Site Utility Infrastructure Improvements – Phase 4 Electrical Upgrade

Summer 2016 – Summer 2017
Why? 4800kv transformer failure outside Thurston Hall
Overview

- This is the 4th and final phase of the large, complex multi year campus wide site utilities infrastructure upgrade (the stuff that no one cares about until it doesn't work).
  - Water main replacements
  - Various water main building connection replacements
  - Storm sewer replacement
  - Various catch basin replacements
  - Underground electrical duct bank replacement
  - Site restoration of various locations
- Phase 4 will specifically address the deteriorating underground campus electrical system
- Another objective of phase 4 is to have the entire campus on 12.5kw voltage as opposed to the current mix of 12.5kw and 4800kw voltage so that the campus will be able to have a reliable, redundant power system.
Phase 4 was in the very early stages of design and planning but was just pushed forward at a very accelerated pace by the State University of New York Construction Fund as a result of available funding.

This project scope met all of the required qualifications and was selected.

A project of this size and complexity would typically be in design and planning for approximately 6 months to 1 year. In order to secure the funding this phase needs to be designed by August of this year so that it can start construction in the summer of 2016.

After the design and planning is complete the project will be bid for approximately 1 month (September).

Bids are then received by the FUND and they will go through the award process to the lowest bidder. This process can take up to 4 – 5 months (February).

Once the low bidder is successfully awarded a contract they can begin to submit the specifications for the material and items they will be using (March).

Once they are approved by the design consultant the contractor can then order the required material, all of which can have lead times of months (June).
- As a result of the complex scheduling and to accommodate campus life and personnel this will be a two summer construction project; Summer of 2016 & Summer of 2017.

- The first phase of Phase 4 will run concurrently with the last part of phase 3 in the summer of 2016.
Project Scope

- Phase 4 will affect a large amount of campus buildings and as a result campus personnel.

- Thru-out the summer of 2016 and 2017 each building listed below will need to be without power for about 2 weeks while the new electrical service is installed, energized and tested.

- Kunsela Hall
- Catskill Hall
- Russell Hall
- O’Connor Hall
- Murphy Hall
- Gerry Hall
- Dubois Hall
- MacDonald Hall
- Alumni Hall
- Wall Service Complex
- Farrell Hall
- Foreman Hall
- Farnsworth Hall
- Evenden Tower
- Sanford Hall
- Smith Hall
- Bush Hall
- Thurston Hall
- South Hall
- North Hall
- Some of the above mentioned buildings will also require disruptive exterior site work in order to install new exterior building transforms, new exterior building switches and new buried concrete electrical duct bank.

- As we mentioned these buildings will need to be without power for approximately 2 weeks while work is being performed. It is understood that all of the above buildings must maintain some level of power during the project.

- In order to accommodate buildings requiring various stages of power throughout the shut down the contract can call for separate standalone generators supplied and hooked up by the contractor.

- Even with standalone generators there will still be a small window, several hours, where the building will lose all power while the generator is disconnected and the new service is connected. This work can possibly be done on weekends.
This is where we need your HELP!

- We need your input to help us schedule what buildings can be taken offline in the summer of 2016 and the summer of 2017.

- In addition we need to know what buildings need minimal power and what that minimal power requirement is for.
Building Information

- We have spoke to a number of building stake holders to gather this information but we are still missing pieces. We also want to make sure that everyone is understanding and on the same page with the timing of the building work.

- The following slides are what we have gathered thus far and assembled. You will also see plans of the buildings that have the more extensive site work:

- There is also a spreadsheet for you to take that shows the overall campus plan.

- As we go through these slides and the spreadsheet please make suggestions as to dates, conflicts, etc. as you see them.
Kunsela Hall

- Window of opportunity to cut power is the month of June in the summer of 2016
- All life safety equipment will have to remain with power as well as the pool pump humidity control.
- Cutover from generator to new electrical service to happen on a weekend

Catskill Hall

- Window of opportunity to cut power is the July 10th – July 24th
- All life safety equipment will have to remain with power as well as the Res. Life offices, custodial managers office, data rack.
Russell Hall
- Window of opportunity to cut power is the summer of 2016, July 18th – August 1st

- All life safety equipment will have to remain with power as well as the 2 RD apartments and the data rack.
O’Connor Hall

- Window of opportunity to cut power is the summer of 2017
- All life safety equipment will have to remain with power as well as the RD apartment

Murphy Hall

- Window of opportunity to cut power is July 4th – July 18th in the summer of 2016
- All life safety equipment will have to remain with power as well as the RD apartment.
Gerry Hall

- Window of opportunity to cut power is June 26th – July 10th in the summer of 2017
- All life safety equipment will have to remain with power as well as the RD apartment and data rack (this data rack is critical as it is a campus hub)

Dubois Hall

- Window of opportunity to cut power is June 20th – July 4th in the summer of 2016
- All life safety equipment will have to remain with power as well as the feed to North Hall.
MacDonald Hall

- Window of opportunity to cut power is July 11th – 25th in the summer of 2016
- All life safety equipment will have to remain with power.
Foreman Hall / Alumni Hall
Forman Hall

- Window of opportunity to cut power is the month of July in the summer of 2016 and the month of July in the summer of 2017
- All life safety equipment will have to remain with power.
- It would be scheduled that duct bank installation and HVAC work would be completed in July of 2016 and the power cut off would be during July of 2017

Alumni Hall

- Window of opportunity to cut power is July 10th – July 17th in the summer of 2017
- All life safety equipment will have to remain with power.
Farrell Hall

- Window of opportunity to cut power is June 20\textsuperscript{th} – July 4\textsuperscript{th} in the summer of 2016
- All life safety equipment will have to remain with power as well as the data center

Farnsworth Hall

- Window of opportunity to cut power is July 18\textsuperscript{th} – August 1\textsuperscript{st} in the summer of 2016
- All life safety equipment will have to remain with power as well as the animal locations. Critical area being the monkeys.
- Cutover from generator to new electrical service to happen on a weekend
Evenden Tower

- Window of opportunity to cut power is July 17th – July 24th in the summer of 2017
- All life safety equipment will have to remain with power.

Sanford Hall

- Window of opportunity to cut power is June 12th – June 26th in the summer of 2017
- Data rack must remain with power as it feeds Thurston Hall & South Hall. The central heating plant must also remain with full power.
Smith Hall
Smith Hall

- Window of opportunity to cut power is June 13th – June 27th in the summer of 2016, May 29th – June 5th in the summer of 2017 and June 12th – July 3rd in the summer of 2017

- All life safety equipment will have to remain with power as well as the data center

Bush Hall

- Window of opportunity to cut power is June 12th – July 24th in the summer of 2017

- Building will remain with full power
Thurston Hall

- Window of opportunity to cut power is June 6th – July 25th in the summer of 2016
- All life safety equipment will have to remain with power as well as the grounds shop.
- Cutover from generator to new electrical service to happen on a weekend

South Hall

- Window of opportunity to cut power is June 6th – August 15th in the summer of 2016 & May 29th – August 14th in the summer of 2017
- All life safety equipment will have to remain with power.
Wall Service Complex
Wall Service Complex

- Window of opportunity to cut power is anytime during the summer of 2016 or summer of 2017.
- Building will remain with full power
As with all construction jobs all of the information that you just saw may be changed, null and void or changed by the contractor and/or construction FUND at any given minute without your or our knowledge or approval.
<table>
<thead>
<tr>
<th>Building</th>
<th>Power Requirements</th>
<th>Summer 2016</th>
<th>Summer 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumni Hall</td>
<td>Power to Biology, Chemistry, Physics and Life Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building 12</td>
<td>Power to Biology, Chemistry, Physics and Life Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O'Connor Hall</td>
<td>Power to Biology, Chemistry, Physics and Life Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Safety, Fire Alarm and Emergency Lighting</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Life Safety, Fire Alarm and Emergency Lighting**

- Summer 2016
  - 20 May: Life Safety, Fire Alarm and Emergency Lighting
  - 27 Jun: Life Safety, Fire Alarm and Emergency Lighting
  - 1 Aug: Life Safety, Fire Alarm and Emergency Lighting

- Summer 2017
  - 22 May: Life Safety, Fire Alarm and Emergency Lighting
  - 29 May: Life Safety, Fire Alarm and Emergency Lighting
  - 5 Jun: Life Safety, Fire Alarm and Emergency Lighting
  - 12 Jun: Life Safety, Fire Alarm and Emergency Lighting
  - 19 Jun: Life Safety, Fire Alarm and Emergency Lighting
  - 26 Jun: Life Safety, Fire Alarm and Emergency Lighting
  - 3 Jul: Life Safety, Fire Alarm and Emergency Lighting
  - 10 Jul: Life Safety, Fire Alarm and Emergency Lighting
  - 17 Jul: Life Safety, Fire Alarm and Emergency Lighting
  - 24 Jul: Life Safety, Fire Alarm and Emergency Lighting
  - 31 Jul: Life Safety, Fire Alarm and Emergency Lighting
  - 7 Aug: Life Safety, Fire Alarm and Emergency Lighting

**Building Schedule**

- Summer 2016: 20 May - 1 Aug
- Summer 2017: 22 May - 31 Jul

**Summer 2016 Schedule**

- 20 May: Life Safety, Fire Alarm and Emergency Lighting
- 27 Jun: Life Safety, Fire Alarm and Emergency Lighting
- 1 Aug: Life Safety, Fire Alarm and Emergency Lighting

**Summer 2017 Schedule**

- 22 May: Life Safety, Fire Alarm and Emergency Lighting
- 29 May: Life Safety, Fire Alarm and Emergency Lighting
- 5 Jun: Life Safety, Fire Alarm and Emergency Lighting
- 12 Jun: Life Safety, Fire Alarm and Emergency Lighting
- 19 Jun: Life Safety, Fire Alarm and Emergency Lighting
- 26 Jun: Life Safety, Fire Alarm and Emergency Lighting
- 3 Jul: Life Safety, Fire Alarm and Emergency Lighting
- 10 Jul: Life Safety, Fire Alarm and Emergency Lighting
- 17 Jul: Life Safety, Fire Alarm and Emergency Lighting
- 24 Jul: Life Safety, Fire Alarm and Emergency Lighting
- 31 Jul: Life Safety, Fire Alarm and Emergency Lighting
- 7 Aug: Life Safety, Fire Alarm and Emergency Lighting

**Building Power Requirements**

- **Alumni Hall**
  - Power to Biology, Chemistry, Physics and Life Sciences
- **Building 12**
  - Power to Biology, Chemistry, Physics and Life Sciences
- **O'Connor Hall**
  - Power to Biology, Chemistry, Physics and Life Sciences

**Life Safety, Fire Alarm and Emergency Lighting**

- Summer 2016: 20 May - 1 Aug
- Summer 2017: 22 May - 31 Jul

**Notes**

- Summer 2016:
  - Power shut down is only in certain buildings.
  - Power shut down is only in Life Safety/SD.

- Summer 2017:
  - Power shut down is only in Life Safety/SD.
  - Power shut down is only in Life Safety/SD.