

Boston College

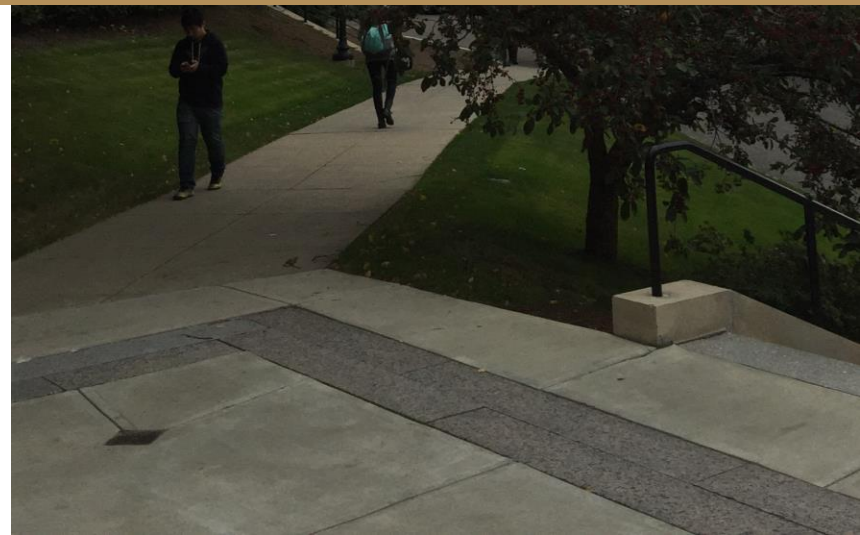
Architectural Development Presentation

January 19, 2018



Central Heating Plant Expansion

CANNONDESIGN

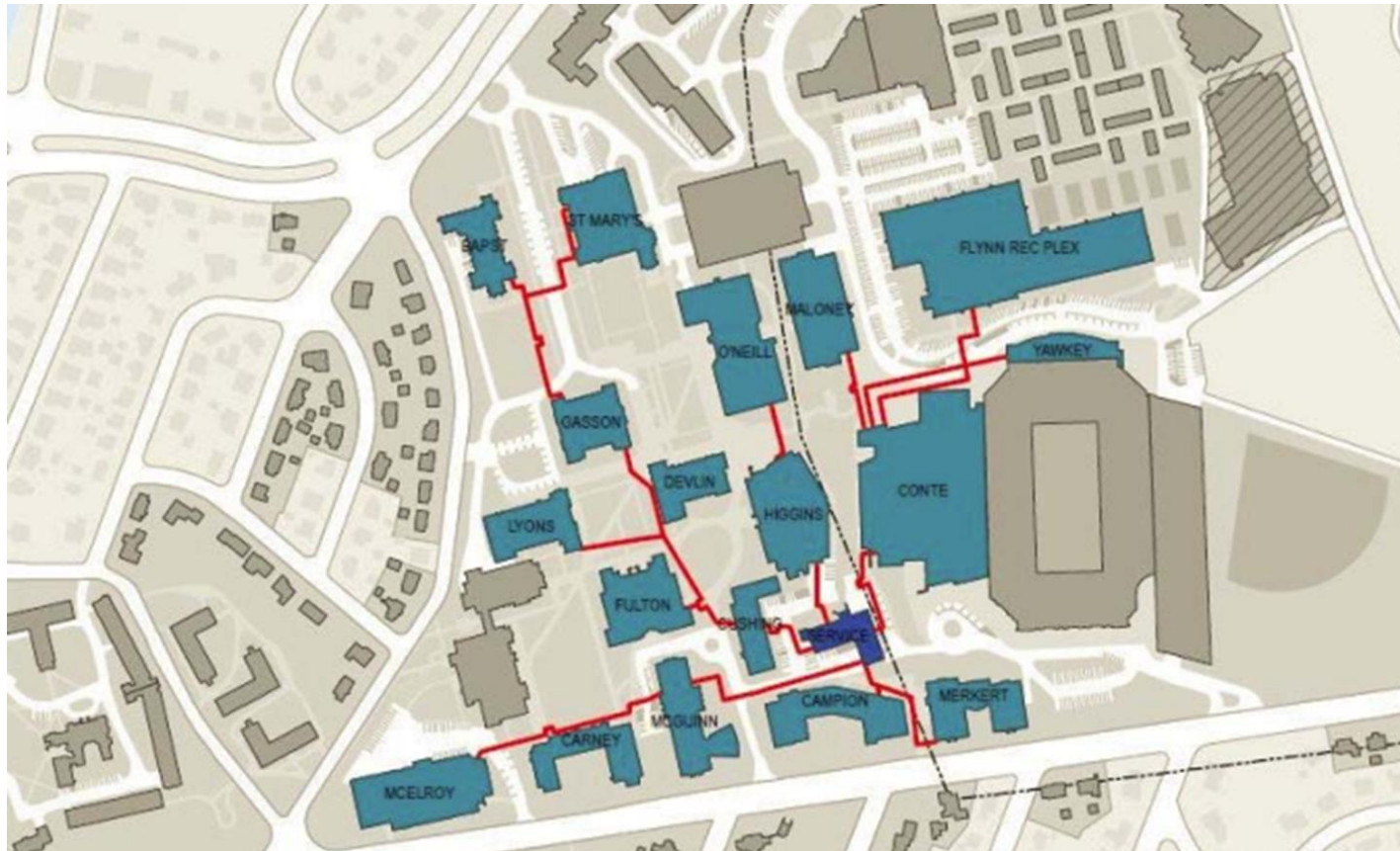


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Existing Central Heating Plant

- Provides steam to approximately 2.4M sqft
- Peak steam load – 100,000 lbs/hr (observed winter 2015)
- (3) existing boilers in CHP– (2) are 37 years old, the 3rd is 50 years old
 - Installed capacity = 100,000 lbs/hr
 - Firm capacity = 62,000 lbs/hr (assumes largest boiler is out of service)



Existing Central Heating Plant

- **Building Condition**
 - Original construction – 1948
 - Aged masonry (stack and building facades)
 - Non-seismic resistant design
 - Life-safety limitations (fire protection, FA, ADA compliance)
 - Non-compliant elect. infrastructure and insufficient E-power
 - Service Building FCI – 0.65



Central Heating Plant Upgrade & Purpose

- Increase firm capacity to meet peak load – long-term firm capacity = 120,000 lbs/hr
- Improve steam distribution reliability
- Defer replacement of existing boilers
- Accommodate Master Plan timeline & uncertainties
- Upgrade building's electrical infrastructure



Site Plan



Exterior Development

Existing View from Conte Circle



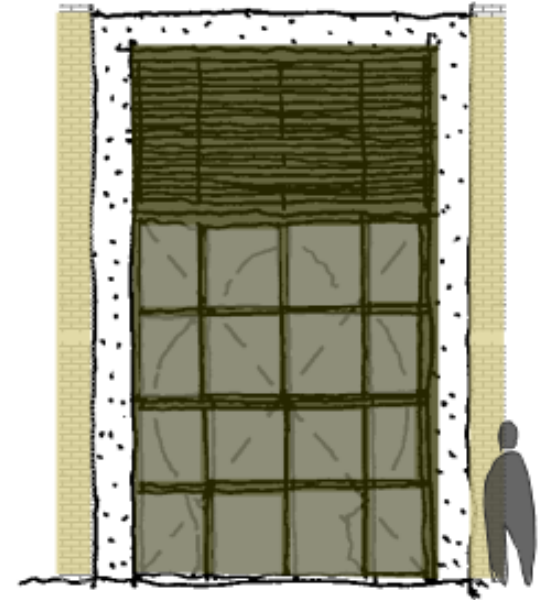
Proposed East Elevation



Proposed East Elevation – Alternate Brick Penthouse



Proposed Bi-Folding Doors



View from Conte Circle – without trees



Alternate Brick Penthouse



View from Conte Circle



Proposed West Elevation



Proposed West Elevation – Alternate Brick Penthouse



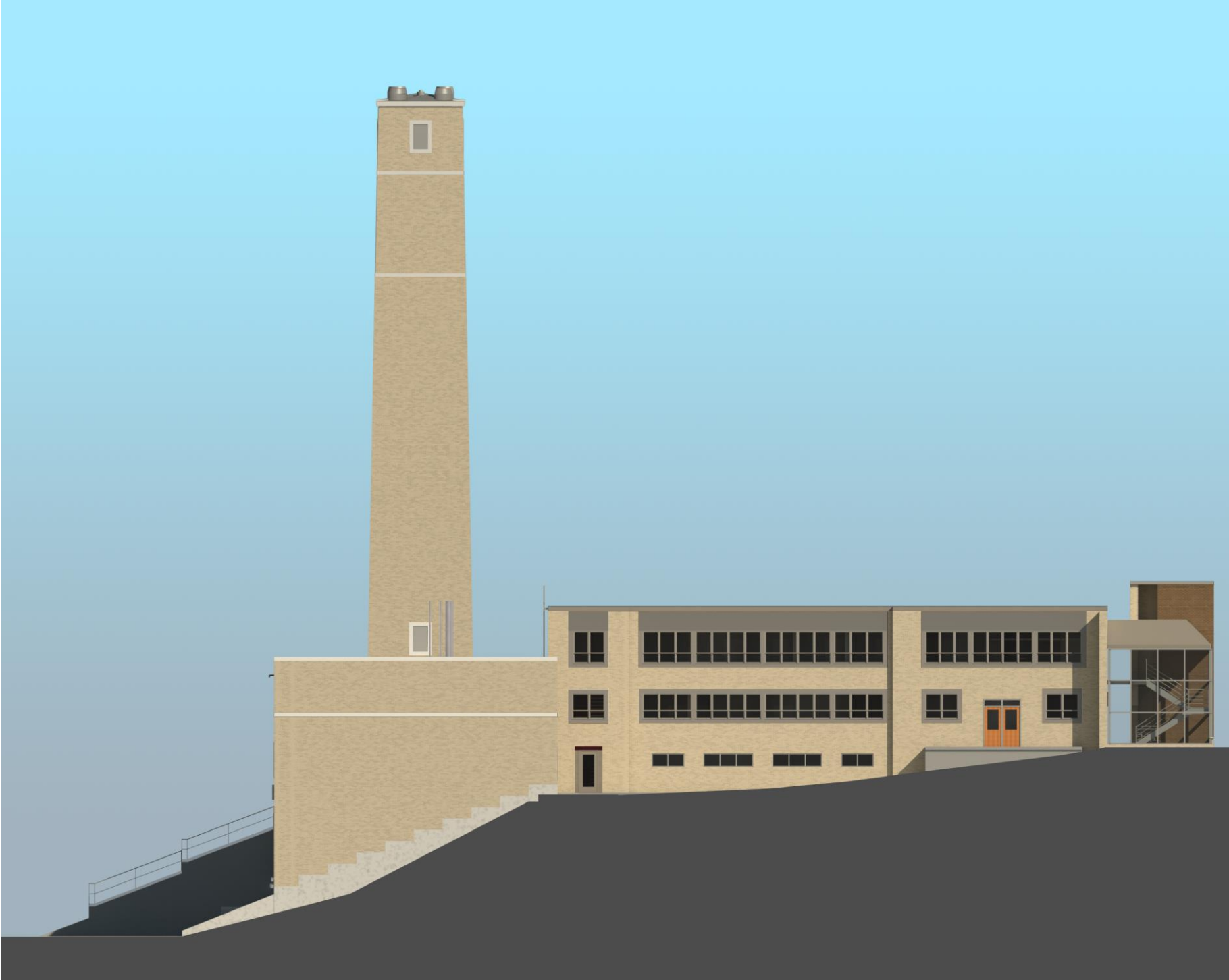
View from Higgins Hall



View from Higgins Hall – Alternate Brick Penthouse



Proposed North Elevation



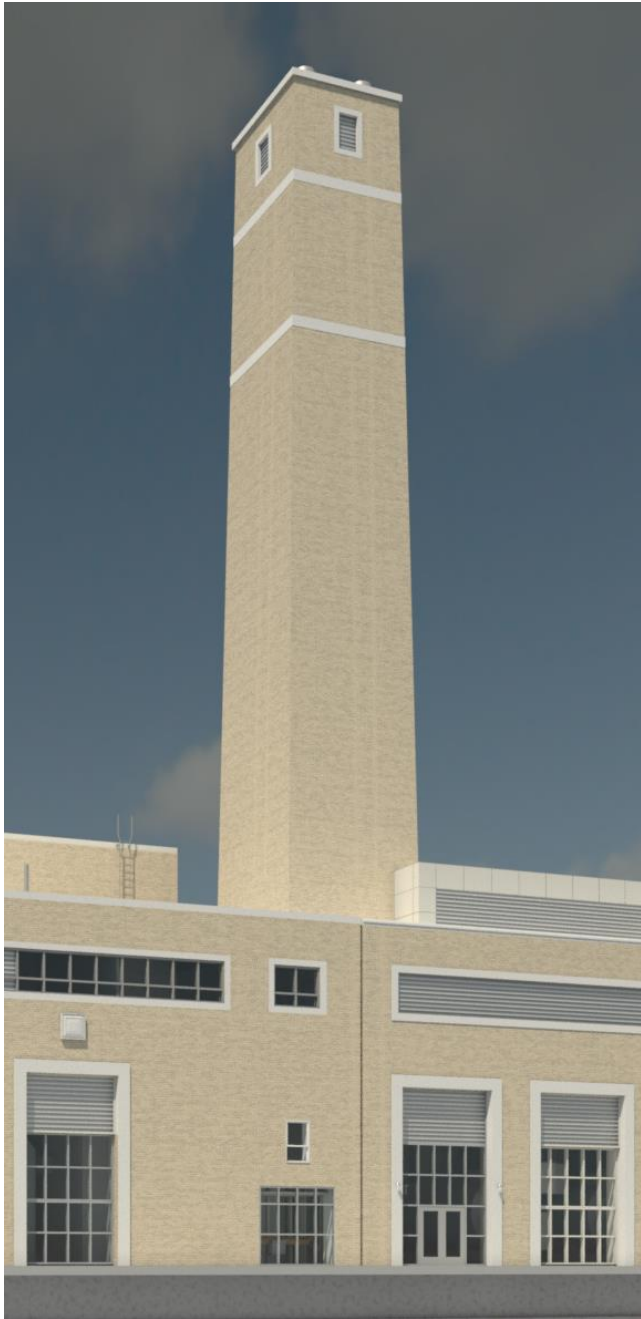
View from the Conte Forum Campus Walk



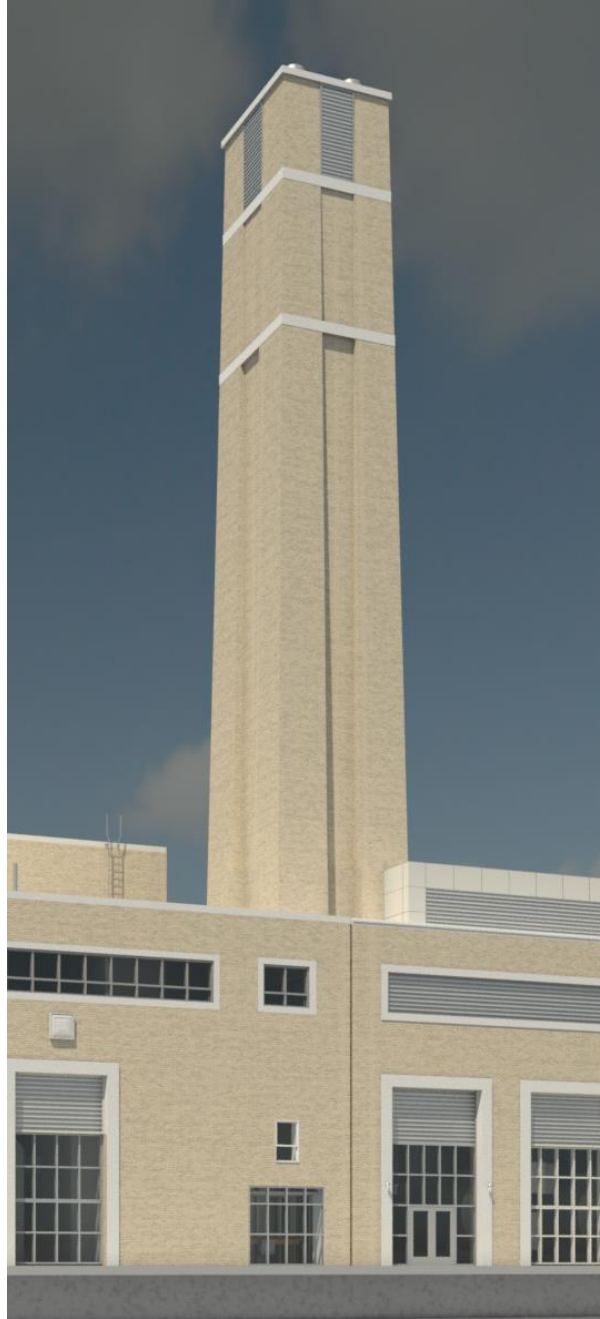
Existing and Proposed Stacks



Proposed Stack Design Options



Tapered

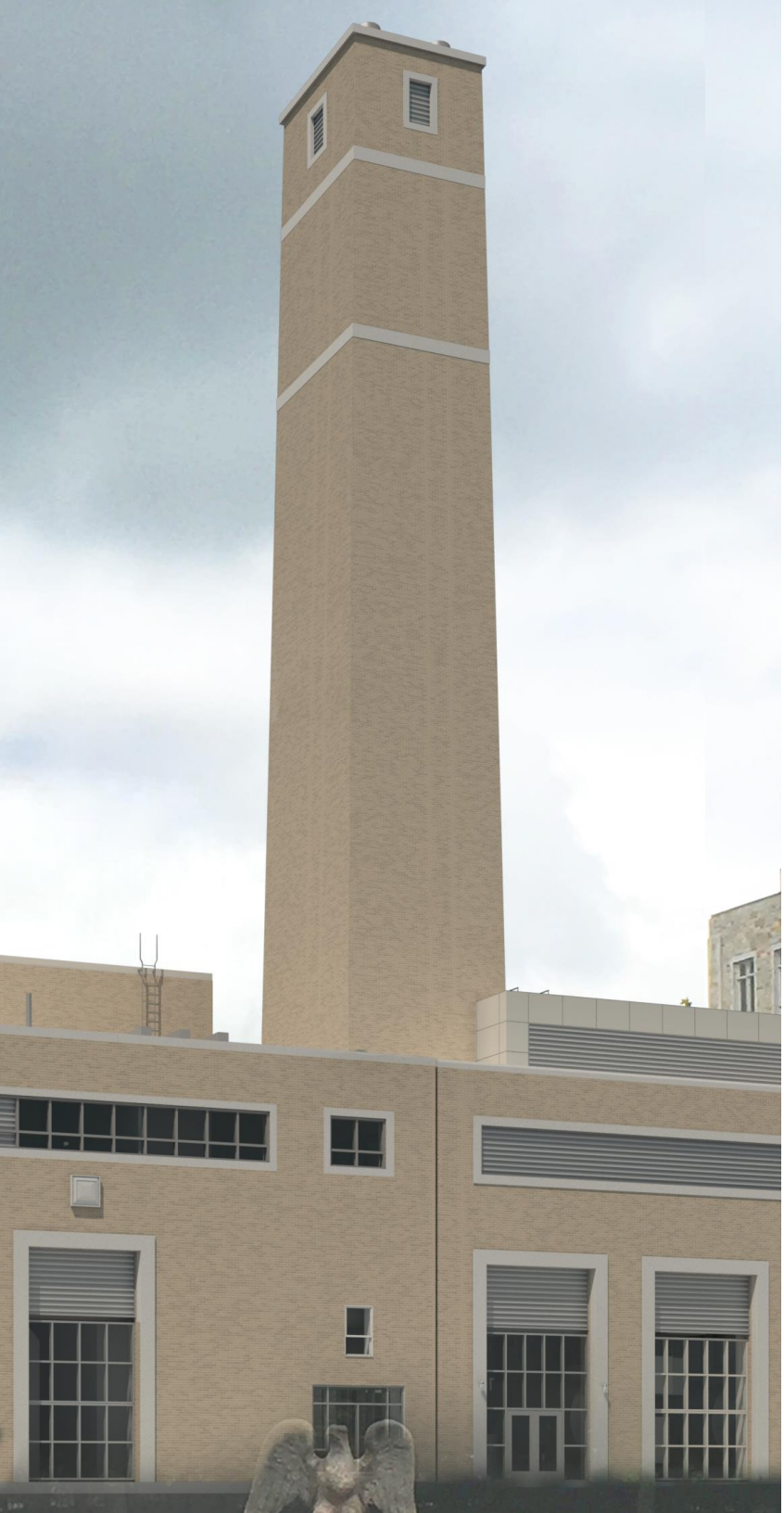


Pilastered



Stepped

**Tapered
(Basis of Design)**



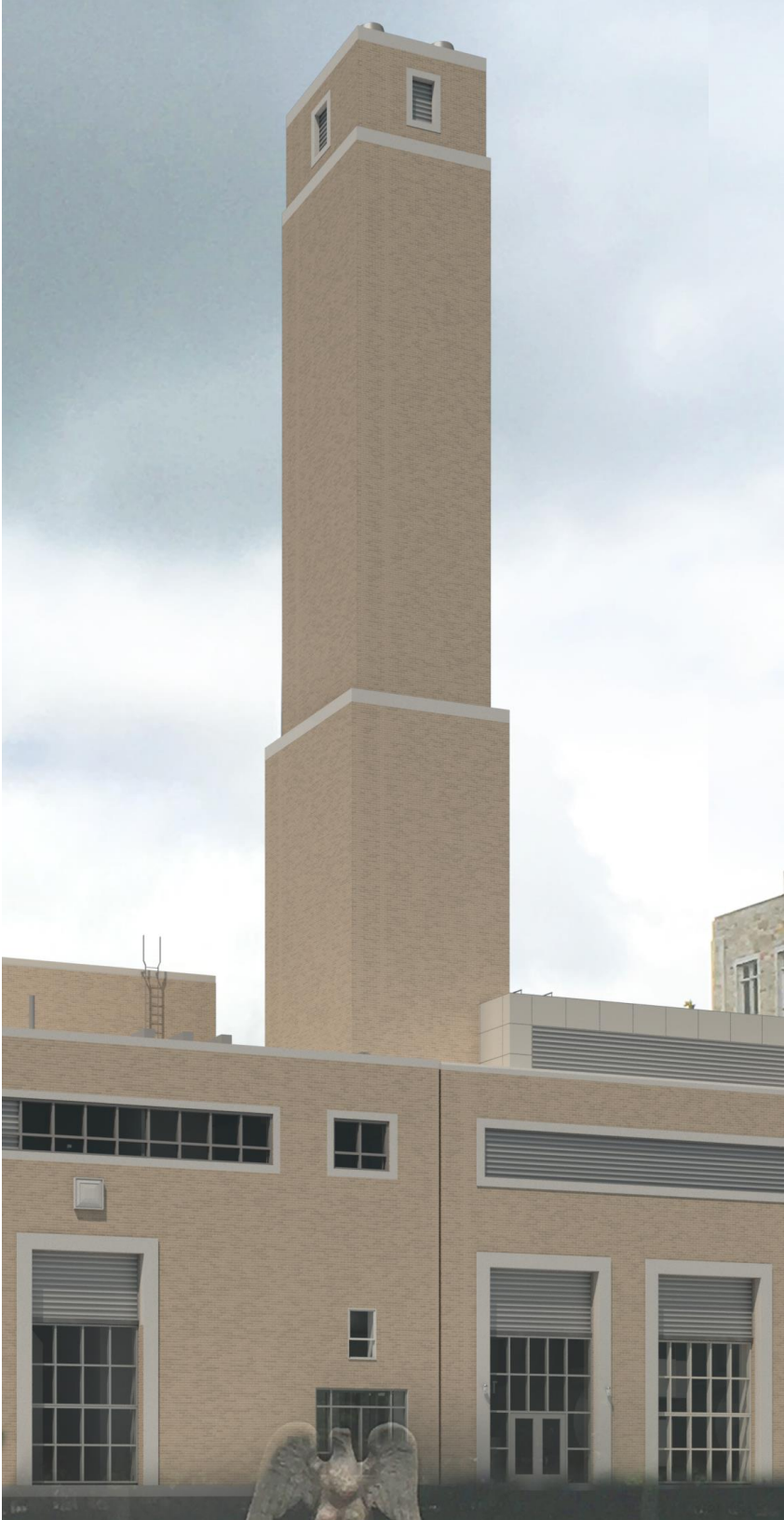
Pilastered Alternate



**Pilastered Alternate
with Ornament**



Stepped Alternate



Proposed Materials – Brick and Cast Stone

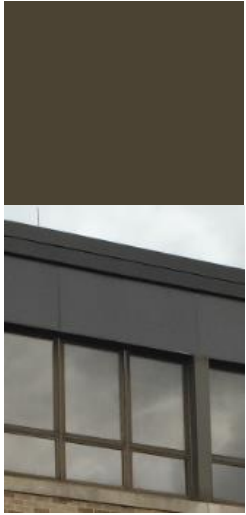


Brick to Match Existing

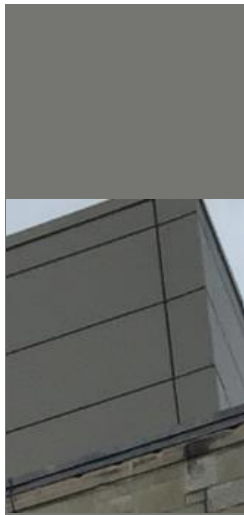


Cast Stone to Match Existing

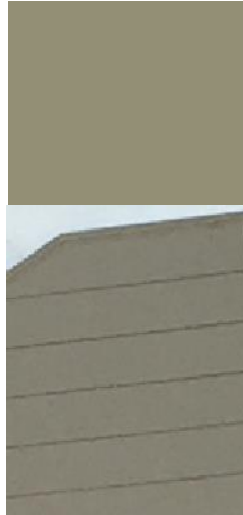
Proposed Materials – Metal Panels and Frames



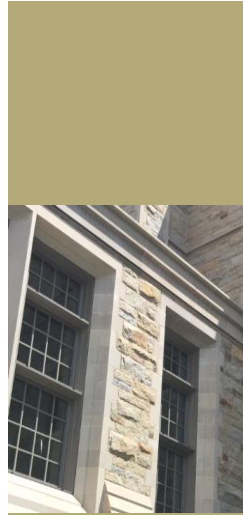
Service Bldg.



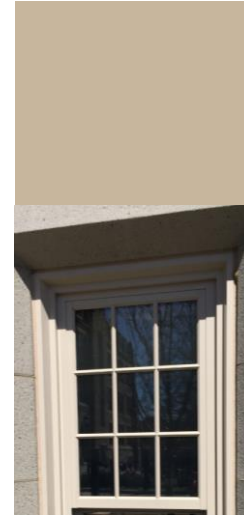
Higgins Hall



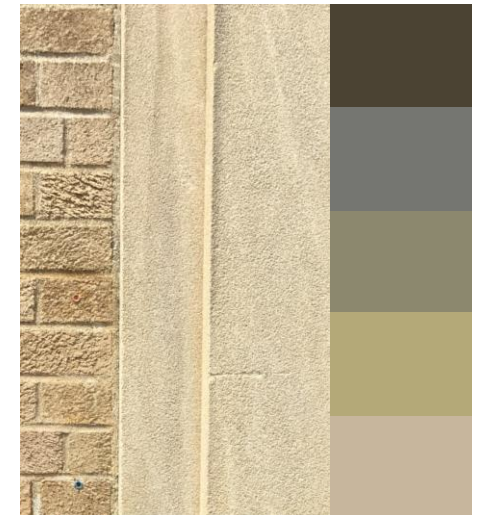
Conte Frm.



Stokes Hall



St. Mary's Hall



CHP Addition

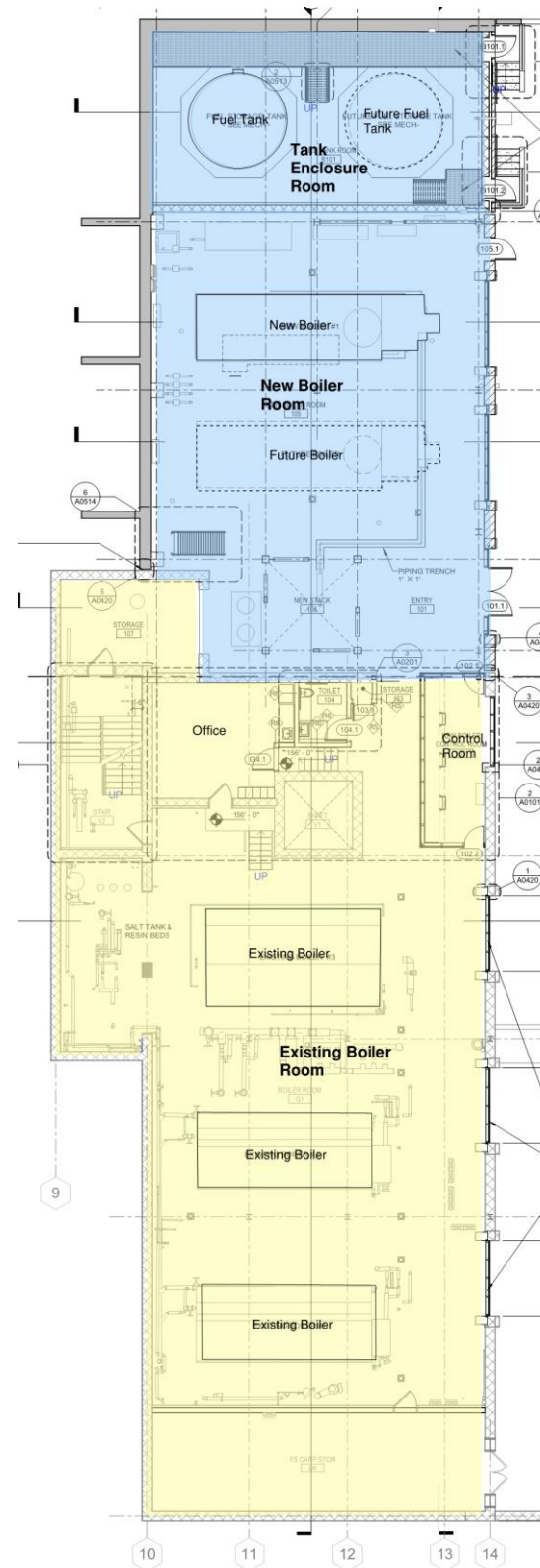
Existing Campus Buildings

Floor Plans

Floor Plans

Level 1

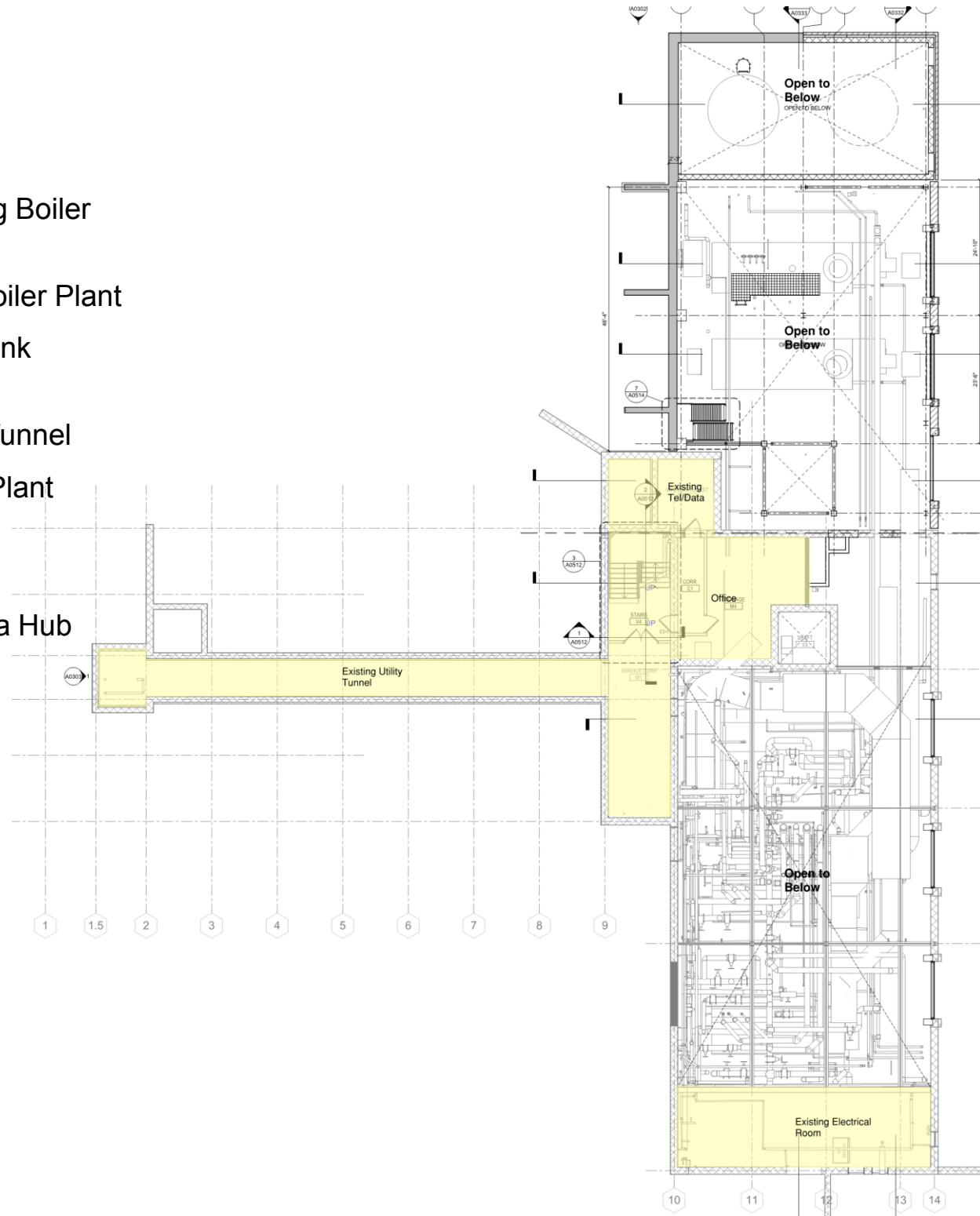
- ✓ Existing Boiler Plant
- ✓ New Boiler Plant
- ✓ Fuel Tank Enclosure



Floor Plans

Level 2- Mezzanine

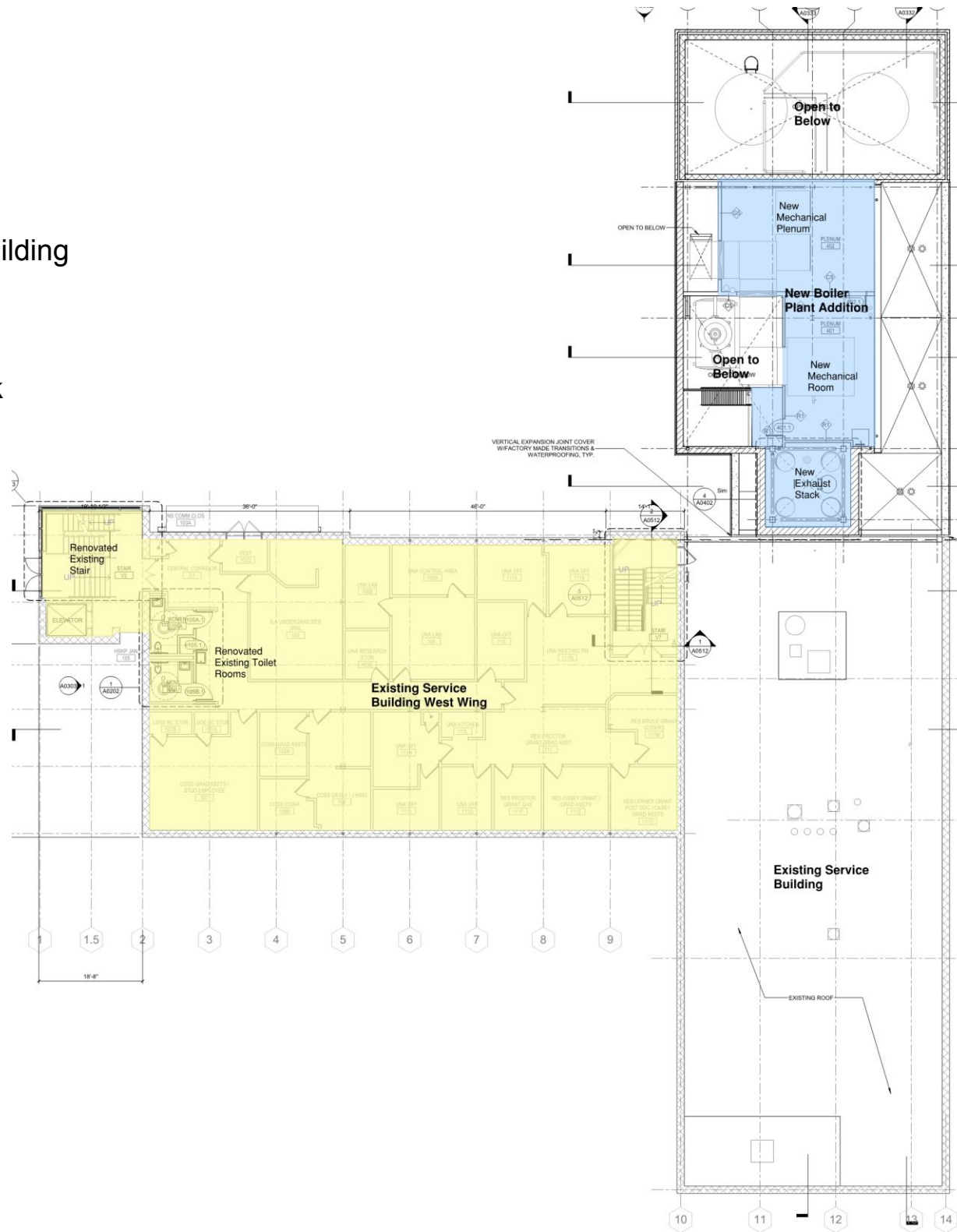
- ✓ Open to Existing Boiler Plant
- ✓ Open to New Boiler Plant
- ✓ Open to Fuel Tank Enclosure
- ✓ Existing Utility Tunnel
- ✓ Existing Boiler Plant Electrical Room
- ✓ Office
- ✓ Existing Tel/Data Hub



Floor Plans

Level 4

- ✓ Existing Service Building
- ✓ New Boiler Plant Addition
- ✓ New Exhaust Stack
- ✓ New Fuel Tank Enclosure



Floor Plans

Level 5

- ✓ Existing Service Building
- ✓ New Boiler Plant Addition
- ✓ New Exhaust Stack
- ✓ New Fuel Tank Enclosure

