

BASIS OF DESIGN - NEW K-6 GRADE SCHOOL BUILDING PROJECT

Date: May 2015 Project Name: New Kindergarten Addition in Watford City, North Dakota Project #: 2015-05 Prepared By: Reader Revision date: _____

BUILDING

New Construction Renovation Addition Sq. Ft.: _____ No. of floors below grade: _____ No. of floors at and above grade: _____

UTILITIES

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

Hot 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 None

Condenser Water Temperature: CWS @ 85°F & CWR @ 95°F None

Hot Water Temperature: HWS @ 160°F & HWR @ 120°F when 26°F OAT Off above 60°F Fixed HWS @ 160°F & HWR @ 130°F None

ASHRAE APPLICATION HANDBOOK

ASHRAE 2015 Handbook: Chapter [] **ASHRAE 2012 Handbook:** Chapter [] [] [] []

OWNER MECHANICAL DESIGN PARAMETERS

Equipment Location: On floor being served In central equipment room(s) _____ In penthouse On-Roof Above Ceiling Outside Occupied Space

Maintenance Outside Occupied Space: Yes serving primary HVAC equipment No

Redundancy: For Boiler N+1 N+N No

Equipment/System Expansion: Increase equipment size by 15% No

Indoor Air Quality at: MERV rating of [] 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

DESIGN CRITERIA

Outdoor Dry Bulb & Wet Bulb: ___°F Heating season ___°F/___°F Cooling season

Occupied Space: Occupied 24-7 Period Occupied-Unoccupied Period Warm-Up & Cool Down _____

Set Points: ___°F heating season & ___°F cooling season 60% RH

Mechanical & Electrical Space and Back of the House Area: Occupied period Unoccupied period Warm-up and cool down

Set Points: ___°F heating season & ___°F cooling season 60% RH

ENERGY & ENVIRONMENT CRITERIA

LEED Certification: Yes No Other certification (List the program)

Annual Operating Budget: With energy budget With organization structure Outsource operation & maintenance

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

SPECIAL CONDITIONS & REQUIREMENTS

1. _____
2. _____
3. _____

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