $117,000 per new bed
What are the opportunities / assumptions?

- Are residences halls / room types assigned to appropriate class years?
- Are existing bedrooms “right-sized”?
- Establish metric: minimum +/- 75 sf/bed inclusive of closets

In-House Review

- Spatial Data: Identify existing singles 150+ sf & existing doubles 225+ sf
- Floor Plan Check / Test Fits: Confirm room areas and geometries
  Furniture standards, test fits, remove closets?
- Potential additional beds warranted additional investigation

Engage consultant

- Room by room confirmation: Existing conditions verification, ceiling heights
  Modified furniture standards
Additional Beds

- How many?
- Where?
- When?

- What’s involved -- enabling?
- How – construction or not?
- Permanent or temporary?
BED OPTIMIZATION: PLANNING
BED OPTIMIZATION: PLANNING

Consultant Verification & Scope Development

Review floor plans for furniture layouts that maximize bed counts.

Standard Furniture Solutions
- FF&E only
- FF&E + Minor Construction

Loft Furniture Solutions
- FF&E only
- FF&E + Minor Construction

3. Standard Furniture

4. Loft Furniture

EXAMPLE: WEST HALL PLAN WITH STANDARD FURNITURE LAYOUTS

EXAMPLE: WEST HALL PLAN WITH LOFT FURNITURE LAYOUTS
BED OPTIMIZATION: PLANNING
BED OPTIMIZATION: PLANNING

Summary

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Furniture Only</td>
</tr>
<tr>
<td>25</td>
<td>Furniture + Electrical</td>
</tr>
<tr>
<td>6</td>
<td>Furniture + New finishes</td>
</tr>
<tr>
<td>42</td>
<td>Demo/Construction + Furniture + Electrical/fire protection</td>
</tr>
<tr>
<td>11</td>
<td>Demo/Construction + Furniture + Electrical/fire protection</td>
</tr>
</tbody>
</table>

(*east wing of Metcalf, construction is new flooring & infilling doors; no additional bed, work done to facilitate additional bed in adjacent room;*)

98 Total rooms
92 Total beds

Bed Optimization Summary of Construction vs. Furniture only

<table>
<thead>
<tr>
<th>Metcalf</th>
<th>Hodgdon</th>
<th>Richardson</th>
<th>West</th>
<th>Commuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>033W</td>
<td>007</td>
<td>001</td>
<td>104</td>
<td>201</td>
</tr>
<tr>
<td>034W</td>
<td>008</td>
<td>005</td>
<td>203</td>
<td>203</td>
</tr>
<tr>
<td>035W</td>
<td>107</td>
<td>101</td>
<td>204</td>
<td>301</td>
</tr>
<tr>
<td>036W</td>
<td>108</td>
<td>106</td>
<td>205</td>
<td>302</td>
</tr>
<tr>
<td>101W</td>
<td>110</td>
<td>211</td>
<td>206</td>
<td>303</td>
</tr>
<tr>
<td>102W</td>
<td>117</td>
<td>217</td>
<td>209</td>
<td></td>
</tr>
<tr>
<td>103W</td>
<td>124</td>
<td>319</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>105W</td>
<td>201</td>
<td>320</td>
<td>211</td>
<td></td>
</tr>
<tr>
<td>106W</td>
<td>207</td>
<td>322</td>
<td>212</td>
<td></td>
</tr>
<tr>
<td>121E-A</td>
<td>208</td>
<td>323</td>
<td>303</td>
<td></td>
</tr>
<tr>
<td>121E-B</td>
<td>210</td>
<td>324</td>
<td>304</td>
<td></td>
</tr>
<tr>
<td>201W</td>
<td>217</td>
<td></td>
<td>305</td>
<td></td>
</tr>
<tr>
<td>202W</td>
<td>224</td>
<td></td>
<td>306</td>
<td></td>
</tr>
<tr>
<td>203W</td>
<td>233</td>
<td></td>
<td>309</td>
<td></td>
</tr>
<tr>
<td>205W</td>
<td>301</td>
<td></td>
<td>310</td>
<td></td>
</tr>
<tr>
<td>207W</td>
<td>307</td>
<td></td>
<td>311</td>
<td></td>
</tr>
<tr>
<td>210W</td>
<td>308</td>
<td></td>
<td>404</td>
<td></td>
</tr>
<tr>
<td>202E</td>
<td>*</td>
<td>310</td>
<td>405</td>
<td></td>
</tr>
<tr>
<td>203E</td>
<td>*</td>
<td>317</td>
<td>409</td>
<td></td>
</tr>
<tr>
<td>204E</td>
<td>*</td>
<td>324</td>
<td>410</td>
<td></td>
</tr>
<tr>
<td>206E</td>
<td>*</td>
<td>333</td>
<td>411</td>
<td></td>
</tr>
<tr>
<td>207E</td>
<td>*</td>
<td></td>
<td>412</td>
<td></td>
</tr>
<tr>
<td>208E</td>
<td>21 rooms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>301W</td>
<td>21 beds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>303W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>307W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>310W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>310E</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>311E</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>314E</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>315E</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>316E</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11 rooms
12 beds

<table>
<thead>
<tr>
<th>Commuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 rooms</td>
</tr>
<tr>
<td>7 beds</td>
</tr>
</tbody>
</table>

Hill Hall
| 106 |
| 1 room |
| 1 beds |

Wren Hall
| 20 |
| 30 |
| 120 |
| 130 |

4 rooms
4 beds
# BED OPTIMIZATION: PLANNING TRANSITION TO CONSTRUCTION

## RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Potential new beds:</th>
<th>162 beds</th>
<th>$4.3 mil total construction cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority #1 beds:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential to be executed immediately:</td>
<td>58 beds</td>
<td>$1.5 mil</td>
</tr>
<tr>
<td>Priority #2 beds:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require approval of new loft furniture:</td>
<td>19 beds</td>
<td>$0.55 mil</td>
</tr>
<tr>
<td>Priority #3 beds:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require converting Stratton from a senior dorm:</td>
<td>49 beds</td>
<td>$1.3 mil</td>
</tr>
<tr>
<td>Priority #4 beds:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May require plumbing variance:</td>
<td>36 beds</td>
<td>$0.95 mil</td>
</tr>
</tbody>
</table>

The 162 potential beds in priorities #1 - #4 of the bed optimization project will yield the following breakdown of rooms:

- 143 total rooms with increased bed counts
  - 62 double rooms
  - 73 triple rooms
  - 8 quad rooms
  - 82 rooms with standard furniture
  - 61 rooms with loft furniture
BED OPTIMIZATION CONSTRUCTION: SUMMER #1 (2017)

Beds Created

• Hodgdon (15),
• Metcalf (30)
• Richardson (12)
• West (17)
• Wren (4)
• Hill (1)
• 32 Dearborn (7)

$15,100/bed
HODGDON HALL

- Large doubles became triples
- Added bathroom fixtures to remain in compliance with code - took over a room
- 4 floors
HASKELL HALL

- Office and student organization relocated
- Yielded a triple/single suite and a triple suite
BED OPTIMIZATION CONSTRUCTION: SUMMER #2 (2018)

HARLESTON HALL

• Offices relocated

• Yielded two suites
  o 4 doubles
  o 5 doubles, 2 singles
BED OPTIMIZATION CONSTRUCTION: SUMMER #2 (2018)

Before

After

HARLESTON HALL

Before

After
HOUSING PROGRAM: WOOD FRAME CONVERSIONS

PROPOSED VIEW OF BELLEVUE STREET
WOOD FRAME CONVERSIONS: PLANNING

BUILDING DESIGN / TEST FITS

13 House Overview

BUILDING MAP

Study Houses
- 11 Bellevue
- 14-16 Bellevue
- 15 Bellevue
- 19 Bellevue
- 21-23 Bellevue
- 22 Bellevue
- 6-8 Capen
- 11 Fairmount
- 21 Fairmount
- 26 Winthrop
- 43-45 Winthrop
- 44-46 Winthrop
- 47 Winthrop
**WOOD FRAME CONVERSIONS: PLANNING**

**BUILDING DESIGN / TEST FITS**

13 House Overview

<table>
<thead>
<tr>
<th>Regulatory Parameters</th>
<th>Current Occupancy Classification: R-3</th>
<th>Current Occupancy Classification: B</th>
<th>Current Occupancy Classification: R-3</th>
</tr>
</thead>
</table>
| **Current Use: Single Family / Two Family** | - No change in Occupancy Classification  
- Change in Use  
- Alteration Level 3 | **Current Use: Offices**  
- Change in Occupancy Classification  
- Change in Use  
- Alteration Level 3 | **Current Use: Dorm** (Congregate living facility with 16 or fewer occupants)  
- No change in Occupancy Classification  
- No change in Use  
- Alteration Level 3 |

**Proposed Occupancy Classification: R-3**

**Proposed Use: Congregate Living Facility with 16 or fewer occupants**
- Dormitory: A space in a building where group sleeping accommodations are provided in one room, or in a series of closely associated rooms, for persons not members of the same family group, under joint occupancy and single management.
- Congregate living facility: A building or part thereof that contains sleeping units where residents share bathroom and/or kitchen facilities.
- Congregate living facilities with 16 or fewer occupants are permitted to comply with the construction requirements for Group R-3

**Alteration Level:** Level 3, work area exceeds > 50% of the building

**Sprinklers:** Required
**Maximum egress travel distance:** 125’
**Stairs:** Required 1hr fire rating if passing through 2 or more units; existing non-conforming stairs may remain unless unsafe.
**Accessibility:** Subject to Compliance with 521 CMR and 2010 ADA Standards
- 5% of units accessible.
- Distributed evenly throughout housing options.

---

4 Tufts University
WOOD FRAME CONVERSIONS: PLANNING

PROPOSED SITE

SUMMARY
- **15 HOUSES**
- 35 APARTMENTS
- 145 BEDROOMS
- 1 STUDENT PER BEDROOM
- GOAL 4:1 BEDROOM:BATH
- MOST APARTMENTS 3:4 STUDENTS
- EACH APARTMENT OWN KITCHEN & LIVING ROOM
- 4 GRADUATE RESIDENCE DIRECTORS
- NO STUDENT PARKING

ZONING
- PROPERTIES WILL BE CLASSIFIED AS DORMITORIES
- ZBA RELIEF FOR DISTANCE TO REMOTE PARKING
- ZBA RELIEF FOR LOT DIMENSIONS
EXISTING HOUSE WITH NO FOOTPRINT CHANGE

#44-46 WINTHROP

CURRENT USE: TWO-FAMILY

PROPOSED USE: DORMITORY

ZONING DISTRICT: GR

STATS
- ~3,800 GSF
- 2 APARTMENTS
- 6 BEDS
MAJOR RENOVATION: CONSTRUCTION

MILLER & HOUSTON HALLS

- Reclaimed garden level yielded 38 beds
- Rehabbed bathrooms, common spaces
- New entry atrium / elevator
MAJOR RENOVATION: CONSTRUCTION

STRATTON HALL
STRATTON HALL

Garden level:
• 20 new beds
• Accessible to ground floor and main common spaces
MAJOR RENOVATION: CONSTRUCTION

STRATTON HALL

Common spaces
- Programming with new furniture
- New finishes
MAJOR RENOVATION: CONSTRUCTION

Before

After

STRATTON HALL

Renovated restrooms
• Light and bright
• Durable new finishes
• Accessibility
• Infrastructure
HOUSING PROGRAM: PROJECT LOCATIONS
## HOUSING PROGRAM: SUMMARY

<table>
<thead>
<tr>
<th>Project/Building</th>
<th>Added Beds</th>
<th>Total Beds</th>
<th>Cost</th>
<th>Scope of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Completed Summer 2017</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed Optimization I</td>
<td>86</td>
<td>86</td>
<td>$1,298,284</td>
<td>Added beds to existing rooms in Hodgdon (15), Metcalf (30), Richardson (12), West (17), Wren (4), Hill (1), and 32 Dearborn (7).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Projects Completed Summer 2018</td>
</tr>
<tr>
<td>Stratton – Deferred Maintenance and Bed Optimization</td>
<td>76</td>
<td>118</td>
<td>$6,490,167</td>
<td>Doubled occupancy in existing large single rooms, driving much needed renovation of bathrooms and common spaces. A gut renovation of garden-level space added 20 new beds. An accessible entrance and lift were added to the building.</td>
</tr>
<tr>
<td>Metcalf - Deferred Maintenance and Bed Optimization</td>
<td>7</td>
<td>115</td>
<td>$4,500,000</td>
<td>Added four new bedrooms by repurposing excess storage space. Improved life safety systems. Renovated lounges and hallways, kitchen and laundry. New electrical systems and new flooring and lighting in bedrooms. New electronic bedroom door locks.</td>
</tr>
<tr>
<td>Haskell – Deferred Maintenance and Bed Optimization</td>
<td>7</td>
<td>154</td>
<td>$5,201,308</td>
<td>Significant envelope repair including new windows, repointed masonry, replaced parapet; and new hot water heaters plus an MAAB compliant front entryway. New electronic bedroom door locks. 7 beds added through conversion of student organization space (relocated).</td>
</tr>
<tr>
<td>Bed Optimization II</td>
<td>62</td>
<td>62</td>
<td>$2,083,000</td>
<td>Added beds to existing rooms in 32 Dearborn (2), Hodgdon (24), Harleston (19), Bush (12) and Hill (5). Added bathrooms in Harleston and Hodgdon.</td>
</tr>
<tr>
<td><strong>Projects in Progress – to be completed August 2019</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>123 Packard</td>
<td>20</td>
<td>20</td>
<td>$1,500,000</td>
<td>New woodframe acquisition.</td>
</tr>
<tr>
<td>CoHo Junior/Senior Housing</td>
<td>141</td>
<td>141</td>
<td>$19,654,707</td>
<td>Renovation of 13 wood frames and one new construction. Apartment style.</td>
</tr>
<tr>
<td>Miller + Houston Major Renovation</td>
<td>38</td>
<td>497</td>
<td>$34,594,284</td>
<td>Renovations to 2 major residence halls: new exterior front entrance area and elevator, MEP and envelope upgrades, improved lounge spaces, new bathrooms.</td>
</tr>
<tr>
<td><strong>TOTAL COST</strong></td>
<td>437</td>
<td>1193</td>
<td>$75,321,751</td>
<td>Avg. cost per bed — ~ $63,000</td>
</tr>
</tbody>
</table>
LESSONS LEARNED

1. Power of data analysis in planning initiatives
2. Coordinated capital and deferred maintenance investment
3. Program governance
4. Scheduling complex, phased housing program
Housing Program:
Planned New Beds
2017 - 2021

Housing Type:
- Green: Graduate
- Blue: Undergraduate: First Year
- Orange: Undergraduate: Apt Style
- Purple: Undergraduate: Others

- Medford/Somerville Campus
  - Fall 2016: 3,418 Total Beds*
  - Planned New Beds by Year:
    - +86 Fall 2017
    - +80 Fall 2018
    - +256 Fall 2019
    - +90 Fall 2020
    - +119 Fall 2021
  - +631 Total Additional Beds

- Fall 2021: ~4,049 Total Beds
  - Assumptions:
    - Undergraduates Only
    - Medford/Somerville Only
    - Incl. Greek in WH/Tufts bldgs
    - Incl. UG Student Staff (FYA+CDA)

- SMFA Campus
  - 54 Fall 2017
  - 26 Fall 2018
  - 80 Total Beds