



# Woodward Lincoln Campus

**Integrated Design Assistance for  
New Construction and Major Renovation**

# Woodward Lincoln Campus (WLC) - Site Overview



- 101 Acres – Link-N-Greens Golf Course
  - 31 acres transferred to the City of Fort Collins for Poudre River Trail Development
  - Historical Landmarks to be integrated into the design
- Phase 1 – ~303K sq. ft.
  - Industrial Turbomachinery Systems (ITS) - Initial Occupancy Nov. 30, 2015
  - Full Occupancy May 2016
    - 490 Members will move to site
      - Fluid Systems Operations
      - Electronic Controls & Systems Operations
      - Engineering , SG&A and Supporting Staff
- Phase 2 – 60K sq. ft.
  - Full occupancy March 2016
    - Corporate Headquarters
    - 170 Members to move to HQ
- Future Phases:
  - Energy Technology Center
  - Building 2 – West of ITS

# The Team



**Owner's Development Representative**



**Energy & Water Innovation**



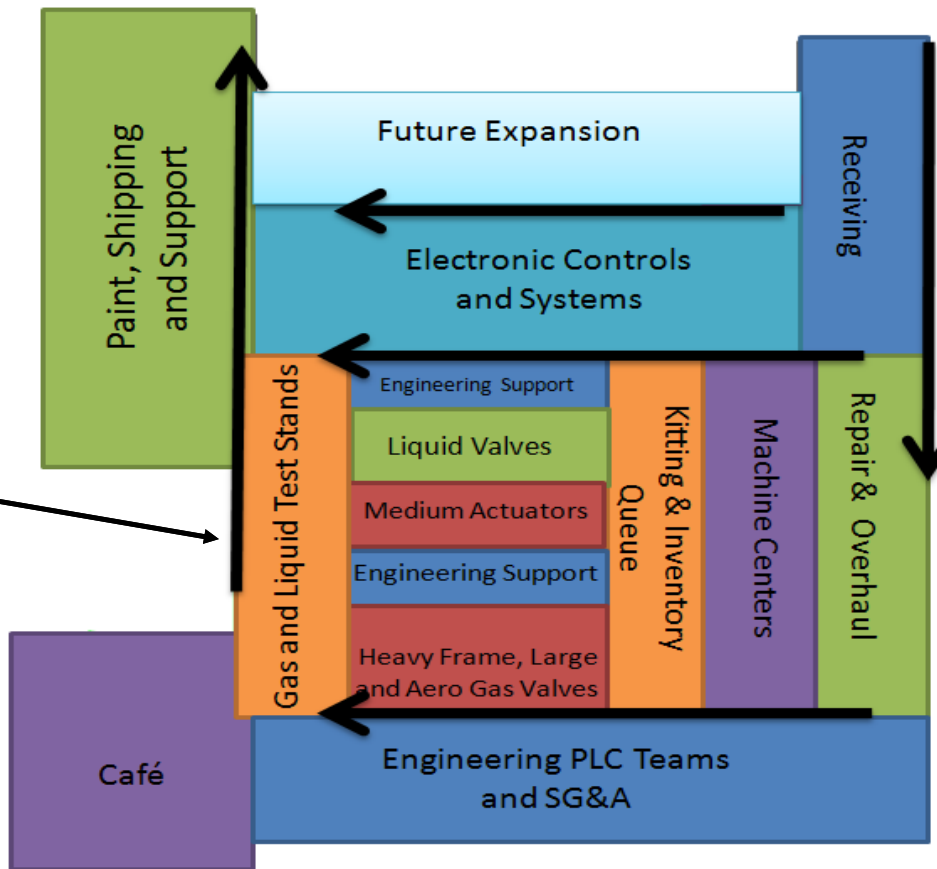
**Architects & Engineers**



**Construction Manager**

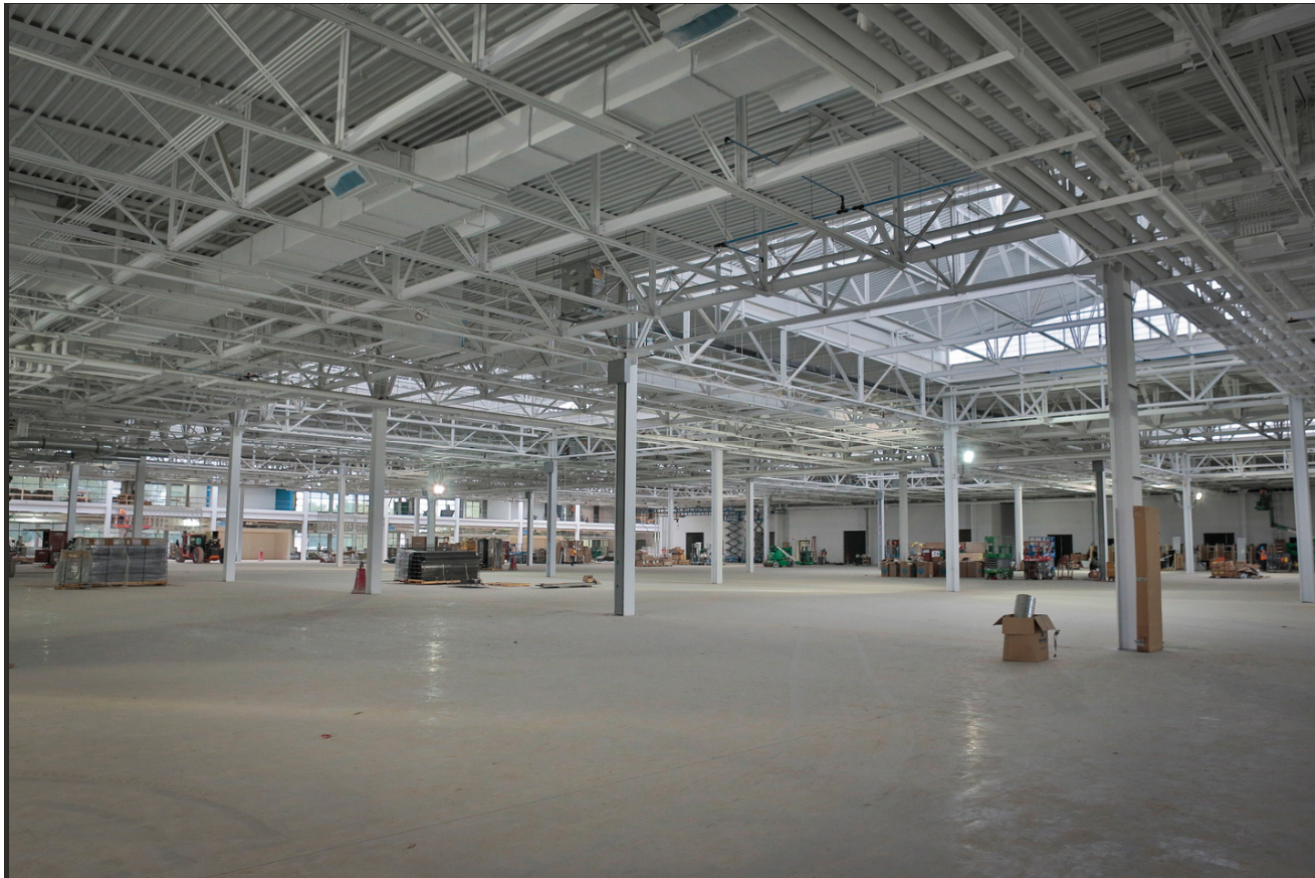
# Operations Value Stream Product Flow

State of the art Gas and Liquid Test Systems are critical design features of the ITS facility

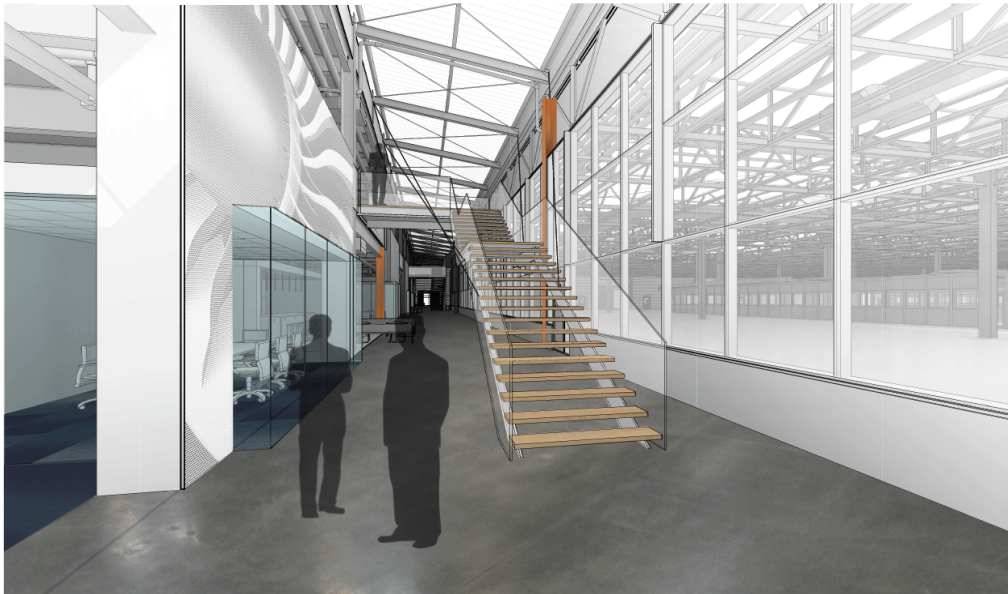




# ITS Operations Open and Flexible Floorplate



# Main Street - Critical Connection to Operations



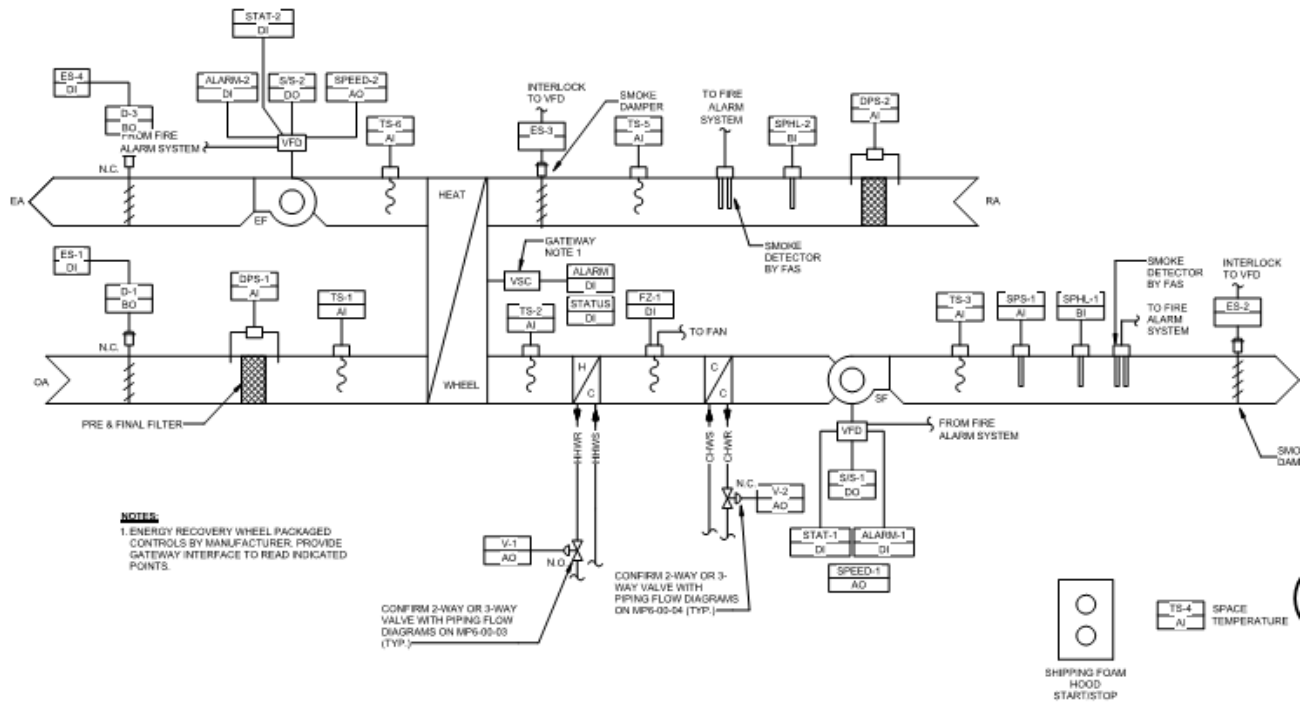
- Seamless connectivity of the IPT members and operations
- Integration of every team member in innovation, design, manufacture and service
- Light and energizing environment in all areas of the ITS facility

Shannon Carravallah  
ITS Mechanical Design Engineer  
Ghafari Associates



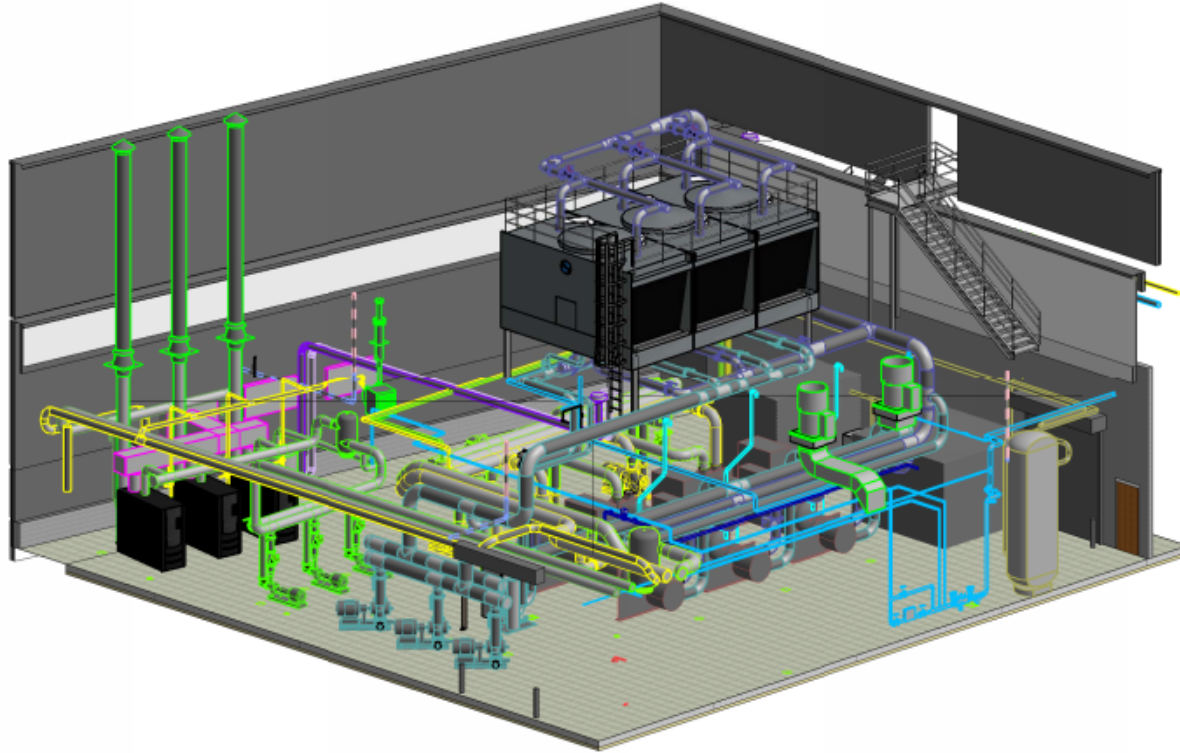
# AIR SIDE & CONTROLS

- Controls & Sequences.
- Pre-design partnership with JCI
- EEI – Commissioning Agent
- Team review and collaboration
- DCV, Energy Wheels, Airside Economizer





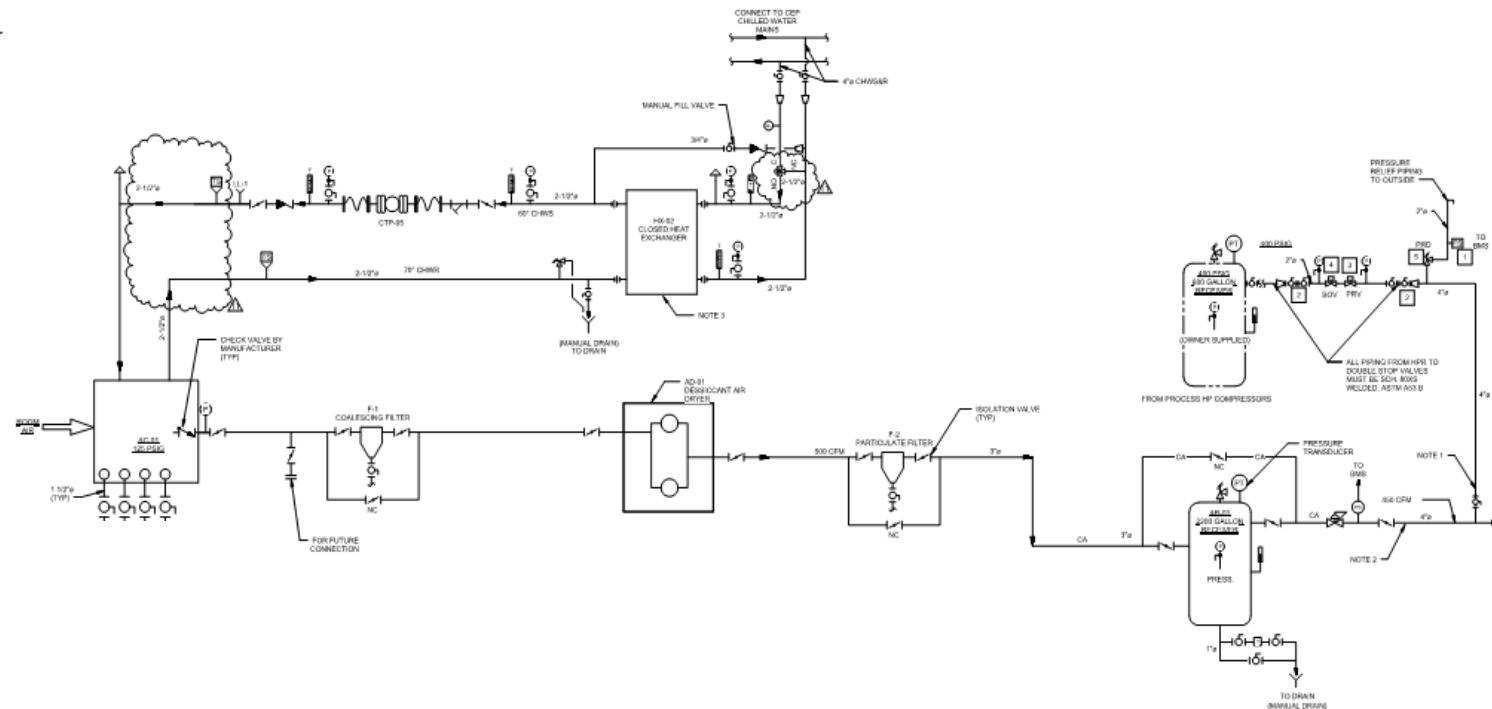
# CENTRAL EQUIPMENT PLANT



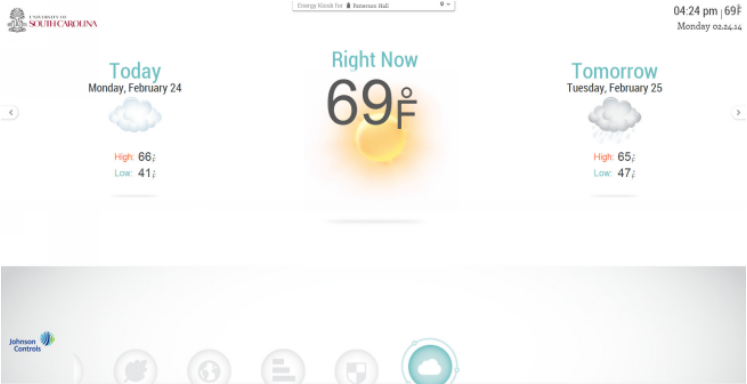
- Condensing Boilers
- Magnetic Bearing Chillers
- Variable Primary
- Shared CHW system: Process & HVAC
- High Efficiency Motors
- Water side economizer (free cooling)

# HOUSE COMPRESSED AIR

- High Pressure Backup
- Modular Aluminum Piping
- Storage
- Variable Primary



# ENERGY MANAGEMENT SYSTEM – GREEN KIOSK



# ENERGY MANAGEMENT SYSTEM – GREEN KIOSK



- Peak demand limiting: Reset AHU discharge air temp, plug control, lighting.
- Display: Impact personnel by visuals.
- Water use (tower water, domestic), power use, gas use, etc.
- What can you do to make a difference?



