Facilities Services & Planning, Design & Construction Update:

Deferred Maintenance and Capital Projects

Campus Finance Committee Meeting
December 8, 2022
Agenda

- Campus and Systemwide Priorities
- FY24 State Funding Request
- Deferred Maintenance Process
- Preventative Maintenance (PM)
- Historical State Funding Allocations
- FY24 State Funding Request
- Primary Power
- Progress on Deferred Maintenance Projects
- Energy Projects
- Annual Capital Financial Plan (CFP)
- State Capital Funding Allocations
- Non-State Capital Funding Allocations
- New Capital Projects in Construction
Deferred Maintenance
Existing UCR facilities and infrastructure have significant deferred maintenance needs, estimated at $740 Million.

Seismic Improvements
Campus Seismic Plan ($1.91B in need)
Impossible goal

Carbon Neutrality
Not projected, but likely will cost over a billion.
Impossible goal.

New Construction
See CFP Priorities
FY24 State Funding Request

• $126M request as part of a systemwide one-time state funding ask of $1.2B.

• Historically, UCR has received a lower allocation of one-time state funding than other campuses (mid-single digit percentages). $126M represents 10.5%, an improvement over previous years.

• $103M remaining for Undergraduate Teaching and Learning Facility (Legislative intent from FY23, which is an additional capital request for UCR).

• These projects would advance multiple goals including climate action, enrollment growth, and the restoration and renewal of facilities.

• Proposed State budget is released in January, UC likely not to receive full $1.2B. Final state allocation in June, with UCOP distribution to follow.
Deferred Maintenance (DM) Process

**UCOP**
- Implemented ICAMP to create a standard process for evaluating campus DM needs. It assumes all UC's are homogenous.
- ICAMP contains an inventory of assets, condition, and asset replacement costs.

**UCR**
- Manages DM as a shared governance between Facilities Services and Planning Design and Construction
- Priorities are organized by a few main categories – for example:
  - Mechanical, Electrical, and Plumbing (MEP)
  - Infrastructure
  - Roofs
Preventative Maintenance (PM)

Facilities PM implementation started in March 2022

Goals:
• Provide inventory of issues related to building systems.
• Reduce DM over the long term.
• Inventory building equipment and assets.
• Reduce emergencies and reactionary work, which is costly
## UCR Historical State DM Funding Allocations

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>UCR State Funding (AB94 &amp; One-Time Funds)</th>
<th>UCR % of Total Funding</th>
<th>Total State Budget for DM Funding - All UC Campuses</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 16-17</td>
<td>$ 1,806,500</td>
<td>5%</td>
<td>$ 35,000,000</td>
</tr>
<tr>
<td>FY 17-18</td>
<td>$ 3,800,000</td>
<td>8%</td>
<td>$ 46,580,000</td>
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<tr>
<td>FY 18-19</td>
<td>$ 3,720,000</td>
<td>5%</td>
<td>$ 70,000,000</td>
</tr>
<tr>
<td>FY 19-20</td>
<td>$ 8,701,000</td>
<td>6%</td>
<td>$ 153,302,500</td>
</tr>
<tr>
<td>FY 20-21</td>
<td>$ 2,296,000</td>
<td>7%</td>
<td>$ 35,000,000</td>
</tr>
<tr>
<td>FY 21-22</td>
<td>$ 20,564,001</td>
<td>6%</td>
<td>$ 325,000,001</td>
</tr>
<tr>
<td>FY 22-23</td>
<td>$ 5,391,000*</td>
<td>4%</td>
<td>$ 125,000,000</td>
</tr>
</tbody>
</table>

UCR has funded an additional ~$30M towards DM projects over this time period

*Includes $1M for decarbonization study.
## Top 10 DM Priorities for FY24

The following 10 represent a total request of $23.2M (18%) out of our $126.2M request.

<table>
<thead>
<tr>
<th>Top 10 DM Projects</th>
<th>DM Project Description</th>
<th>DM Category</th>
<th>Estimated DM Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SUBSTATION - Site Switchgear/Breakers improvements: Substation Improvements</td>
<td>Primary Power</td>
<td>$4,690,000</td>
</tr>
<tr>
<td>2</td>
<td>SPIETH: HVAC - Equipment/Controls - Phase 1 Commissioning and Ducting Replacement</td>
<td>Mechanical Systems</td>
<td>$645,569</td>
</tr>
<tr>
<td>3</td>
<td>SPIETH: HVAC - Equipment/Controls - Phase 2 Replace Air Handlers 1 &amp; 2</td>
<td>Mechanical Systems</td>
<td>$6,308,741</td>
</tr>
<tr>
<td>4</td>
<td>Main Domestic Water Station - Drives and Controls, Electrical Distribution Replacement</td>
<td>Mechanical Systems</td>
<td>$1,750,000</td>
</tr>
<tr>
<td>5</td>
<td>PHYSICS - Ductwork and Exhaust VFD</td>
<td>Mechanical Systems</td>
<td>$4,900,000</td>
</tr>
<tr>
<td>6</td>
<td>FAWCETT LAB - Replace roof covering</td>
<td>Roofs</td>
<td>$868,000</td>
</tr>
<tr>
<td>7</td>
<td>RIVERA - Air Handler 2 Replacement</td>
<td>Mechanical Systems</td>
<td>$2,100,000</td>
</tr>
<tr>
<td>8</td>
<td>OLMSTED: HVAC - Equipment/Controls: Replace economizers for fresh air controls for all Air Handlers</td>
<td>Mechanical Systems</td>
<td>$420,000</td>
</tr>
<tr>
<td>9</td>
<td>OLMSTED: HVAC - Equipment/Controls - Repairs to Air Handlers</td>
<td>Mechanical Systems</td>
<td>$420,000</td>
</tr>
<tr>
<td>10</td>
<td>SPROUL - HVAC - Equipment/Controls - Replace Heat Exchangers/VFD Pumps</td>
<td>Mechanical Systems</td>
<td>$1,050,000</td>
</tr>
</tbody>
</table>
Primary Power

How it works
• UCR substation is shared ownership with RPU.
• UCR receives 12kV from the city.
• Switches and cables carry electrical power to campus buildings.

Risk to Campus
• There is a single point of failure at the substation.
• Infrastructure is outdated and has not been maintained; switchgear, cables, transformers, etc.

Next Steps
• Continue progress with major cable and switchgear replacement: moved 4kV switch and transition campus to 12 kV
• Identify opportunities to build redundancy into the system.
• Improve reliability through project work.
Progress on Deferred Maintenance Projects

Some Recently Completed Projects

- Pierce Hall
- Watkins 1000 Improvements
- Physics Building:
  - Physics 2000
  - Elevator modernization
- Olmsted tunnel and sidewalk
- Watkins Elevator Cab and Controls Improvements
- Weber Elevator Cab Improvements
- PE/Athletics Elevator Cab Improvements
- Electrical Substation – Feeder Replacements and relocation of switch 3’ from freeway

In Construction

- Batchelor Hall Building Systems
- Primary Power Reliability:
  - Feeders, equipment replacement work is ongoing. Next set of projects beginning construction include medium voltage infrastructure, switch replacement, substation metering
- Spieth Hall Roofing
- Arts Building Performance Lab Exterior
- Webber Hall Elevator Controls (December construction start)
- Skye Hall HVAC Replacement
- Data Center Upgrade & Improvements
- Bourns Fire Alarm
- Museum of Photography
- ADA Upgrades – Across Campus

List does not include Auxiliaries projects.
Progress on Deferred Maintenance Projects

In Planning/Design
- Rivera Library Air Handler
- Rivera Library Fire Suppression
- Boyce Hall Mechanical
- Physics Roof Replacement
- Physics Building Mechanical Replacement (HVAC)
- Boyce Hall Roof Replacement
- Orbach Science Library Roof
- Geology Roof Replacement
- Corp Yard Roof Replacement
- PE & Dance Mechanical Systems Controls
- Greenhouse Improvements
- Spieth Hall Mechanical
- Arts Building Decking
- West Campus Irrigation Infrastructure
- West Campus Internet Improvements (Fiber Optic)
- Campbell Hall and University Office Building Mechanical Systems
- Natural Reserves projects
- Access controls on entry floors
- Spieth Hall North Elevator Controls

List does not include Auxiliaries projects.
Energy Projects

• $1M in one-time state funding for decarbonization study.
• LED Phase II starting in 2023 (LED Phase 1 complete)
• Steam trap replacement project under review
• Inflation Reduction Act (IRA) Grant funding investigation
• Additional Solar installation opportunities being evaluated
  o Recently completed 3 rooftop solar projects and SOM II & Business will have PV installed as well.
• Building controls updates underway
• Inset projects to mitigate 2025 carbon offset needs to meet UC Carbon Neutrality Goal
  o UCOP approval for inset program
Annual Capital Financial Plan (CFP)

- Annual process to solicit feedback from across the campus on capital needs and priorities.

- PD&C meets with stakeholders in Spring to review capital space needs and organizational priorities.

- Starting with the previous year’s plan, priorities are documented and presented to the CFC for review and recommended approval, prior to final approval by the Chancellor.

- Campus prepares CFP and submits draft CFP to UCOP in August/Sept.

- Regents review and approve the CFP every November. Projects listed in the CFP allows the streamlining of project approvals.

- This year’s narrative and objectives covered:
  - 2030 Capacity Plan and shortage of academic and support space
  - Student housing
  - Deferred maintenance and infrastructure
  - Seismic Safety Policy requirements
  - Post-pandemic issues
Annual Capital Financial Plan

Priority new construction projects include:
- Undergraduate Teaching and Learning Facility (UTLF)
- Undergraduate Teaching and Learning Facility 2 (UTLF2)
- Business School Building: construction currently starting
- Engineering Building: Computer Science – Proposal
- Clean Technology Park: funded by state with $15M in FY22 and $47M in FY23.

Top priority renovations projects include:
- Spieth Hall Renovation and Seismic Upgrade
- Physics Building Systems Renewal
- Rivera Library Improvements and Seismic Upgrade
- Webber Hall Improvements and Seismic Upgrade
- Orbach Library Seismic Upgrades
- PE / Dance Improvements and Seismic Upgrade
State Capital Funding Allocations

Recent State-Funded Projects Completed, in Construction, or in Planning

- Pierce Hall Building Systems Renewal ($34.680M State - $59M total)
- Batchelor Hall Building Systems Renewal ($18.083M State - $36M total)
- Student Success Center ($50M State - $61M total)
- School of Medicine Education Building II ($100M)
- Undergraduate Teaching and Learning Facility ($51.5M, $103M in subsequent years)
- Clean Technology Park ($62M)
Non-State Capital Funding Allocations

Recent Non-State Funded Projects Completed, in Construction, or in Planning

• The Barn Expansion ($29M)
• Dundee-Glasgow ($160M, P3 delivery)
• North District Phase 1 ($220M, P3 delivery)
• Big Springs Parking Structure ($30M)
• Plant Research 1 ($27M)
• Student Health and Counseling Center ($37M)
• Orbach Science Library Basement Simulation Suite ($7M)
• School of Business ($87M)
• Multidisciplinary Research Building 1 ($164M)
• North District Phase 2 (pursuing state funding in 2023)
• Gender-Inclusive Restrooms in Spieth Hall and PE and Dance Building (1st Phase)
New Capital Projects in Construction

School of Medicine Education Building II
Completion/opening: Summer 2023
New Capital Projects in Construction

Student Health & Counseling Center
Completion/opening: Fall 2023
New Capital Projects in Construction

School of Business
Completion: Summer 2024
Questions?