Facilities Master Plan Overview

CPC

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Director of Facilities - COE

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AGENDA

Vision
Key Goals / Questions Asked
Implementation
Engineering Quad
Hollister
Olin
Q&A
1. UPSON IMPACTS
   a) How will vacated space be reprogrammed to meet needs?
   b) Rhodes 1-4 for ECE and ORIE, and College in General?

2. OLIN LAB SHORTFALL
   a) Can the wet lab need be confirmed?
   b) How much wet lab space will be required; when and how will it be provided?

3. HOLLISTER RENOVATION
   a) How would a reprogrammed Hollister Hall be best utilized by the College?
   b) During construction, where would occupants be housed?
   c) How can the Hydraulics lab and other recent lab renovations be preserved during construction?
   d) Can the demolition of the existing Carpenter Hall be used to reduce deferred maintenance and underperforming space, as land for a possible addition to Hollister, and as additional green space?
a) Could this building be demolished and the basement renovated to provide inexpensive storage and increased green space?
5. HIGH VOLTAGE LAB

a) What is the future program and best use for the High Voltage Lab (demolition, swing space, student teams, external reuse, etc.).

Option 1
- Remove Extraneous Buildings L
- Landscape Improvements
- Paint Exterior White Areas + New Entry
- Interior Improvements, finishes & interior MEP

Option 2
- Option 1 +...
- Exterior Upgrades
- Upgrade MEP Infrastructure

Option 3
- Option 1 + 2 +...
- Extensive Exterior Upgrades

Option 4
- Option 1 + 2 + 3 +...
- Full Exterior Upgrade + Renovation

RECOMMENDED HYBRID 1 & 2
Campus Concerns
- Conformance with Campus Master Plan
- Enhance Cornell Campus
- Address COE Maintenance Backlog
- Improve Building Energy Use
- Maximize Funding Opportunities

College of Engineering
- Support COE Vision of Top 3
- Enhance Student Experience
- Support COE Faculty Research (leadership in Advanced Materials and Data; emerging in Bioengineering and Energy)
PROGRAM

- Minimal Additional Square Footage
- Significant Upgrade to All Space Typologies

### Renovated and New Space by Department

<table>
<thead>
<tr>
<th>Department</th>
<th>Research</th>
<th>Office</th>
<th>Teaching</th>
<th>Lounge/Study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBE</td>
<td>49,150</td>
<td>7,200</td>
<td>7,800</td>
<td>5,300</td>
<td>69,450</td>
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<tr>
<td>CEE</td>
<td>34,175</td>
<td>8,340</td>
<td>11,160</td>
<td>4,450</td>
<td>58,125</td>
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<tr>
<td>COE</td>
<td>13,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13,000</td>
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<tr>
<td>ECE</td>
<td>9,500</td>
<td>1,020</td>
<td>1,000</td>
<td>0</td>
<td>11,520</td>
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<tr>
<td>MSE</td>
<td>3,873</td>
<td>880</td>
<td>1,800</td>
<td>800</td>
<td>7,353</td>
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<tr>
<td>ORIE</td>
<td>1,200</td>
<td>4,360</td>
<td>3,280</td>
<td>1,300</td>
<td>10,140</td>
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<tr>
<td>SE</td>
<td>1,100</td>
<td>640</td>
<td>3,000</td>
<td>0</td>
<td>4,740</td>
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<tr>
<td>Admin</td>
<td>17,750</td>
<td>0</td>
<td>0</td>
<td>16,100</td>
<td>33,850</td>
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<tr>
<td><strong>Total</strong></td>
<td>129,748</td>
<td>22,440</td>
<td>28,040</td>
<td>27,950</td>
<td>208,178</td>
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</table>

### NASF Change by Space Typology

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Existing NASF (A)</th>
<th>New NASF (B)</th>
<th>Difference NASF (B-A)</th>
<th>% Change (B/A)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>465,677</td>
<td>479,379</td>
<td>13,702</td>
<td>3%</td>
<td>Includes wet labs, hybrid labs, computational labs, specialty labs, researcher workstations, and associated data and storage.</td>
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<tr>
<td>Office</td>
<td>197,996</td>
<td>181,466</td>
<td>-16,530</td>
<td>-8%</td>
<td>Includes faculty and staff offices, office support, and conference rooms.</td>
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<tr>
<td>Teaching</td>
<td>132,687</td>
<td>144,854</td>
<td>12,167</td>
<td>9%</td>
<td>Includes teaching labs, classrooms, lecture rooms, seminars, and student project rooms.</td>
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<tr>
<td>Lounge/Study</td>
<td>42,480</td>
<td>44,009</td>
<td>1,529</td>
<td>4%</td>
<td>Includes library, student study areas, building lounges, dining areas.</td>
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<td><strong>Total</strong></td>
<td><strong>838,840</strong></td>
<td><strong>849,708</strong></td>
<td><strong>10,868</strong></td>
<td><strong>1%</strong></td>
<td></td>
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</table>
IMPLEMENTATION
PHASE 1C
olin hall first steps
PHASE 2A
hollister hall south
PHASE 2B
olin hall
PHASE 3A
Ward Demo / HVL Reno
putting it all back together
PHASE 3B
rhodes final occupants
hollister hall
PHASES 1B AND 2B
IMPACT | FLEXIBLE RESEARCH ENGINE & COE HEART

NEW NORTH WING
- High Performance Research Engine

HIVE
- Building Heart
- Circulation
- Student Centric
- Vertical Connections

SOUTH WING RENOVATION
- Low Energy
- COE Administration
- Classrooms
- Student Centric

GROUND FLOOR COMMONS
- Library
- Classrooms
- Meeting Areas
- Student Commons
REPLACE NORTH WING

- Requires full demolition of north wing
- Opportunities to right size floor elevations at key floors
- Flexibility in siting & massing to improve street edge relationship
- Optimized structure for research
- Optimized penthouse and mechanical feeding
- Opportunities to add floors
- Can use slope to advantage across section to connect LB, L1, L2
STUDENT HIVE
GROUND FLOOR STUDENT COMMONS

- Multiple Flexible Classrooms
- Student Commons
- Student Hive
- New Entrance
- Engineering Library
olin hall

PHASE 1C AND 2B
OLIN HALL | BREATHE NEW LIFE

- Extension of Research to West
- Southern Research Bar
- Requires Significant Swing Space
- Relocate Existing Non Lab Functions on Level 2 and 3 to Level 1
- Expand Research Area on Level 2 and 3
OTHER COMPONENTS

WARD HALL DEMOLITION

HIGH VOLT RENOVATION

RHODES GATEWAY & BACKFILL
CONSIDERATIONS FOR THIS COMMITTEE

• Land use ideas for Ward site post demo

• Ideas for quad revitalization/reconfiguration

• Gateway considerations at College Ave & Hoy Rd, respectively
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