A 21st CENTURY HEADQUARTERS

AGU 100

ADVANCING EARTH AND SPACE SCIENCE

A FEW WORDS

ABOUT THE TEAM

Holly Lennihan

Director of Sustainable Design, Senior Associate

Hickok Cole Architects

Roger Frechette

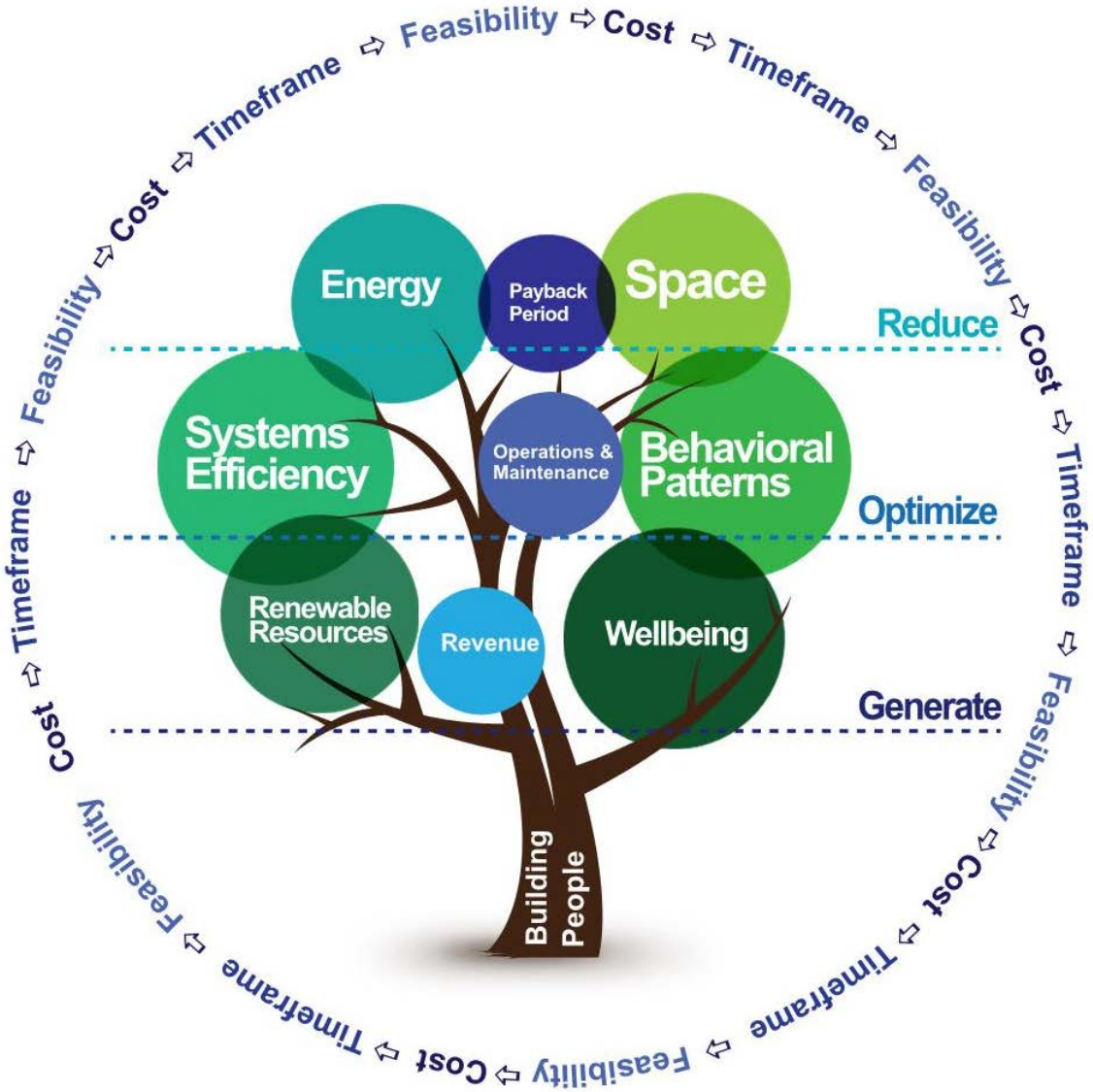
Managing Principal

Interface Engineering

PROJECT

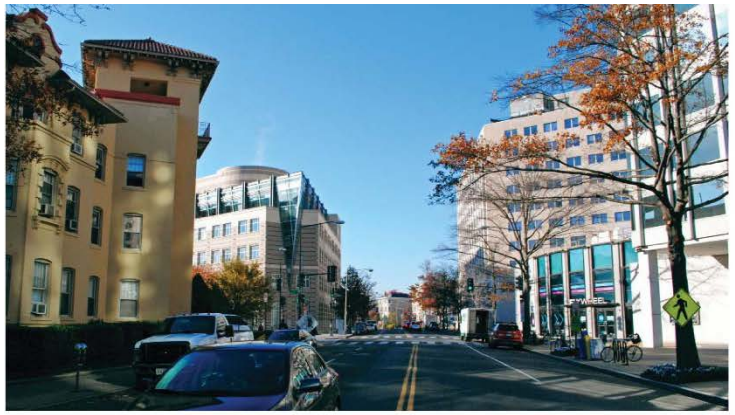
GOALS

- Develop a workplace environment that is state of the art
- Consistent, flexible and adaptable 21st century work environment
- Work environment that makes it easy to collaborate with our members and other partners/ vendors
- Showcase the contributions of Earth and space science
- Push the limits of the building performance in terms of energy, water, the work environment; Net Zero
- Raise the visibility of AGU through this project



THE

EXISTING BUILDING



LOOKING WEST ON FLORIDA AVENUE

CORNER OF 20TH STREET AND FLORIDA AVENUE

LOOKING NORTH UP 20TH STREET

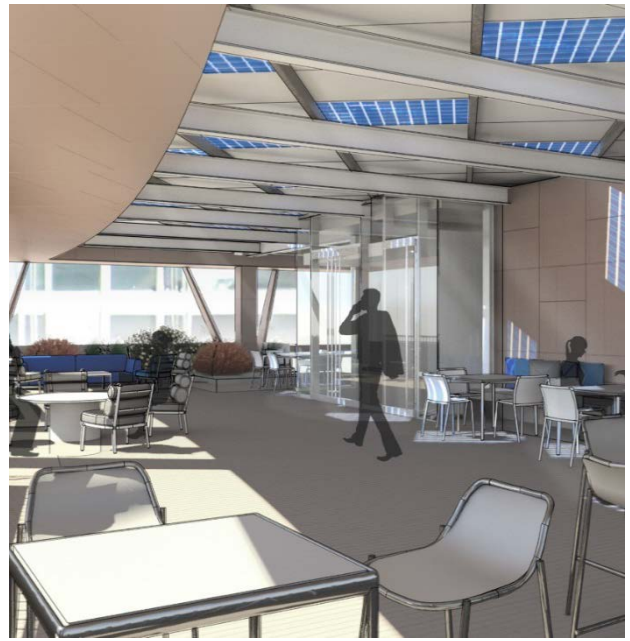
LOOKING EAST ON FLORIDA AVENUE

CURRENT

PROPOSED

THE
A & E

1. Radiant Ceiling Grid & DC lights
2. The Hy-Phy Wall and Biophilia
3. PV Array as Amenity on the Roof
4. Transparency and Openness



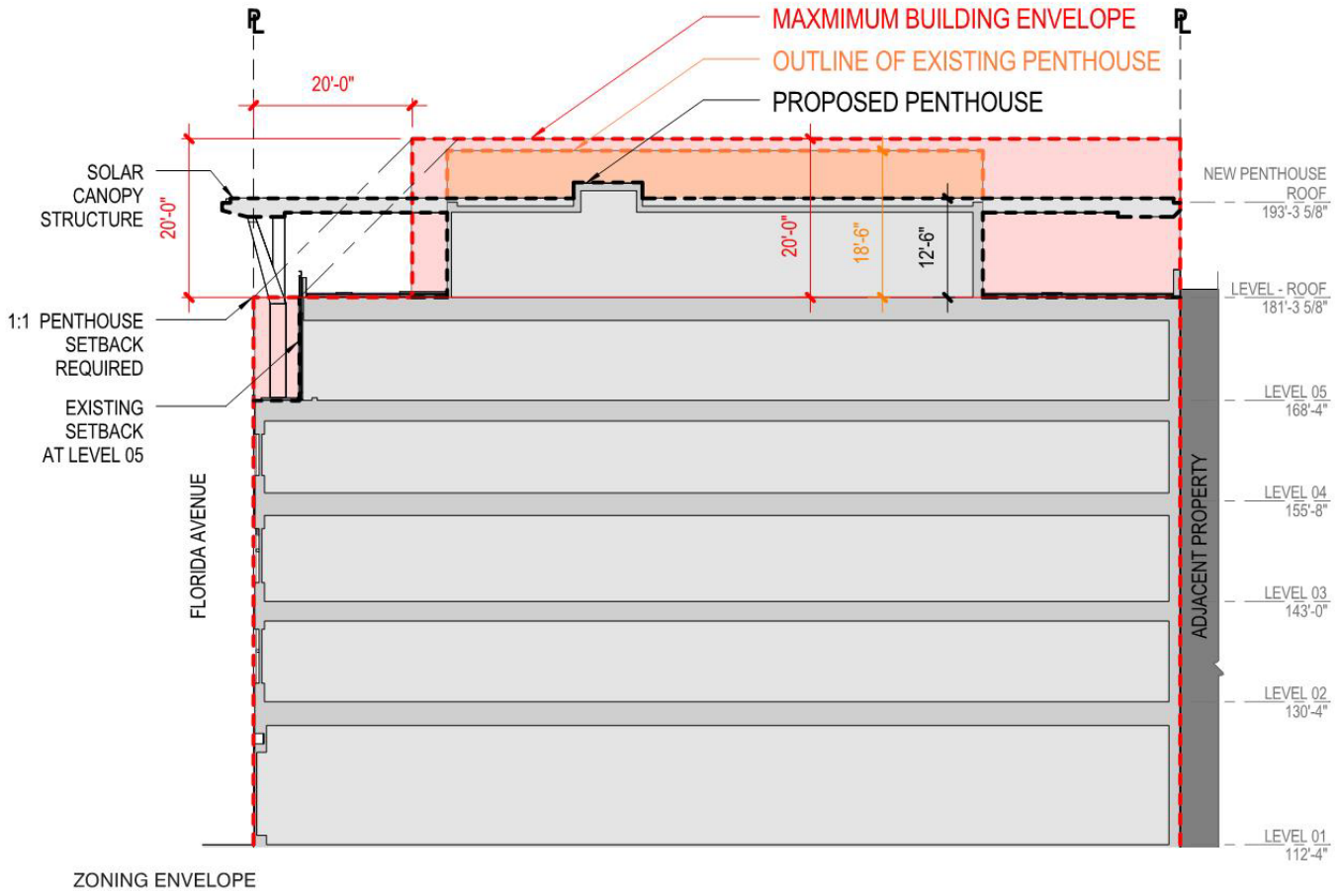
JURISDICTIONAL

CHALLENGES & APPROVALS

COMMUNITY ENGAGEMENT

- **ZP&D COMMITTEE OF THE ANC** (2/25)
- **DUPONT CIRCLE CONSERVANCY** (3/08)
- **DUPONT CIRCLE CITIZENS ASSOCIATION** (3/16)
- **COMMUNITY MEETING AT AGU** (3/16)
- **HISTORIC PRESERVATION REVIEW BOARD HEARING**
- **ZP&D COMMITTEE OF THE ANC** (4/06)
- **DUPONT CIRCLE CONSERVANCY** (4/12)
- **ANC 2B APRIL MEETING** (4/13)
- **DUPONT CIRCLE CITIZENS ASSOCIATION** (5/20)

RENOVATION@AGU.ORG




OPENING UP
THE NEW BUILDING

A NEW WAY OF WORKING

EMBODY THE MISSION

SHARED SPACES
PRE-FUNCTION SPACE AT
EXECUTIVE CONFERENCING

SHARED SPACES
SEMI-PRIVATE MEETING
SPACES FOR OPEN TEAMING

QUIET SPACES
FOR FOCUSED WORK OR
PRIVATE MEETINGS

IMPROVED CIRCULATION
PERIMETER & VERTICAL
CONNECTION AT ALL AGU
WORK FLOORS

FORMAL CONFERENCING
AT PROW

ARRIVAL LOBBY
FEATURING “CROSS
SECTION THROUGH
MEMBER SCIENCE”
WALL

OPEN OFFICE
PERSONAL WORKSPACE
FOR INCREASED
COLLABORATION

A NEW WAY OF WORKING

EMBODY THE MISSION

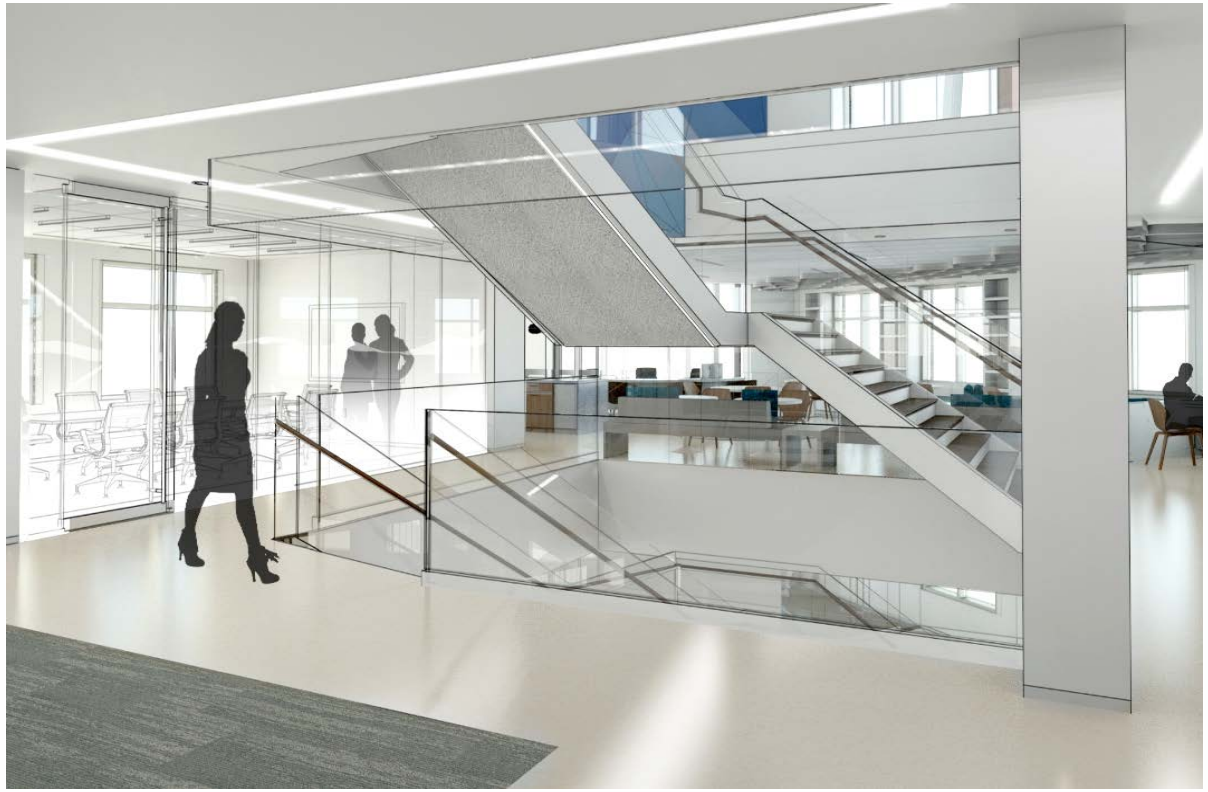
Typical Open Office

A NEW WAY OF WORKING

EMBODY THE MISSION

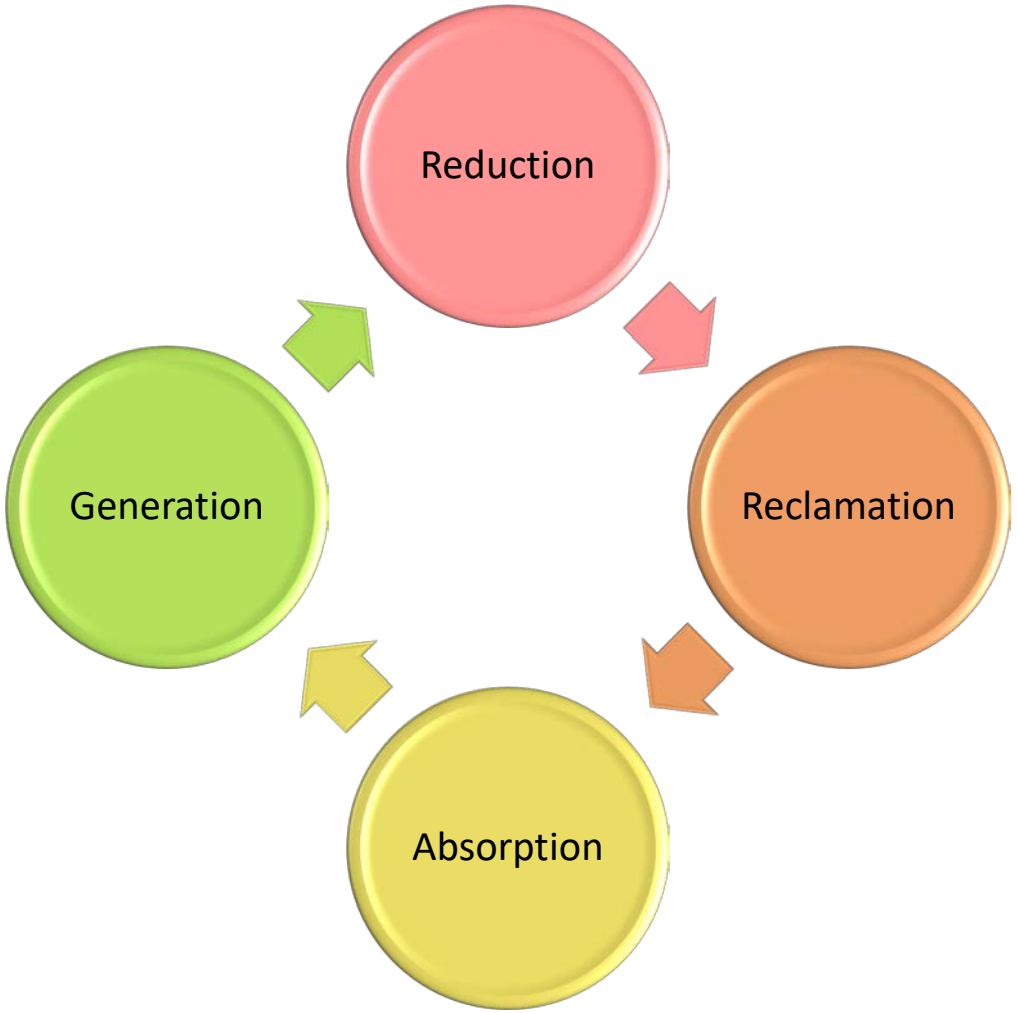
THINKING ABOUT THE OCCUPANTS

WELLNESS



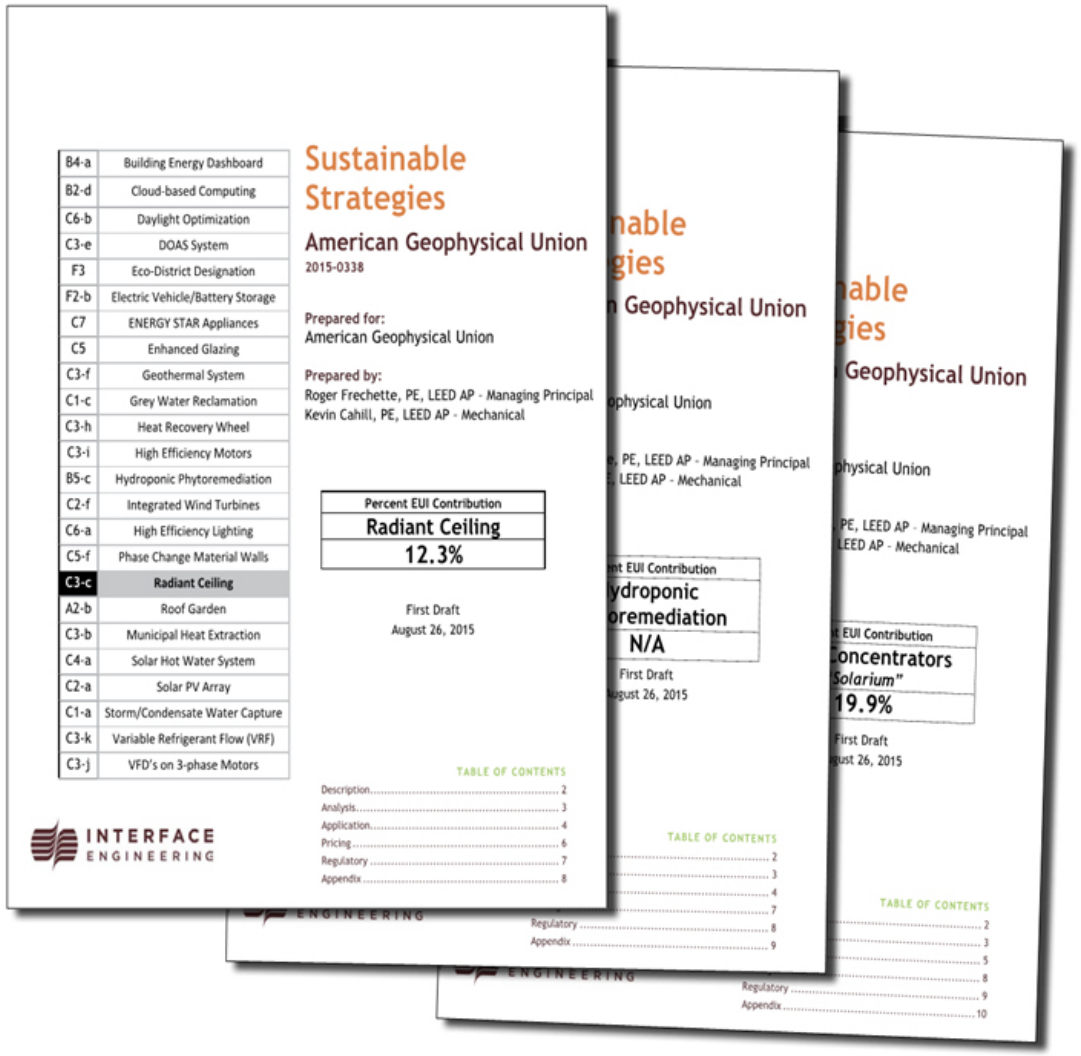
HIGH PERFORMANCE DESIGN

METHODOLOGY



EXPLORING ALL OF THE OPTIONS

PROCESS



HIGH PERFORMANCE DESIGN

STRATEGIES

- Solar Photovoltaics (PV)
- Enhanced Envelope Insulation
- Free Cooling Condenser Operation
- DC Powered Workspace
- Direct Current LED Lighting
- Hydroponic Phytoremediation (Hy-Phy)
- Heat Recovery Water Chiller
- Dynamic Glass Shading
- Triple-Pane Glazing
- Dedicated Outside Air System (DOAS)
- Exhaust Air Heat Recovery
- Rain Water Collection & Reuse
- Daylight Responsive Controls (DRC)
- Dynamic Toilet Room Exhausting
- Variable Frequency Drives
- Radiant Ceiling Cooling System
- Occupancy Sensors & Controls
- Condensate Water Collection & Reuse
- Sewer Heat Exchange System
- Low-Flow Plumbing Fixtures
- Recycled Water Flushing
- Access Control – Power Management
- Energy Usage Display Monitors

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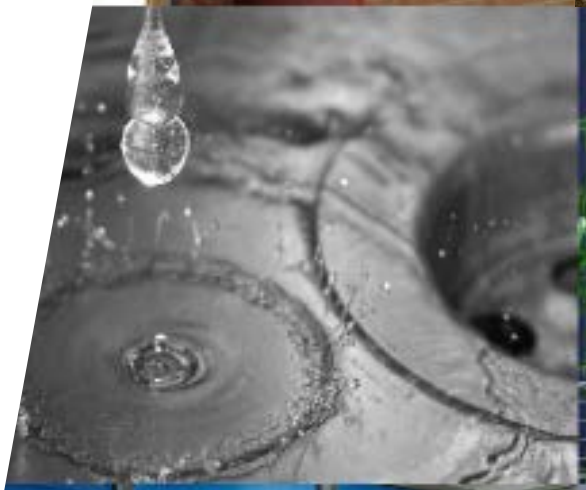
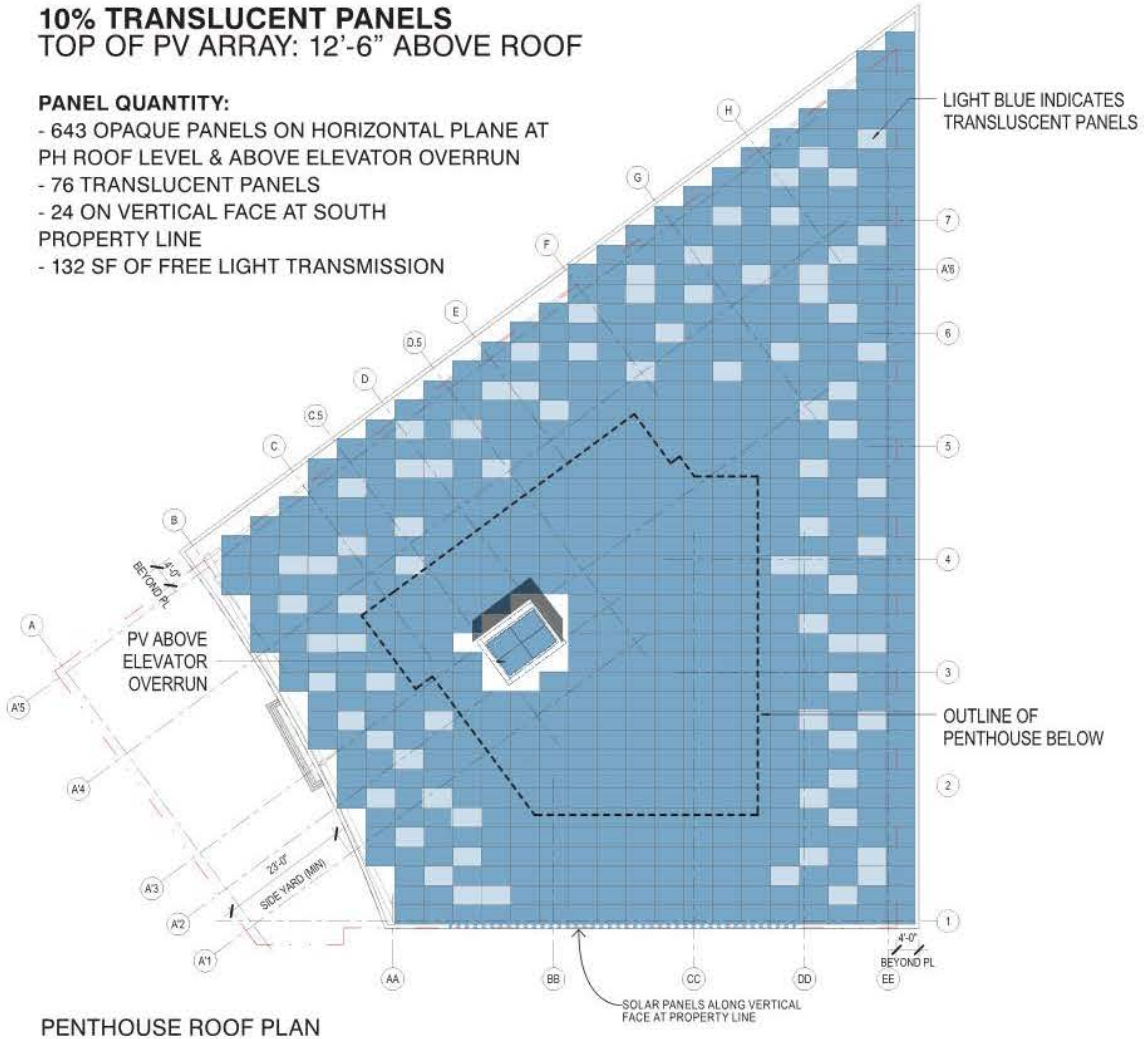



10% TRANSLUCENT PANELS
TOP OF PV ARRAY: 12'-6" ABOVE ROOF

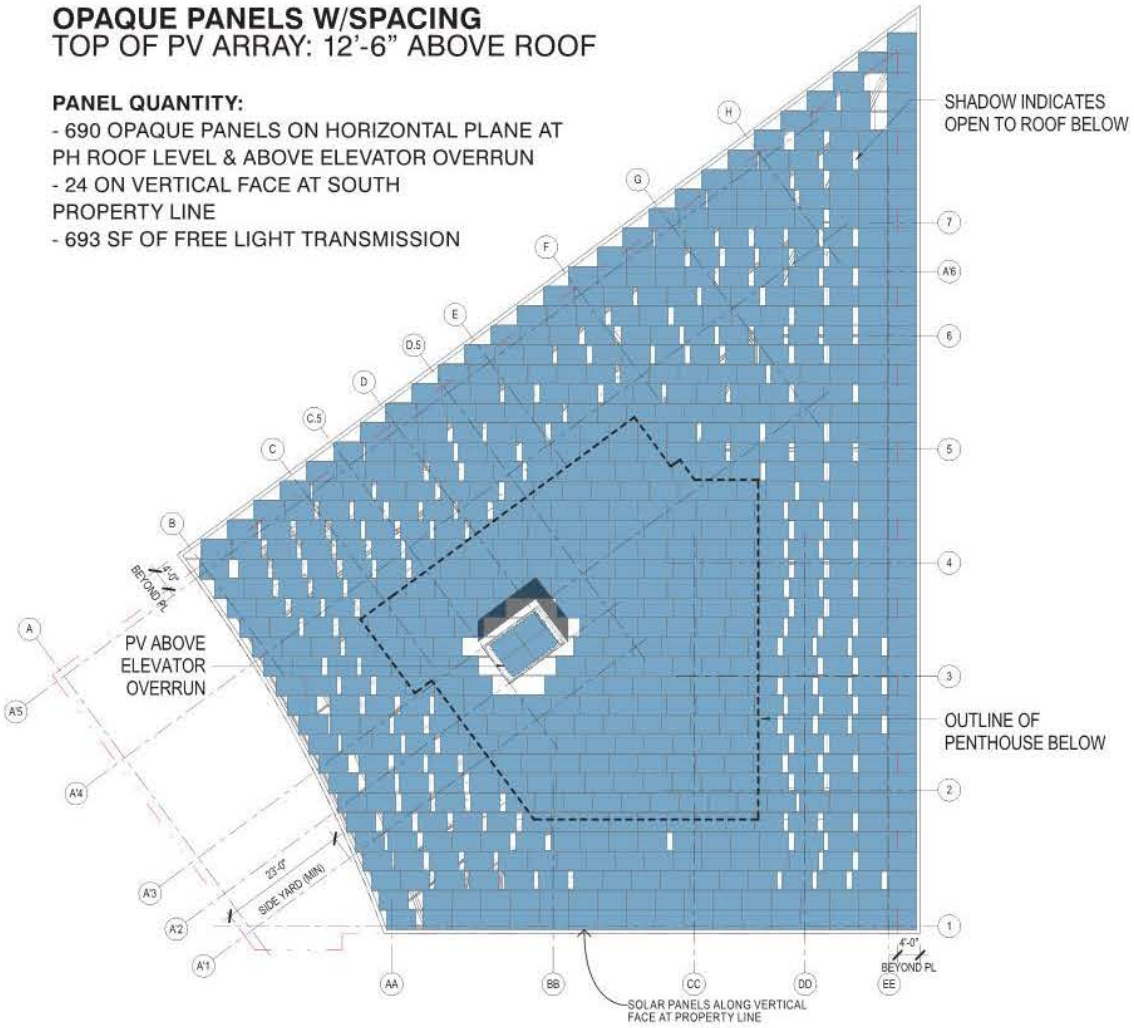
PANEL QUANTITY:
- 643 OPAQUE PANELS ON HORIZONTAL PLANE AT PH ROOF LEVEL & ABOVE ELEVATOR OVERRUN
- 76 TRANSLUCENT PANELS
- 24 ON VERTICAL FACE AT SOUTH PROPERTY LINE
- 132 SF OF FREE LIGHT TRANSMISSION



PENTHOUSE ROOF PLAN
5/26 - HPRB SUBMISSION

OPAQUE PANELS W/SPACING
TOP OF PV ARRAY: 12'-6" ABOVE ROOF

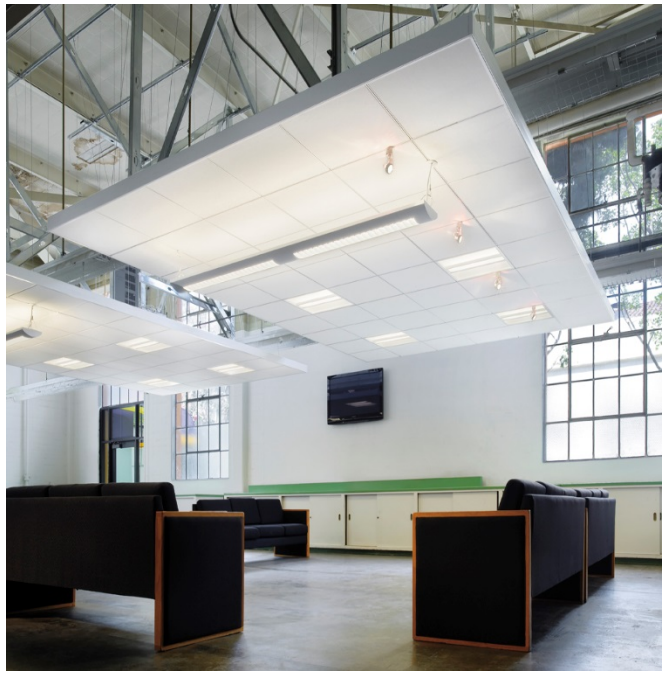
PANEL QUANTITY:
- 690 OPAQUE PANELS ON HORIZONTAL PLANE AT PH ROOF LEVEL & ABOVE ELEVATOR OVERRUN
- 24 ON VERTICAL FACE AT SOUTH PROPERTY LINE
- 693 SF OF FREE LIGHT TRANSMISSION



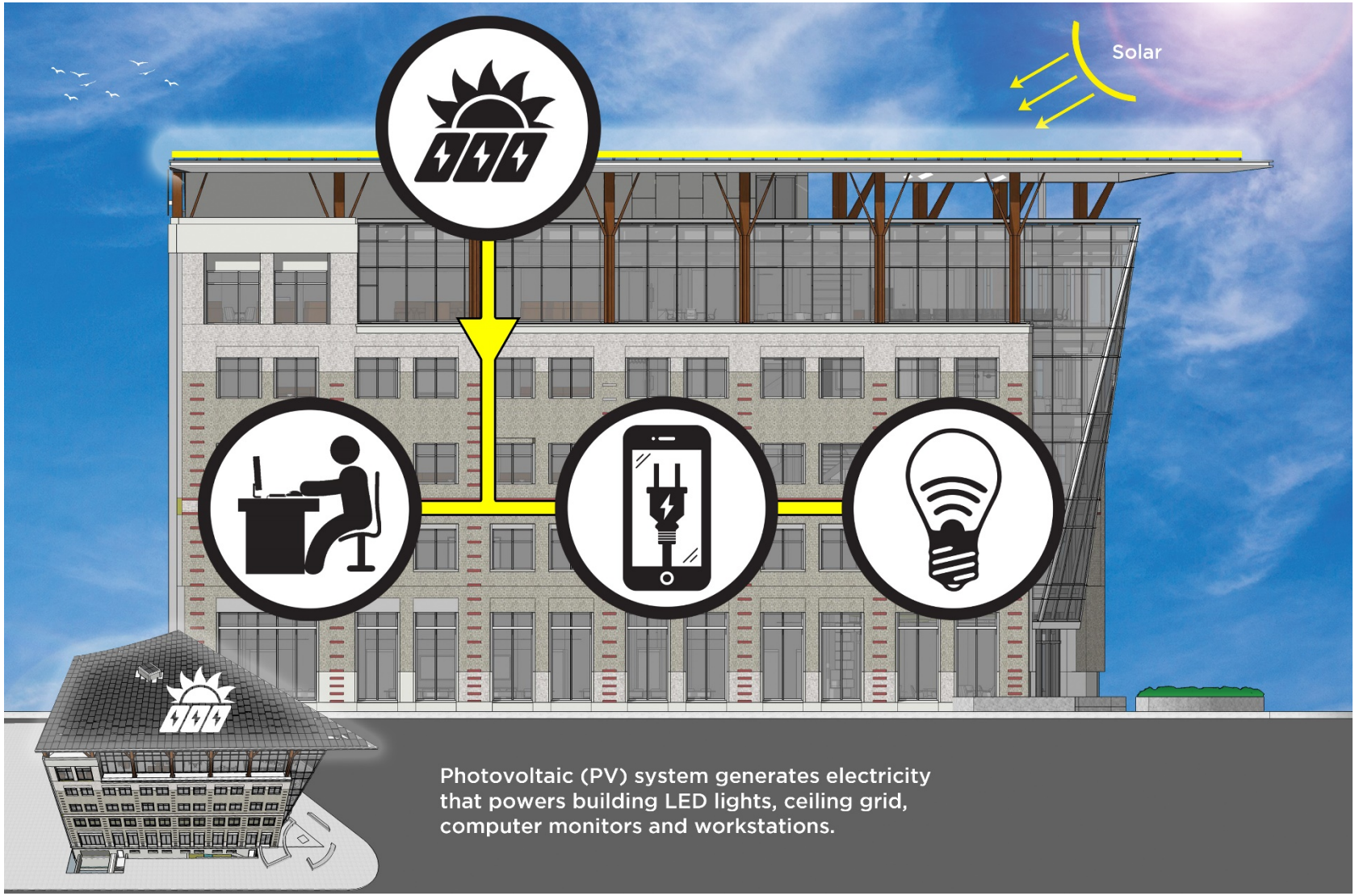
7/15 REVISED - PV PANEL LAYOUT

PHOTOVOLTAIC ARRAY AND THE DC GRID

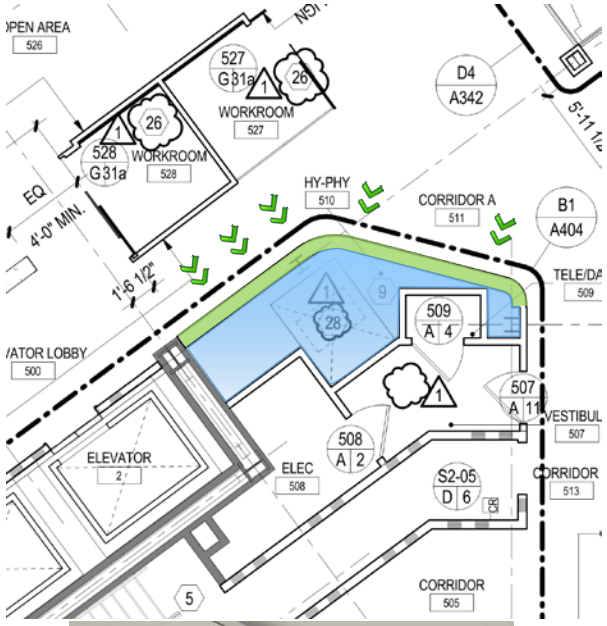
16-Port DC Power Module

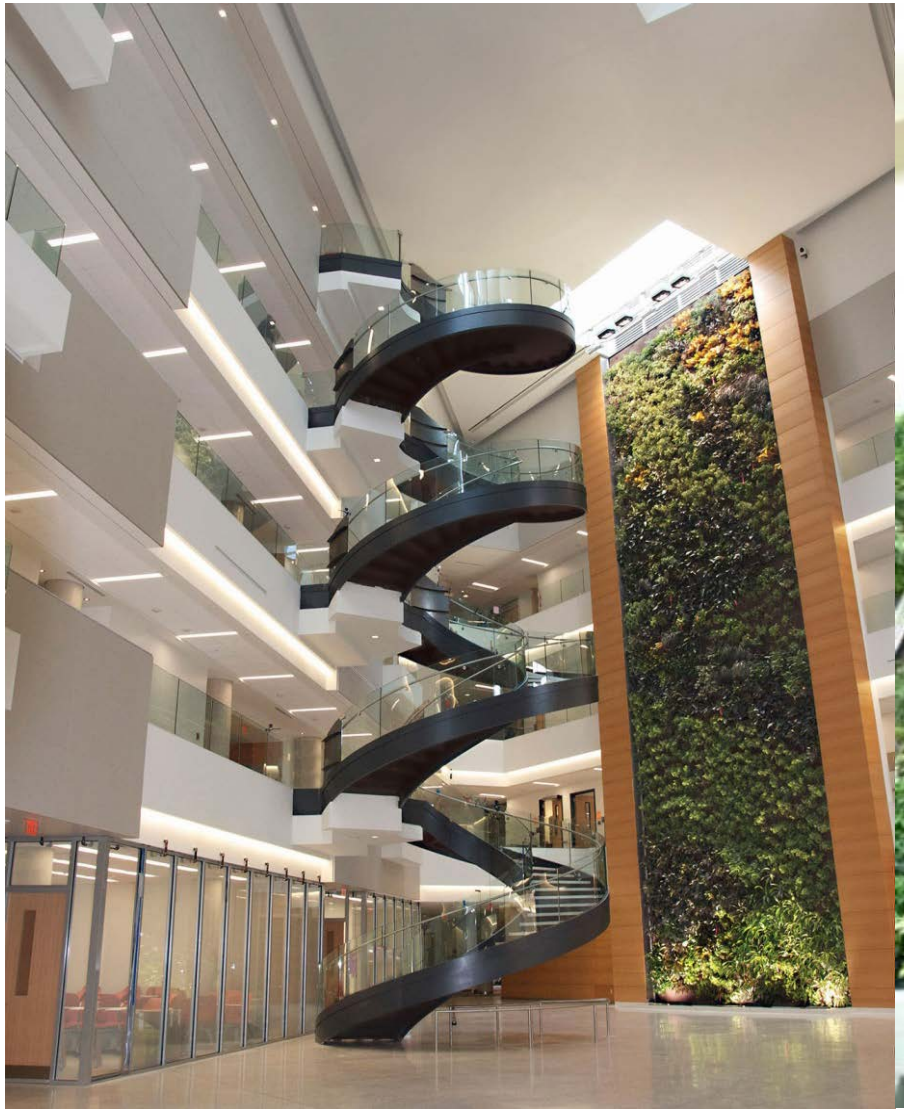


Electrified Ceiling Grid

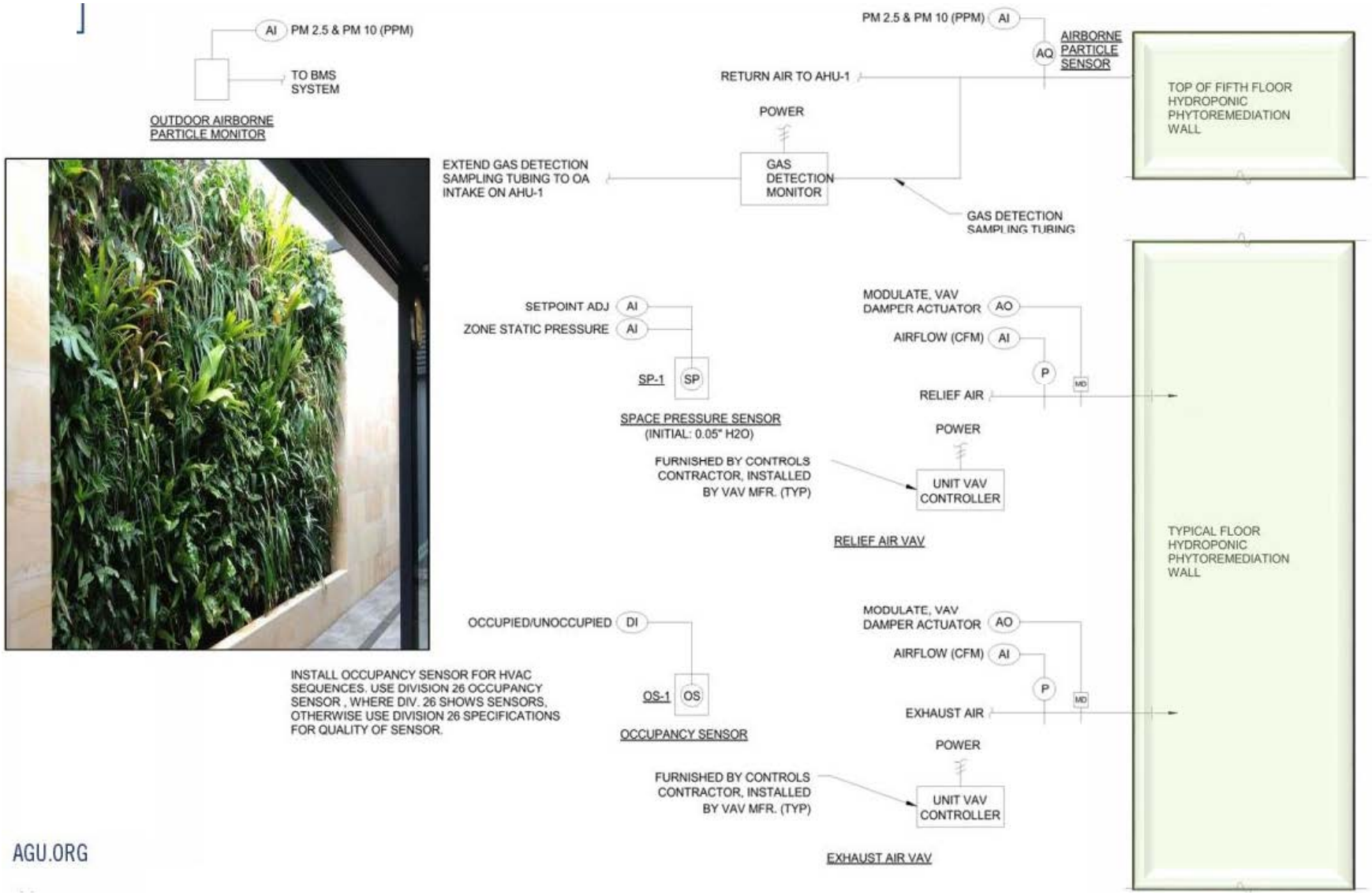


PHOTOVOLTAIC ARRAY AND THE DC GRID





HYDROPONIC PHYTOREMEDIATION ‘HY-PHY’ WALL



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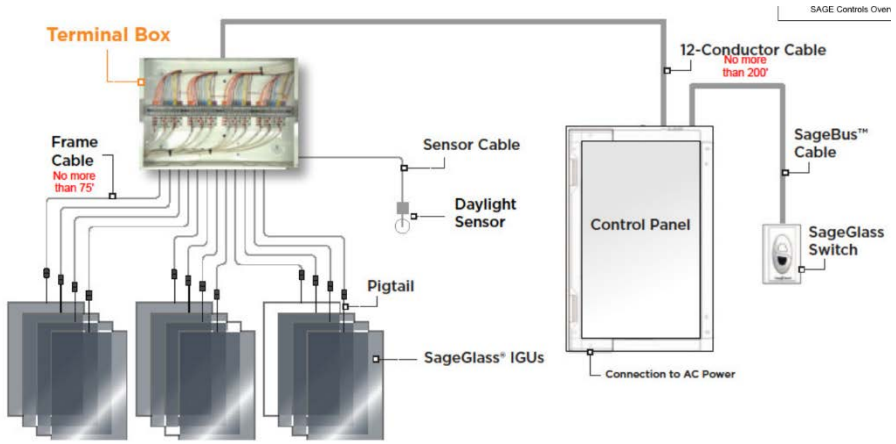
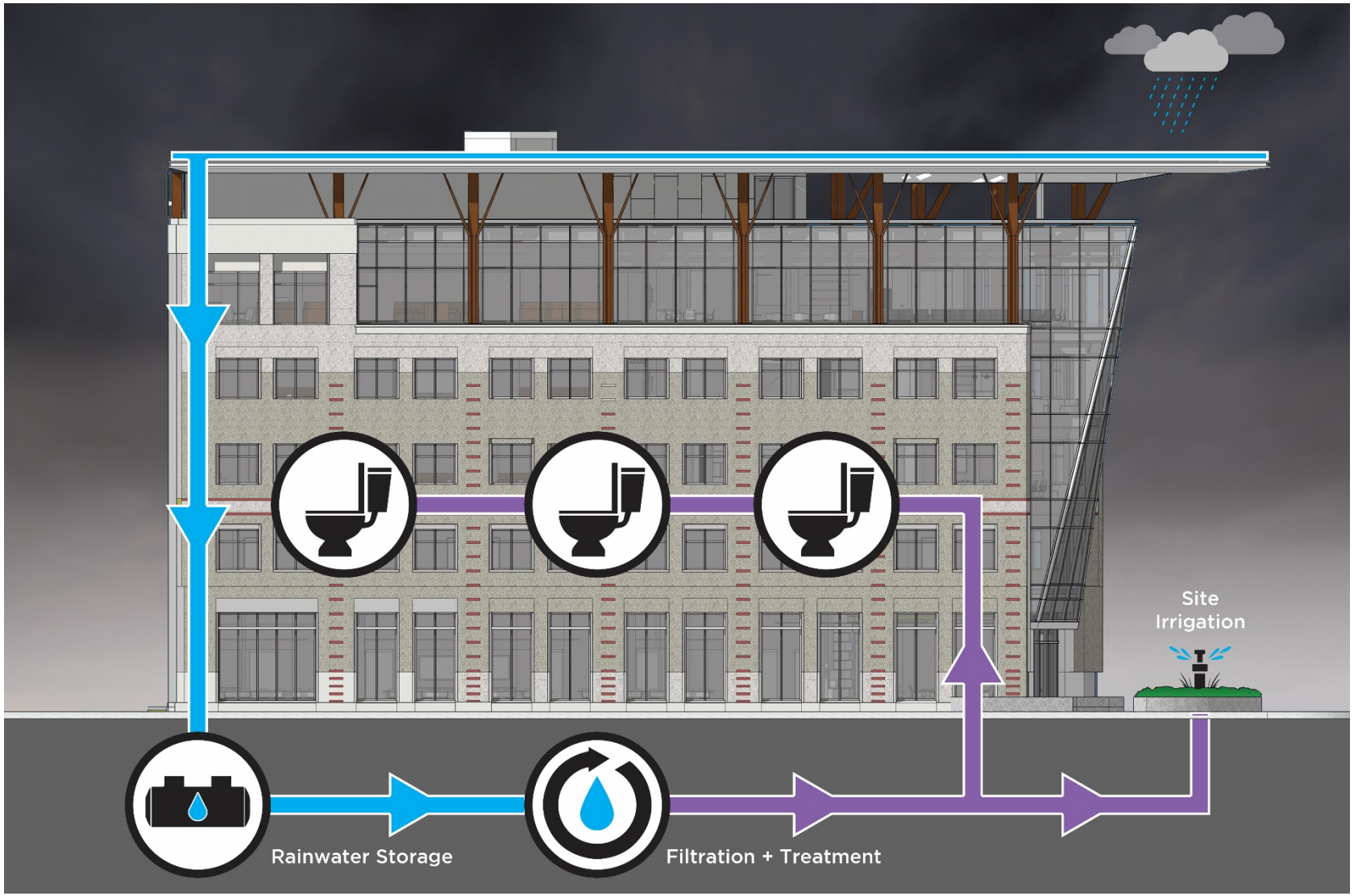
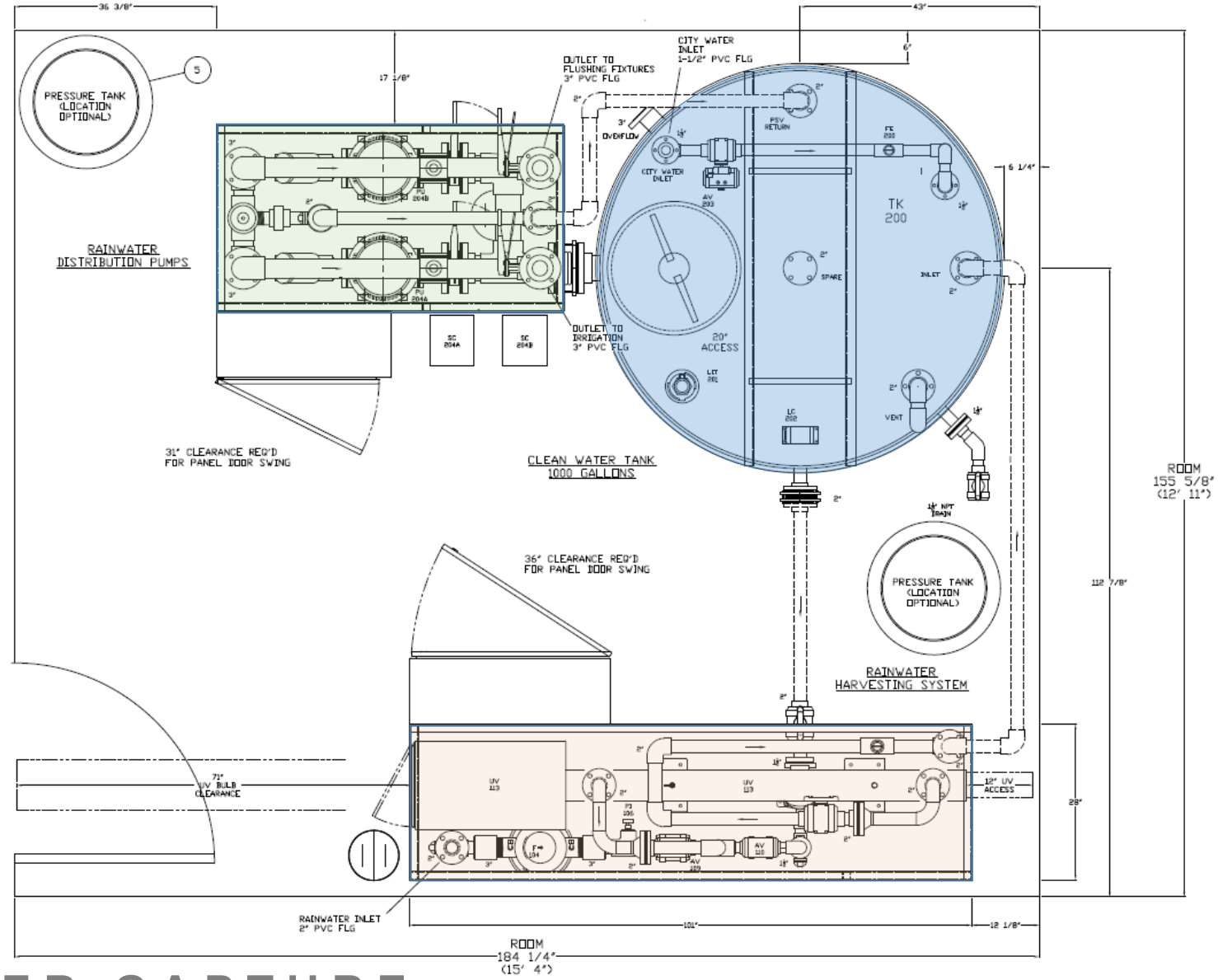
HYDROPONIC PHYTOREMEDIATION 'HY-PHY' WALL



DYNAMIC GLAZING



RAIN WATER CAPTURE AND REUSE



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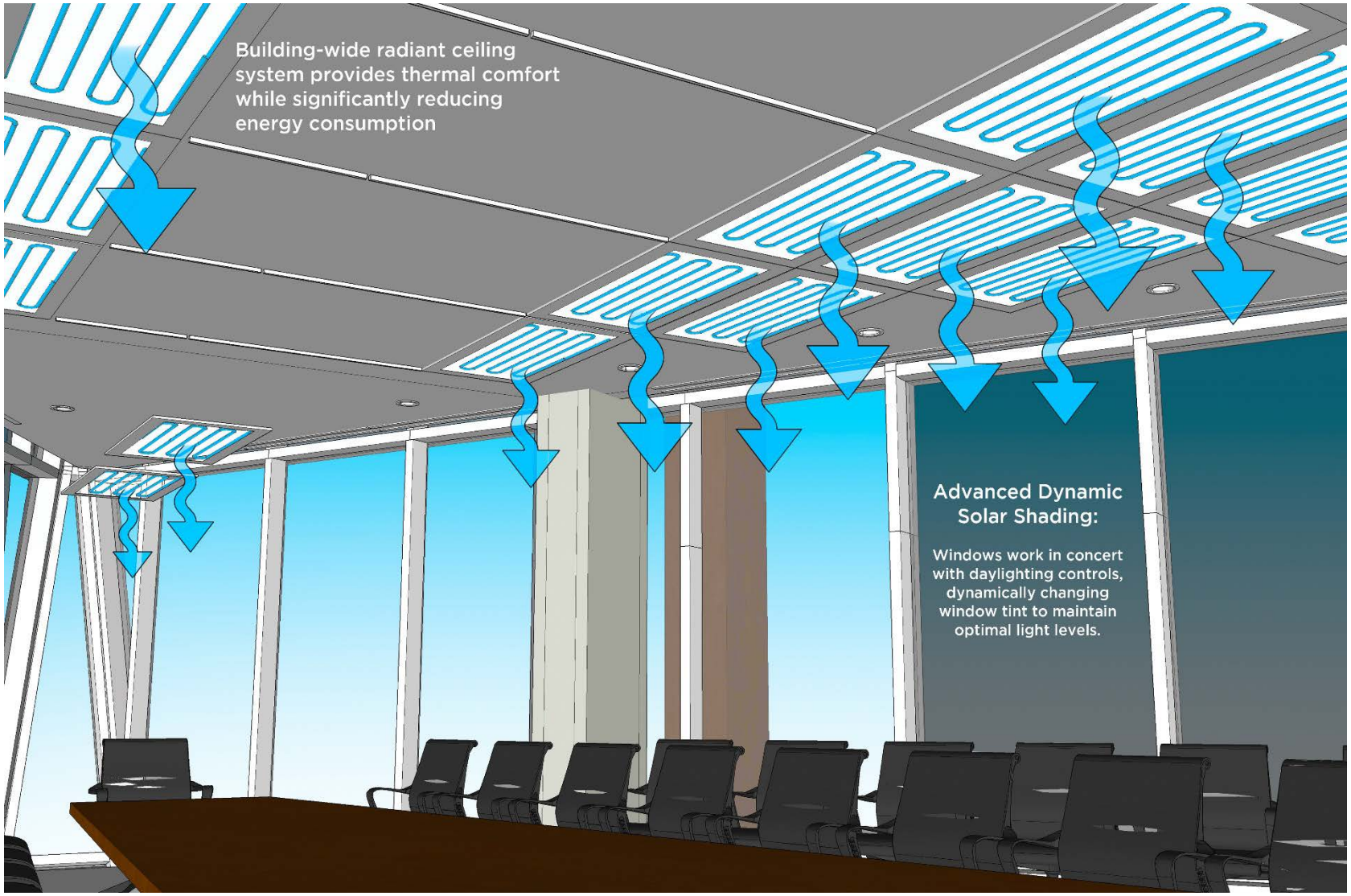
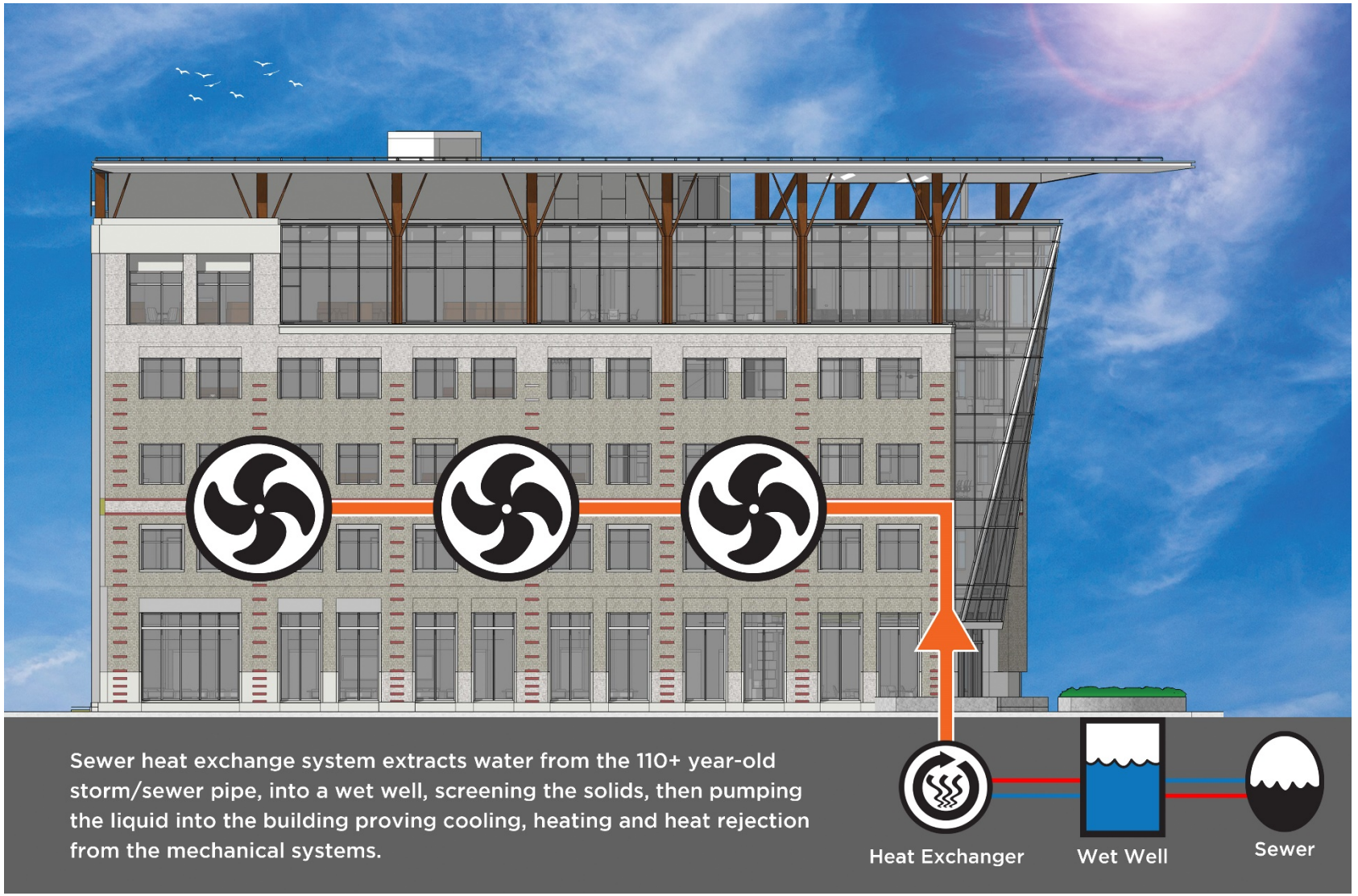
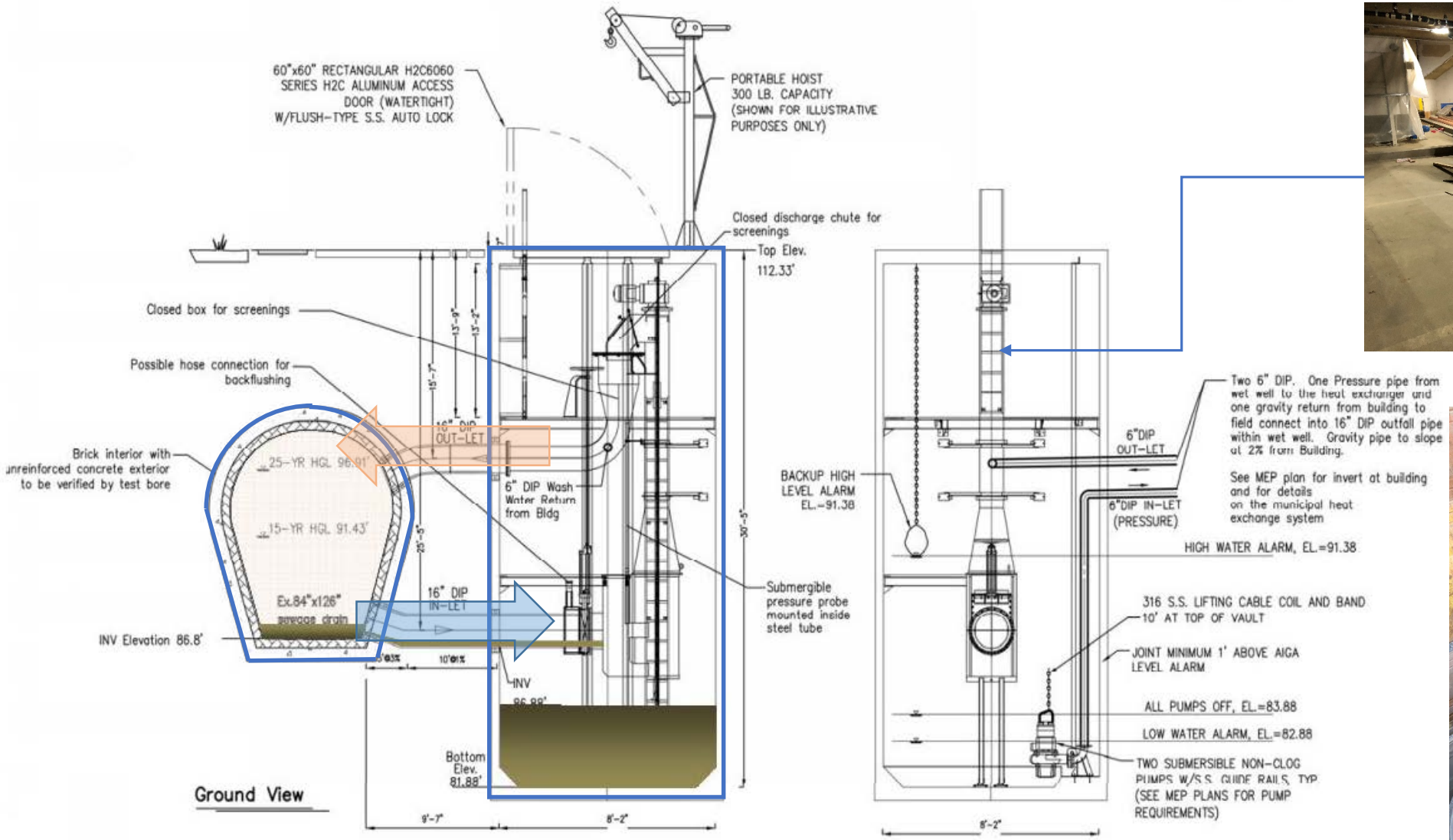


RADIANT CEILING SYSTEM

8’ x 8’ – 150 year old sewer



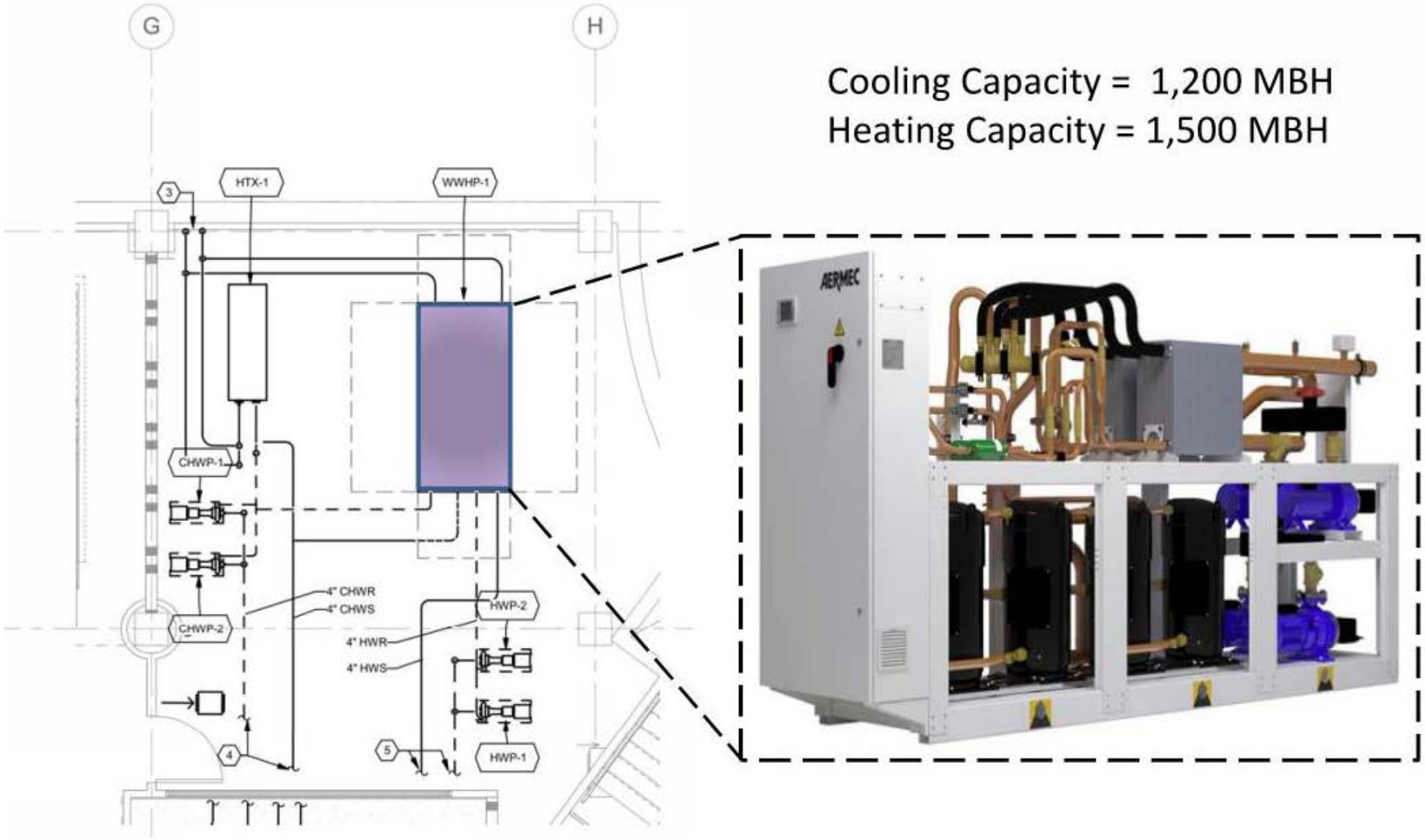
MUNICIPAL HEAT EXCHANGE



Screening Pump

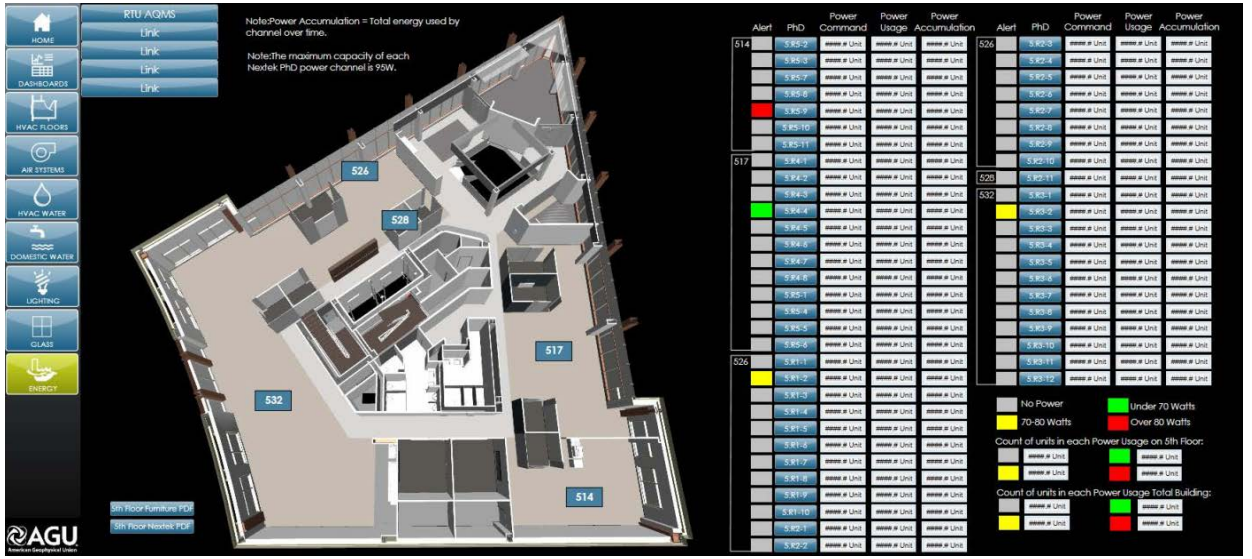
Wet Well & Sewer Connection

MUNICIPAL HEAT EXCHANGE



Cooling Capacity = 1,200 MBH
Heating Capacity = 1,500 MBH

MUNICIPAL HEAT EXCHANGE



INTEGRATED BUILDING TECHNOLOGIES

A 21st CENTURY

HEADQUARTERS


Q&A