Space Modeling and Capital Plan Development

Charge: The Space Modeling + Capital Plan Development Working Group and their associated Task Forces will assist the Vice Presidents in determining the operational and future growth space gaps on main campus, as well as developing a capital ten-year plan for the 2021-2031 cycle.
Space Modeling

Strategic Planning -> Resource Modeling -> Space Modeling -> Campus Master Planning -> Project Planning

Total Space Gap

Current Space Gap

Future Space Gap

Phase 1

Phase 2
Phase 1 - Determine current operational gaps in on-campus space

- Quantify existing campus spaces by category
- Define Needs for that category based on selected metrics
- Identify “operational gaps” between current space and spaces needed

*Membership listed under Space Modeling committee documents, linked [here](#)
Reference Materials

• Office of Financial Management (OFM)
  Higher Ed Facility Study, 2019
• Facilities Inventory and Classification
  Manual (FICM) Coding Methodology
• National Intramural-Recreational Sports
  Association (NIRSA) Space Planning
  Guideline, 2009
• Viking Union Master Plan, 2018

Glossary of Terms

• NASF – Net Assignable Square Feet: Floor area
  assigned to an occupant, program or support
  function
• GSF – Gross Square Feet: Total footprint area per
  building floor including non-assignable areas
  (circulation, mechanical/electrical, restrooms)
  and building elements (walls & structure)
• WSCH – Weekly Student Contact Hours: Enrolled
  student x class hours x days/week

Sharepoint link to documents above
Campus Growth

Enrollment

- 22% growth since '01/02

Gross SF / Student

- 6% decrease since '01/02
Methodology

Two types of gap analysis

Quantitative

A
Calculate existing space by type of space (from campus space database)

B
Determine optimum space needs using various space metrics

B-A = Operational Gap

Gap Overage (Gap Need)
% of existing (% of existing)

Qualitative

• Narrative descriptions of gaps in performance, quality or usability
<table>
<thead>
<tr>
<th>Space Category</th>
<th>Space Types</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructional + Research</strong></td>
<td>Classrooms and support spaces</td>
</tr>
<tr>
<td></td>
<td>Class Labs and support spaces</td>
</tr>
<tr>
<td></td>
<td>Open Labs: Computer, Media and Special-Use Labs and support spaces</td>
</tr>
<tr>
<td></td>
<td>Research Labs: dry, wet, other and support spaces</td>
</tr>
<tr>
<td><strong>Office Spaces</strong></td>
<td>Faculty and Staff: Single-occupant offices and shared workspaces w/ multiple workstations</td>
</tr>
<tr>
<td></td>
<td>Conference rooms, supply storage and support spaces</td>
</tr>
<tr>
<td></td>
<td>Administrative + Student Services suites (except health + counseling clinics)</td>
</tr>
<tr>
<td><strong>Community Spaces</strong></td>
<td>Library collections and processing</td>
</tr>
<tr>
<td></td>
<td>Student study and collaboration spaces</td>
</tr>
<tr>
<td></td>
<td>General use facilities: Lounges, food + dining facilities, merchandising, community meeting rooms, galleries and support spaces</td>
</tr>
<tr>
<td></td>
<td>Health and counseling clinic facilities</td>
</tr>
<tr>
<td><strong>Athletics/Campus Rec</strong></td>
<td>Indoor and outdoor athletic and recreational facilities</td>
</tr>
<tr>
<td><strong>Residential Facilities</strong></td>
<td>Student housing</td>
</tr>
<tr>
<td><strong>Campus Support + Infrastructure</strong></td>
<td>Central services: Storage, mail services, publishing/printing services</td>
</tr>
<tr>
<td></td>
<td>Telecomm</td>
</tr>
<tr>
<td></td>
<td>Police</td>
</tr>
<tr>
<td></td>
<td>Facilities Management</td>
</tr>
</tbody>
</table>
## Instructional Space

### Quantitative

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Recommended Metrics (OFM Report, 8am-5pm)</th>
<th>Space gap (NASF)</th>
<th>Space gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classrooms (General Use, Departmental)</td>
<td>1.19 NASF / WSCH (Weekly Student Contact Hour)</td>
<td>(17,054)</td>
<td>(11%)</td>
</tr>
<tr>
<td>Class Labs</td>
<td>1.18 NASF / WSCH</td>
<td>(48,810)</td>
<td>(35%)</td>
</tr>
<tr>
<td>Open Labs (Media, Computer, Special-Use)</td>
<td>6 NASF / Enrollment FTE</td>
<td>36,653</td>
<td>30%</td>
</tr>
<tr>
<td>Research Labs</td>
<td>1,280 NASF / Principal Investigator (All types)</td>
<td>(64,412)</td>
<td>(89%)</td>
</tr>
</tbody>
</table>

### Qualitative

- Distribution of classroom sizes mismatched with course sizes
- Space needs assessment required to understand potential for adaptation to other lab types/uses
- Inequities in the amount and quality of research space
- Furniture and equipment mismatched with pedagogical and curricular needs
**Office Space**

**Quantitative**

Workstation Quantities Across Campus - "Supply vs Demand"

**Supply**
- Current Single Offices Qty.: 1444
- Current Workstation Qty. in Shared Workspaces: 1223

**Demand**
- Faculty/Staff Workstations Needed: 2322
- Student Employee Workstations Needed: 0

![Bar chart showing supply vs demand for workstation quantities across campus]

**Qualitative**

Office Spaces generally
- Wide variation in office sizes and workstation allocations in shared spaces
- Significant variation in quality of work environments
- No swing, surge or flex space

Student Services Programs
- Most Student Service programs are far from parking
- Inadequate spaces for confidential advising, support, outreach and counseling
- Many campuses have Welcome centers for visitors and prospective students
- Many NW campuses have a formal Longhouse

Faculty/Staff needs based on 1:1 workstation / head count, except 1:2 Graduate TA’s + police, 1:10 for construction, maintenance, custodial positions
# Library + Study Spaces

## Quantitative

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Recommended Metrics (OFM Report)</th>
<th>Space gap (NASF)</th>
<th>Space gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library Stacks &amp; Processing</td>
<td>0.07 NASF / Physical Volume Equivalent (PVE)</td>
<td>(14,016)</td>
<td>(14%)</td>
</tr>
<tr>
<td>Campus Study Space</td>
<td>5.25 NASF / Student Head Count</td>
<td>1,126</td>
<td>1%</td>
</tr>
</tbody>
</table>

## Qualitative

- As with office spaces, need to provide more and better common spaces that facilitate and encourage student collaboration
## Community Spaces

### Quantitative

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Recommended Metrics (OFM Report)</th>
<th>Space gap (NASF)</th>
<th>Space gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Spaces</td>
<td>20 NASF / FTE</td>
<td>(36,795)</td>
<td>(15%)</td>
</tr>
</tbody>
</table>

### Qualitative

- Very few after-hours amenities or entertainment on campus
- Lacking accommodations for commuter students
- Equity, Inclusion, Dignity
  - Need to continue gender inclusive accommodations
  - Need more lactation accommodations
  - Need to provide space and amenities for spiritual and meditative practices
  - Need further improvements in accessibility
  - Need accommodations for low-income and homeless students
- Limited number of event spaces are small and outdated
- Shortage of makerspaces
## Recreation/Athletics

### Quantitative

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Existing Rec Spaces</th>
<th>Recommended NASF (NIRSA Guide for 10-20k students)</th>
<th>Space gap (NASF)</th>
<th>Space gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor</td>
<td>130,678 NASF</td>
<td>148,000 NASF</td>
<td>(17,322)</td>
<td>(13%)</td>
</tr>
<tr>
<td>Outdoor</td>
<td>±9 acres</td>
<td>±15 acres</td>
<td>(±6 acres)</td>
<td>(67%)</td>
</tr>
</tbody>
</table>

### Qualitative

- Indoor NASF include Carver spaces that are used ±30% of time for Recreation
- Many athletics, recreation and club activities have to be held off campus
- Conflicts in scheduling
- For reference, regulation soccer field ~3.5 acres
Residential

Quantitative

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Existing Beds</th>
<th>Operational Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>4,035</td>
<td>(842)</td>
</tr>
</tbody>
</table>

Bed count projections are supported by the recent “Housing and Dining Development Assessment – 2019” prepared by Ayers Saint Gross.

Qualitative

- Majority of inventory is in fair to poor condition
- Triple-beds in rooms designed for two
- Insufficient variety of amenities on campus for residents, especially afterhours (grocery, entertainment, communal cooking, etc)
- Equity, Inclusion, Dignity
  - Need to continue gender inclusive accommodations
  - Need further improvements in accessibility
University Support + Infrastructure

Quantitative

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Recommended Metrics (OFM Report)</th>
<th>Space gap (NASF)</th>
<th>Space gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Support &amp; Infrastructure</td>
<td>7% of all other NASF</td>
<td>(9,237)</td>
<td>(12%)</td>
</tr>
</tbody>
</table>

Qualitative

Preservation challenges
• Density of Campus
• Age of Buildings
• Conditions of Campus Facilities

Programmatic challenges
• Modernization needs
• Programmatic Improvements
• Repurposing space
Transportation Infrastructure

Quantitative (Parking)

<table>
<thead>
<tr>
<th>Existing Spaces</th>
<th>Current Spaces / Head Count*</th>
<th>Calculated Need [assuming .25 spaces / head count]</th>
<th>Operational Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,375 [~28 acres]</td>
<td>.19 [84% avg. occupancy]</td>
<td>4,332 [~75% avg. occupancy]</td>
<td>(957) (~8 acres)</td>
</tr>
</tbody>
</table>

*Student + Staff + Faculty = 17,327

Qualitative

- Pedestrian corridor not ideal for multi-modal alternative transportation
- Need for better routing for transit to and through campus
- Parking proximity to programs, for visitors and students/staff
## Space Needs Summaries

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Existing</th>
<th>Operational Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional/Research Space</td>
<td>497,908 sf</td>
<td>(93,623) sf</td>
</tr>
<tr>
<td>Office Space</td>
<td>384,394 sf</td>
<td>(20-50) workstations</td>
</tr>
<tr>
<td>Library and Study Spaces</td>
<td>187,961 sf</td>
<td>(12,890) sf</td>
</tr>
<tr>
<td>Community Spaces</td>
<td>253,359 sf</td>
<td>(36,795) sf</td>
</tr>
<tr>
<td>Recreational/Athletics (Indoor)</td>
<td>130,678 sf</td>
<td>(17,322) sf</td>
</tr>
<tr>
<td>Recreational/Athletics (Outdoor)</td>
<td>±9 acres</td>
<td>(±6) acres</td>
</tr>
<tr>
<td>Residential</td>
<td>4,035 beds</td>
<td>(842) beds</td>
</tr>
<tr>
<td>University Support</td>
<td>79,794 sf</td>
<td>(9,237) sf</td>
</tr>
<tr>
<td>Transportation (Parking)</td>
<td>3,375 spaces</td>
<td>(957) spaces</td>
</tr>
</tbody>
</table>
Next Steps

Feb 27 - Mar 13: UPRC – Review Phase 1 Findings, References and Provide Feedback

Milestones

• Mar 2: Working Group Begins Work on Phase 2 Projecting Future Growth Gap

• Apr 15: Status Report to UPRC

• May 20: Present draft Final Space Modeling Report to UPRC

• May 21 – May 29: UPRC – Review Report and Provide Feedback

• June 11: Working Group posts Final Space Modeling Report
10-Year Capital Plan

Projects for Consideration
Continuation Projects

Received funding in prior biennia; funding will be requested in 2021-23

PROJECTS:

• Electrical Engineering and Computer Science Building
Programmatic Projects (UPRC to Evaluate)

New facility to meet institutional needs; change or improve existing space to meet program requirements

PROJECTS:

• Classroom + Lab Upgrades
• CFPA Addition + Renovation
• Consolidated Academic Support Services Facilities (Phases 1-3)
• Environmental Studies Center Renovation
• Ross Engineering Renovation
• Student Development Success Center
• Wilson Academic Renovation
• Minor Works - Program
Preservation/Infrastructure Projects
(UPRC to Evaluate)

Renovating building systems to extend useful life; upgrading and expanding utility and infrastructure systems

PROJECTS:

• Access Control Security and Infrastructure Upgrades
• Elevator Preservation Safety + ADA Upgrades
• Heating System Carbon Reduction + Energy Efficiency Improvements
• Southcentral Campus Roadway Revisions
• Westside By-Pass Road Realignment
• Minor Works - Preservation
Next Steps

• Feb 27 - Mar 11:  UPRC Reviews and Propose Ranking of Projects
• Mar 11:          UPRC Meeting – Discuss and Provide Feedback

Milestones

April 17:           Present Draft 10-Year Plan to BOT
June 12:            Request Approval of Final 10-Year Plan to BOT
Summer 2020:        Submit Project Proposals, 2-Year Capital Request, and 10-Year Capital Plan to OFM