CAMPUS VOLTAGE UPGRADE PROJECT

Facilities Management – Energy Services
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3/14/2018
Voltage Upgrade Background

- Required to retire and demolish the Power Plant and Poultry Substation.
- Much of existing underground infrastructure has exceeded lifespan by 30-40 years.
- Replaces old failing underground cable pathways (Ductbanks)
- Replaces aged transformers, switchgear and cable.
- Provides redundancy and reliability in the campus distribution system.
- More efficient distribution with the higher voltage of 12,470V versus 2,400V.
Project 1: Morrill Courtyard Upgrade Project

This project consist of installing the underground infrastructure and cabling that will support the existing buildings upgrade from 2.4kV to 12.5kV.

Area/Buildings affected
- Morrill Hall Expected Outage - 24 hours
- Bartlett Center Expected Outage - 24 hours
- Thatcher Hall Expected Outage - 24 hours
- Parking Lot #16 - South Half

Start Date: March 19, 2018
Project Length: 45 days
Project 2: Architecture Upgrade Project

This project consist of installing the underground infrastructure and cabling that will support the existing buildings upgrade from 2.4kV to 12.5kV.

Area/Buildings affected:
- DW Reynolds Architecture Bldg - Estimated Outage: 48 hours
- CEAT Endeavor Lab
- Parking Lot #6A – East Side
- Parking Lot #6 - Near NE corner of Arch Bldg

Start Date: April 1, 2018
Project Length: 15 days
Project 3: Athletic/Hester Vault Upgrade Project

THIS PROJECT CONSIST OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABLELING THAT WILL SUPPORT THE EXISTING BUILDINGS UPGRADE FROM 2.4KV TO 12.5KV.

Area/Buildings affected
Intersection at Athletic and Hester
DW Reynolds Architecture Bldg
CEAT Endeavor Lab
Civil Lab Annex (South End) - Estimated Outage 10 days
Start Date: April 1, 2018
Project Length: 15 days
PROJECT-4 General Academic Bldg Upgrade

Project 4: General Academic Building Upgrade Project

This project consists of installing the underground infrastructure and cabling that will support the existing building upgrade from 2.4kV to 12.5kV. This project also involves dismantling and removing the existing transformer from the building basement.

Area/Buildings affected:
General Academic Building Expected Outage - 5 Days
Parking Lot #16 - Southwest Corner

Start Date: April 1, 2018
Project Length: 15 days
Project 5: Monroe Street Infrastructure Upgrade Project

This project consists of installing the underground infrastructure and cabling that will support the existing buildings upgrade from 2.4KV to 12.5KV.

Area/Buildings affected:
- Intersection at Monroe and Athletic
- Parking Lot #34
- Parking Lot #44
- No Outages Required
- Start Date: May 15, 2018
- Project Length: 30 days
PROJECT 5: INFRASTRUCTURE UPGRADE-1

THIS PROJECT CONSISTS OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABLING THAT WILL SUPPORT THE NEW FACILITIES UPGRADED FROM 2.4KV TO 12.5KV

Area/Buildings affected:
- Athletic Avenue from Monroe to Hester
- Physical Sciences
- Edmon Low Library - Estimated Outage - 48 Hours
- Engineering North - Estimated Outage - 24 Hours
- Engineering South - Estimated Outage - 48 Hours
- Civil Lab Annex (North End) - Estimated Outage - Tied to Engineering South
- Parking Lot #53 – University Health Center
- Parking Lot #46 – Near Kerr Hall
- Parking Lot #45 – Near Agriculture Hall
- Parking Lot #34 – Near Physical Sciences

Start Date: May 21, 2018
Project Length: 90 days
PROJECT 7: INFRASTRUCTURE UPGRADE-2

THIS PROJECT CONSISTS OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABLING THAT WILL SUPPORT THE NEW FACILITIES UPGRADED FROM 2.4KV TO 12.5KV

Area/Buildings affected:
- Hester Street from Athletic to Morrill
- Classroom Building - Estimated Outage - 24 Hours
- Seerican Center for Performing Arts - Estimated Outage 24 Hours
- Fire Station - Estimated Outage - 24 Hours
- Parking Lot #19

Start Date: May 21, 2018
Project Length: 90 days
PROJECT 8: GUNDERSON SWITCH UPGRADE

This project consists of installing the underground infrastructure and cabling that will support the new facilities upgraded from 2.4kV to 12.5kV.

Area/Buildings affected:
- Old Central - Expected Outage: 4 Days
- Gunderson Hall - Expected Outage: 4 Days
- Alumni Center - Expected Outage: 4 Days

Start Date: July 1, 2018
Project Length: 30 days
PROJECT 9: MATH SCIENCE UPGRADE

This project consists of installing the underground infrastructure and cabling that will support the new facilities upgraded from 2.4KV to 12.5KV.

Area/Buildings affected
- PIO Building - Expected Outage - 48 Hours
- Math Sciences - Expected Outage - 48 Hours
- ITLE Building - Expected Outage - 48 Hours

Start Date: TBD, 2018
Project Length: 30 days

NEW VISTA SWITCHGEAR & DUCTBANK

NEW CABLE PULL THROUGH EXISTING DUCTBANKS
PROJECT 10: MURRAY UPGRADE PROJECT

THIS PROJECT CONSISTS OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABLING THAT WILL SUPPORT THE NEW FACILITIES UPGRADED FROM 2.4KV TO 12.5KV

Area/Buildings affected:
- Murray Hall - Expected Outage - 48 Hours
- North Murray Hall - Expected Outage - 48 Hours
- Stout Hall - Expected Outage - 48 Hours
- Wentz Parking Garage - Expected Outage - 48 Hours

Start Date: TBD, 2018
Project Length: 20 days
PROJECT 1: CITD/TENNIS UPGRADE PROJECT

THIS PROJECT CONSISTS OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABLES THAT WILL SUPPORT THE NEW FACILITIES UPGRADED FROM 2.4kV TO 12.5kV

Area/Buildings affected
Wes Watkins CITD Bldg - Expected Outage - 48 Hours
Greenwood Tennis Center - Expected Outage - 48 Hours

Start Date: TBD, 2018
Project Length: 10 days

REFEED EXISTING SWITCHGEAR WITH 12,470V SERVICE

NEW CABLE PULL THROUGH EXISTING DUCTBANKS

ENERGIZE EXISTING 15kV CABLE WITH 12,470V FEED
PROJECT 12: AGRICULTURE UPGRADE PROJECT

THIS PROJECT CONSISTS OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABLELING THAT WILL SUPPORT THE NEW FACILITIES UPGRADED FROM 2.4KV TO 12.5KV

Area/Buildings affected
Agriculture Building - Expected Outages - South End - 48 Hours
Northwest - 24 Hours
Northeast - 3 Days
Start Date: TBD, 2018
Project Length: 30 days

NEW CABLE INSTALLED IN EXISTING CONDUIT

NEW CONDUIT & CABLE FROM SWITCH TO TRANSFORMER
PROJECT 13: 4-H / AGRICULTURE NORTH UPGRADE PROJECT

THIS PROJECT CONSISTS OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABLING THAT WILL SUPPORT THE NEW FACILITIES UPGRADED FROM 2.4KV TO 12.5KV

Area/Buildings affected
4-H Youth Development Bldg - Expected Outage - 48 Hours
Agriculture North Bldg - Expected Outage - 48 Hours

Start Date: TBD, 2018
Project Length: 15 days
PROJECT 14: PHYSICAL SCIENCE UPGRADE

THIS PROJECT CONSISTS OF INSTALLING THE UNDERGROUND INFRASTRUCTURE AND CABELING THAT WILL SUPPORT THE NEW FACILITIES UPGRADED FROM 2.4KV TO 12.5KV

Area/Buidlings affected
Physical Science 1 - Expected Outage - 24 Hours
Physical Science 2 - Expected Outage - 4 Days

Start Date: TBD, 2018
Project Length: 30 days
POWER DISTRIBUTION CENTER PROJECT

This project consists of a new distribution switching center for all the campus power distribution. The power distribution center is fed from the OG&E McElroy substation and the new university substation located at Pioneer and Virginia. The new distribution center is required to retire and demolish the OSU/Poultry substation on Hall of Fame.

Area/Buildings affected:
- Parking Lot #49E
- Parking Lot #53
- University Health Center
- Lincoln Street

Start Date: May 2018
Project Length: 8 Months
Phase II Overview

- Prior to Phase II, Power Distribution Center is required to be constructed.
- Existing 2400V lines from Poultry Sub will be replaced with new feeds from Power Distribution Center.
- Upon completion, Poultry Substation can be demolished.
- Will re-use existing underground infrastructure where practical and identified during design.
Questions