

## BASIS OF DESIGN - CORPORATE CENTRAL PLANT EXPANSION

Date: September 2014 Project Name: Central Chiller Plant Expansion-Cleveland, Ohio Project #: 2014-09 Prepared By: Reader Revision date: \_\_\_\_\_

### BUILDING

New Construction  Renovation  Addition Sq. Ft.: \_\_\_\_\_  Infrastructure Expansion No. of floors below grade: \_\_\_\_\_ No. of floors at and above grade: \_\_\_\_\_

### UTILITIES

**Electrical:**  New  Upgrade  Existing **Existing Gas:**  New  Upgrade  Existing **Steam:**  New  Upgrade **Chilled Water:**  New  Upgrade  Existing

**Hot Water:**  New  Upgrade  Existing **Condenser Water:**  New  Upgrade  Existing

**Services from Utility for:**  Electric  Gas  District energy steam  Existing

**Campus Power Plant:**  Electric  Gas  Steam  CHWS  CWS  Hot Water  None

### UTILITY DESIGN PARAMETERS

**Electrical:**  120/1/60  208/3/60  277/3/60  480/3/60  \_\_\_/3/60

**Emergency Power:**  New  Diesel oil  Gas  Existing  None **Gas:**  Design parameters by plumbing engineer

**Steam Pressure:**  Low @ \_\_\_psig  Medium @ \_\_\_psig  High @ \_\_\_psig  High @ \_\_\_psig

**Chilled Water Temperature:**  CHWS @ 42°F  CHWR @ 56°F  CHWS Reset @ 42°F/46°F & CHWR @ 56°F/60°F

**Condenser Water Temperature:**  CWS @ \_\_\_°F  CWR @ \_\_\_°F  CWS Reset @ 85°F/48°F & CWR @ 98°F/62°F

**Hot Water Temperature:**  None  HWS @ 160°F & HWR @ 120°F when 9°F OAT and HWS @ 90°F & HWR 70°F when OAT is 60°F  Fixed HWS @ \_\_\_°F & HWR @ \_\_\_°F

### ASHRAE APPLICATION HANDBOOK

**ASHRAE 2011 Handbook:** Chapter { } **ASHRAE 2012 Handbook:** Chapter { } { } { }

### OWNER MECHANICAL DESIGN PARAMETERS

**Equipment Location:**  On floor being served  In central equipment room(s)  \_\_\_\_\_  In penthouse  Away from building  \_\_\_\_\_

**Maintenance Outside Occupied Space:**  Yes serving primary HVAC equipment  No

**Redundancy:**  For (List Equipment)  N+?  No

**Equipment/System Expansion:**  Increase equipment size by \_\_\_%  No

**Indoor Air Quality at:**  MERV rating of { } and { } for pre-filters MERV rating of { } for final filters

**Acoustic & Vibration Criteria:**  Design parameters by acoustic consultant  None

**Specialty Room(s):**  (List Room)  None

**Occupancy Schedule:**  24-7-365  Occupied/Unoccupied with manual over-ride (List Hours of Occupancy)

### DESIGN CRITERIA

**Outdoor Dry Bulb & Wet Bulb:** \_\_\_°F Heating season \_\_\_°F/\_\_\_°F Cooling season

### ENERGY & ENVIRONMENT CRITERIA

**LEED Certification:**  Yes  No  Other certification (List the Program)

**Annual Operating Budget:**  With energy budget  With organization structure  \_\_\_\_\_

**Refer To The Facility Files For Additional Operation & Maintenance Design Criteria**

### SPECIAL CONDITIONS & REQUIREMENTS

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

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