Agenda Item IX.A
USNH Deferred Maintenance/Facilities Condition Assessment

Board of Trustees
October 20, 2017
USNH Deferred Maintenance Planning – FCA

Project Mission:
Develop a full understanding of USNH’s facility’s needs through a comprehensive facilities condition assessment that leverages institutional knowledge, aligns facility needs and priorities, develops a capital strategy to identify funding requirements for deferred maintenance, modernization and future lifecycle needs and creates a data-informed decision making framework to track progress of capital investments.

Project Milestones:
- Background Data Collection   June 2, 2017
- Data Synthesis & Analysis    July 31, 2017
- Site Level Reporting         August 25, 2017
- Trustees Presentation        October 20, 2017

Current Status/Next Steps:
Sightlines completed the Facilities Condition Assessment program and next steps include the uploading to the interactive database (4Tell), system integration, training and use.
University System of New Hampshire

Building Portfolios Presentation

October 2017
Introduction
## Goals and methodology

| Independent and Inclusive | The inventory is both independent with our staff and inclusive of the diverse knowledge of Facilities staff to verify the inventory on get buy –in from the ground |
| Credible | The process is comprehensive and consistent in the identification and codification of projects |
| Flexible | The inventory is flexible to changes in institutional priorities and renovation coordination |
| Affordable | The plan will be cognizant of the finite availability of institutional resources |
| Sustainable | The BPS should become an internal planning tool for the Facilities Services organization |
Mission and Vision of the System

Mission
The mission of the University System of New Hampshire is to serve the higher educational needs of the people of New Hampshire. The University System strives to assure the availability of appropriate higher educational opportunities to all New Hampshire people; seeks to enroll a diverse student population to enhance educational experiences; and provides programs and activities based on a commitment to excellence. Through its institutions, the University System engages in research which contributes to the welfare of humanity and provides educational resources and professional expertise which benefit the state and its people, the region and the nation.

Vision
The University System of New Hampshire is one of the smallest public university systems in the United States, but our vision is to be the very best small university system in the country. We seek to achieve this vision by:
1. being truly student oriented.
2. being truly committed to excellence in selected programs and services.
3. being efficient and effective in the use of our resources through partnerships, both internal and external.
4. being widely recognized as a valued partner to the people and communities of our state.
USNH Campus Age Profile

265 Buildings – 8.8 M GSF

Campus Age by Category

- Under 10: 21%
- 10 to 25: 22%
- 25 to 50: 28%
- Over 50: 30%

Campus Function

- E&G: 52%
- Residential: 39%
- Auxiliary: 9%
Building Portfolio Vocabulary

• **Timeframe**
  - A: 1-3 years
  - B: 4-7 years
  - C: 8-10 years

• **Project Category**
  - **Repair/Maintenance**: Replacement of components that are failing or planned replacement at the end of a component’s life expectancy
  - **Modernization**: Replacement of components before the end of their life expectancy
  - **Infrastructure**: Projects addressing systems and grounds outside of buildings

• **Investment Criteria**
  - **Reliability**: Issues of imminent failure or compromise to the system that may result in interruption to program or use of space.
  - **Asset Preservation**: Projects that preserve or enhance the integrity of building systems or building structure, or campus infrastructure.
  - **Safety/Code**: Code compliance issues and institutional safety priorities or items that are not in conformance with current codes, even though the system is “grandfathered” and exempt from current code.
  - **Program Improvement**: Projects that improve the functionality of space, primarily driven by academic, student life, and athletic programs or departments. These projects are also issues of campus image and impact.
  - **Economic Opportunity**: Projects that result in a reduction of annual operating costs or capital savings.
Identified Need
Identified Needs by Structure

Categorizing the $704.4 M in campus need

Total Needs by Structure

- Building Needs: 81.3%
- Infrastructure: 14.2%
- Grounds Needs: 4.5%

Total Needs by Structure and Timeframe

- A (1-3 years)
- B (4-7 years)
- C (8-10 years)
Identified Needs by Structure, by Campus

Includes all projects within A, B, & C timeframes

Identified Needs by Structure, by Campus

- UNH: $406.4
- PSU: $163.8
- KSC: $132.6
- GSC: $1.5

- Building
- Infrastructure
- Grounds

© 2017 Sightlines, LLC. All Rights Reserved.
Identified Needs by Timeframe

Timeframes A, B, & C only

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Total Need, $ in millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeframe A</td>
<td>$353.44</td>
</tr>
<tr>
<td>Timeframe B</td>
<td>$210.66</td>
</tr>
<tr>
<td>Timeframe C</td>
<td>$140.26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># of projects</th>
<th>1,839</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeframe A</td>
<td></td>
</tr>
<tr>
<td>Timeframe B</td>
<td></td>
</tr>
<tr>
<td>Timeframe C</td>
<td></td>
</tr>
</tbody>
</table>

© 2017 Sightlines, LLC. All Rights Reserved.
Identified Needs by Timeframe by Campus

Timeframes A, B, & C only

Identified Needs by Timeframe, by Campus

Total Need, $ in millions

- UNH: $406.4
- PSU: $163.8
- KSC: $132.6
- GSC: $1.5

- A (1-3 years)
- B (4-7 years)
- C (8-10 years)
**Identified Needs by Timeframe**

*Timeframes A, B, & C only*

**USNH Identified Needs - $704.4 M**

- **Timeframe A (1-3 years):** 50%
- **Timeframe B (4-7 years):** 30%
- **Timeframe C (8-10 years):** 20%

**Recent BPS Experience**

- **Timeframe A (1-3 years):** 51%
- **Timeframe B (4-7 years):** 29%
- **Timeframe C (8-10 years):** 20%

**Timeframes**

- **A Timeframe:** Projects due or coming due within the next one to three years
- **B Timeframe:** Projects coming due within the next four to seven years
- **C Timeframe:** Projects coming due within the next eight to ten years.

Outside of ten years is considered "X" timeframe and outside of the scope of work for Building Portfolio Solutions.
**Identified Needs by Investment Criteria**

*Timeframes A, B, & C only*

![USNH Identified Needs](image1)

- **Reliability**: Issues of imminent failure of compromise to the system that may result in interruption to program or use of space.
- **Safety/Code**: Code compliance issues and institutional safety priorities or items that are not in conformance with current codes, even though the system is “grandfathered” and exempt from current code.
- **Asset Preservation**: Projects that preserve or enhance the integrity of buildings systems, structure, or campus infrastructure.
- **Economic Opportunity**: Projects that result in a reduction of annual operating costs or capital savings.
- **Program Improvement**: Projects that improve the functionality of space, primarily driven by academic, student life, and athletic programs or departments. These projects are also issues of campus image and impact.

![Recent BPS Experience](image2)

© 2017 Sightlines, LLC. All Rights Reserved.
Identified Needs by System

Timeframes A, B, & C only

Identified Building Needs by System, by Timeframe

- **Building Envelope**
  - $81.5
- **Building Systems**
  - $220.7
- **Infrastructure**
  - $131.4
- **Space Renewal**
  - $219.6

- **Safety/Code**
  - $51.1

Legend:
- Red: A (1-3 years)
- Blue: B (4-7 years)
- Yellow: C (8-10 years)
Benchmarking the Backlog – Net Asset Value

Net Asset Value

System Comparison Group
- Connecticut State Colleges & Universities
- Mississippi Institutions of Higher Learning
- Oregon University System
- PASSHE System
- University of Alaska System
- University of Maine System
- University of Massachusetts System
- University of Missouri System
- West Virginia Higher Education Policy Commission
USNH Space Distribution vs. Needs

265 Buildings – 8.8 M GSF

USNH Space Distribution

Under 25: 49%
25 and Older: 51%

USNH Building Needs

Under 25: 30%
25 and Older: 70%
Identified Needs by Building
A Look at Building Needs Over 10 Years

All building needs within 10 years across campuses

Building Need By Timeframe – Top 20 Buildings

<table>
<thead>
<tr>
<th>Building Name</th>
<th>Total Need, $ in millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaulding Hall - UNH</td>
<td>$30.0</td>
</tr>
<tr>
<td>P.E. Center - PSU</td>
<td>$25.0</td>
</tr>
<tr>
<td>NeSmith Hall - UNH</td>
<td>$20.0</td>
</tr>
<tr>
<td>Stoke Hall - UNH</td>
<td>$15.0</td>
</tr>
<tr>
<td>Hyde Hall - PSU</td>
<td>$10.0</td>
</tr>
<tr>
<td>Elliot Hall - KSC</td>
<td>$5.0</td>
</tr>
<tr>
<td>Redfern Arts Center - KSC</td>
<td>$5.0</td>
</tr>
<tr>
<td>Dimond Library - UNH</td>
<td>$5.0</td>
</tr>
<tr>
<td>Spaulding Gymnasium - KSC</td>
<td>$5.0</td>
</tr>
<tr>
<td>Williamson Hall - UNH</td>
<td>$5.0</td>
</tr>
<tr>
<td>Morse Hall - UNH</td>
<td>$5.0</td>
</tr>
<tr>
<td>UNH School of Law</td>
<td>$5.0</td>
</tr>
<tr>
<td>Paul Creative Arts Center</td>
<td>$5.0</td>
</tr>
<tr>
<td>Christensen Hall - UNH</td>
<td>$5.0</td>
</tr>
<tr>
<td>Randall Hall - KSC</td>
<td>$5.0</td>
</tr>
<tr>
<td>Memorial Union Bldg - UNH</td>
<td>$5.0</td>
</tr>
<tr>
<td>Mason Library - KSC</td>
<td>$5.0</td>
</tr>
</tbody>
</table>

Legend:
- Red (A): 1-3 years
- Blue (B): 4-7 years
- Yellow (C): 8-10 years
A Look at Building Needs Over 10 Years

Building Need $/GSF – Top 20 Buildings (Over 10,000 GSF)

- A (1-3 years)
- B (4-7 years)
- C (8-10 years)
Identified Needs by NAV
Understanding NAV

NAV Index = \( \frac{(\text{Replacement Value} - \text{Building Needs})}{\text{Replacement Value}} \times 100 \)

- **Capital Upkeep Stage:** Primarily new or recently renovated buildings with sporadic building repair & life cycle needs; “You pick the projects”
- **Repair and Maintain Stage:** Buildings are beginning to show their age and may require more significant investment on a case-by-case basis
- **Systemic Renovation Stage:** Buildings may require more significant repairs; large-scale capital infusions/renovations are inevitable; “The projects pick you”
- **Transitional/Gut Renovation/Replacement Stage:** Major buildings components are in jeopardy of complete failure. Reliability issues are widespread throughout the building.
NAV by Building

Understanding the percent “good” throughout campus

**Capital Upkeep 100-80%**

- **Capital Upkeep Stage:** Primarily new or recently renovated buildings w/ sporadic building repair & life cycle needs; “You pick the projects”
- **Repair and Maintain Stage:** Buildings are beginning to show their age & may require more significant investment on a case-by-case basis
- **Systemic Renovation Stage:** Buildings may require more significant repairs; large-scale capital infusions/renovations are inevitable; “The projects pick you”
- **Transitional/Gut Renovation/Replacement Stage:** Major buildings components are in jeopardy of complete failure. Reliability issues are widespread throughout the building.

© 2017 Sightlines, LLC. All Rights Reserved.
Understanding the percent “good” throughout campus

**NAV by Building**

- **Capital Upkeep Stage**: Primarily new or recently renovated buildings with sporadic building repair & life cycle needs; “You pick the projects”
- **Repair and Maintain Stage**: Buildings are beginning to show their age & may require more significant investment on a case-by-case basis
- **Systemic Renovation Stage**: Buildings may require more significant repairs; large-scale capital infusions/renovations are inevitable; “The projects pick you”
- **Transitional/Gut Renovation/Replacement Stage**: Major buildings components are in jeopardy of complete failure. Reliability issues are widespread throughout the building.
University of New Hampshire Campus Map

Buildings are colored by NAV score

<table>
<thead>
<tr>
<th>Building</th>
<th>NAV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zais Hall</td>
<td>59%</td>
</tr>
<tr>
<td>Conant Hall</td>
<td>58%</td>
</tr>
<tr>
<td>Putnam Hall</td>
<td>57%</td>
</tr>
<tr>
<td>Stoke Hall</td>
<td>57%</td>
</tr>
<tr>
<td>Huddleston Hall</td>
<td>50%</td>
</tr>
<tr>
<td>Macfarlane Grn/Hse &amp; Pesticide Lab</td>
<td>49%</td>
</tr>
<tr>
<td>Morrill Hall</td>
<td>47%</td>
</tr>
<tr>
<td>Hetzel Hall</td>
<td>43%</td>
</tr>
<tr>
<td>New England Ctr Adams/Res Tower</td>
<td>39%</td>
</tr>
<tr>
<td>UNH Central Energy (Heating Plant)</td>
<td>39%</td>
</tr>
<tr>
<td>Taylor Hall</td>
<td>34%</td>
</tr>
<tr>
<td>Spaulding Hall</td>
<td>25%</td>
</tr>
<tr>
<td>Nesmith Hall</td>
<td>23%</td>
</tr>
<tr>
<td>Hood House</td>
<td>10%</td>
</tr>
</tbody>
</table>
NAV by Building

Understanding the percent “good” throughout campus

**Capital Upkeep Stage:** Primarily new or recently renovated buildings w/ sporadic building repair & life cycle needs; “You pick the projects”

**Repair and Maintain Stage:** Buildings are beginning to show their age & may require more significant investment on a case-by-case basis

**Systemic Renovation Stage:** Buildings may require more significant repairs; large-scale capital infusions/renovations are inevitable; “The projects pick you”

**Transitional/Gut Renovation/Replacement Stage:** Major buildings components are in jeopardy of complete failure. Reliability issues are widespread throughout the building.
Plymouth State University Campus Map

Buildings are colored by NAV score

<table>
<thead>
<tr>
<th>Building</th>
<th>NAV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling Center</td>
<td>59%</td>
</tr>
<tr>
<td>Centre Lodge</td>
<td>50%</td>
</tr>
<tr>
<td>Highland Hall</td>
<td>48%</td>
</tr>
<tr>
<td>BFA Art Studio</td>
<td>45%</td>
</tr>
<tr>
<td>Mary Taylor</td>
<td>44%</td>
</tr>
<tr>
<td>Bagley House</td>
<td>43%</td>
</tr>
<tr>
<td>University Police</td>
<td>43%</td>
</tr>
<tr>
<td>Hyde Hall</td>
<td>41%</td>
</tr>
<tr>
<td>University Camp</td>
<td>41%</td>
</tr>
<tr>
<td>Holmes House</td>
<td>37%</td>
</tr>
<tr>
<td>Ellen Reed House</td>
<td>32%</td>
</tr>
<tr>
<td>1 High Street – Eco House</td>
<td>30%</td>
</tr>
<tr>
<td>42 North River Street</td>
<td>9%</td>
</tr>
<tr>
<td>P.E. Center</td>
<td>8%</td>
</tr>
<tr>
<td>43 North River Street</td>
<td>7%</td>
</tr>
</tbody>
</table>
NAV by Building

Understanding the percent “good” throughout campus

### NAV by Building

**Capital Upkeep Stage:** Primarily new or recently renovated buildings w/ sporadic building repair & life cycle needs; “You pick the projects”

**Repair and Maintain Stage:** Buildings are beginning to show their age & may require more significant investment on a case-by-case basis

**Systemic Renovation Stage:** Buildings may require more significant repairs; large-scale capital infusions/renovations are inevitable; “The projects pick you”

**Transitional/Gut Renovation/Replacement Stage:** Major buildings components are in jeopardy of complete failure. Reliability issues are widespread throughout the building.
Keene State College Campus Map

Buildings are colored by NAV score

<table>
<thead>
<tr>
<th>Building</th>
<th>NAV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joslin House</td>
<td>26%</td>
</tr>
<tr>
<td>Hale Building</td>
<td>31%</td>
</tr>
<tr>
<td>21 Appleton Street</td>
<td>35%</td>
</tr>
<tr>
<td>Elliot Hall</td>
<td>36%</td>
</tr>
<tr>
<td>Spaulding Gym</td>
<td>41%</td>
</tr>
<tr>
<td>Parker Hall</td>
<td>43%</td>
</tr>
<tr>
<td>Bushnell Apts.</td>
<td>48%</td>
</tr>
<tr>
<td>Morrison Hall</td>
<td>55%</td>
</tr>
<tr>
<td>Redfern Arts</td>
<td>56%</td>
</tr>
<tr>
<td>Randall Hall</td>
<td>59%</td>
</tr>
</tbody>
</table>
Prioritize Buildings To Program Value

- **Maintain/Repurpose**: Excellent Building Condition, Low Program Value
- **Stewardship**: Excellent Building Condition, High Program Value
- **Transitional Buildings**: Poor Building Condition, Low Program Value
- **Major Capital Renovations**: Poor Building Condition, High Program Value

Program Value

Building Condition
Next Steps

• Break down each of the campuses facilities into “portfolios of impact” – groupings of facilities to attain a specific program outcome; examples include decreasing deferred maintenance, investing into student spaces, etc.

• Develop facilities investment strategies that balance the key repair, renewal and modernization priorities across each of the campuses.

• Although a focus on specific buildings will be determined by the total investment need of these spaces, the majority of work could be driven by correction to systems and infrastructure.

• Sightlines working with 4Tell will upload the information collected from the assessment to the 4Tell system where facilities and the system office will be able to update the projects continuously utilizing the online platform.