

go back to minimum outside air whenever the space relative humidity exceeds 60% RH. When the economizer is inactive, the mixed air and exhaust air dampers shall be at their normal positions, in order to provide the minimum ventilation requirement. Mixed air reset shall be provided. During unoccupied hours and warm-up mode, the mixed air dampers are positioned for 100 percent recirculation and the relief air damper is closed. The air handling unit supply fan cycles to maintain the set back room temperature and to warm-up building in the morning.

1) Occupied mode outside air control: With the system in the occupied mode the DDC system shall monitor the return air oxygen level through an oxygen sensor. The system shall modulate the position of the outside air and return air dampers in order to bring in an amount of outside air that will maintain a return air oxygen level of acceptable rate (adjustable). The minimum outside air setting shall be xxx liters per second based on a minimum of 60 people at 10 L/s. Should the oxygen sensor located in the gym detect an oxygen level of less than 19.5 % the DDC system shall position the outside air and return air dampers for an outside air flow of xxx liters per second (based on the full load of people in the gym) and provide a DDC/EMCS low space oxygen level alarm. When the space oxygen level rises to 23 % or above the control of the outside air and return air dampers shall again be based on the return air oxygen level.

a. AHU Systems Gym #135 BID OPTION described

AHU-2 in mechanical room #132 shall be a modular type draw thru unit equipped with a hot water heating coil, chilled water cooling coil, packaged humidifier and a combination filter/mixing section. Relief louvered penthouse shall be provided for use of 100 percent outside air ventilation during economizer mode. The mixed air dampers modulate to maintain the mixed temperature set point and the relief air damper modulates to maintain a slightly positive building pressure, in response to the economizer thru the DDC. An intake louver shall be provided on an outside wall per force protection requirements and shall be ducted to the top of the AHU mixing box section. The heating operation shall be capable of supplying the minimum outside air required at a constant discharge temperature and shall be selected with no more than 514.6 fpm (3 meters/second) coil velocity. Minimum outside air shall be relieved thru relief dampers. The AHU-2 shall be a single zone variable air volume system. The VAV air handling unit provides a variable volume of primary air, at a constant temperature, to the air handling system. The speed of the supply fan shall be modulated by a variable frequency drive to maintain a constant pressure in the air distribution system. Discharge air reset shall be provided. (ie. DAT = (55°F) (12.3°C) @ space temperature of (78°F) (25.6°C) and DAT = (105°F) (40.6°C) @ space temperature of (70°F) (21.1°C). The outside air damper shall be modulated by the DDC to track the supply fan and to maintain building at slightly positive pressure. Economizer mode shall be disabled at temperatures above high limit and return to minimum position. Economizer mode shall be disabled and go back to minimum outside air whenever the space relative humidity exceeds 60% RH. An air flow station shall be provided in the outside air duct to the air handling unit filter/mixing section to provide and thru a controller maintain minimum outside air requirements. When the economizer is inactive, the mixed air and relief air dampers shall be at their normal positions, in order to provide the minimum ventilation requirement which is exhausted through the relief. Mixed air reset shall be provided. (ie. MAT = (52°F) (11.1°C) @ space temperature of (78°F) (25.6°C) and MAT = (65°F) (18.3°C) @ space temperature of (70°F) (21.1°C). AHU-2

cooling coil shall also, be provided with dehumidification when space RH exceeds 60% RH by modulating cooling coil fully open & reheating to return to 40% - 60% RH range. During unoccupied hours and warm-up mode, the mixed air dampers are positioned for 100 percent re-circulation and the relief air damper is closed. In order to provide this minimum ventilation air a constant volume supply fan may be provided to maintain constant ventilation air to the VAV air handling unit system in lieu of outside air flow measurement station/controller. The VAV box minimums shall be set to maintain the AHU minimum ventilation rate for a fully occupied facility. During unoccupied hours and warm-up mode, the mixed air dampers shall be positioned for 100 percent re-circulation and the relief air damper is closed. Each temperature control zone is to be served by a VAV terminal unit (this is to include each room identified on the Architectural plans to be air-conditioned and heated) which modulates the quantity of primary air supplied to each room with pressure independent controls, to maintain the temperature set point. When the damper in the VAV terminal unit closes to the minimum position, and the room temperature continues to drop, a control valve on the VAV terminal unit heating coil modulates open to maintain the room temperature set point. During the unoccupied and warm-up modes of operation the VAV terminal unit dampers are at minimum position, and the VAV terminal unit heating valves are open. The air handling unit supply fan cycles to maintain the set back room temperature and to warm-up the room to the occupied heating set point during the warm-up mode of gym operation. Condensate shall be ran to restrooms. Economizer shall be deactivated if space relative humidity drops below 40 percent.

1) Occupied mode outside air control: With the system in the occupied mode the DDC system shall monitor the return air oxygen level through an oxygen sensor. The system shall modulate the position of the outside air and return air dampers in order to bring in an amount of outside air that will maintain a return air oxygen level of acceptable rate (adjustable). The minimum outside air setting shall be xxx liters per second based on a minimum of 60 people at 10 L/s. Should the oxygen sensor located in the gym detect an oxygen level of less than 19.5 % the DDC system shall position the outside air and return air dampers for an outside air flow of xxx liters per second (based on the full load of people in the gym) and provide a DDC/EMCS low space oxygen level alarm. When the space oxygen level rises to 23 % or above the control of the outside air and return air dampers shall again be based on the return air oxygen level."

(3) Section 01332, Page 6, add the following new paragraph and subparagraphs to the section:

"1.6 References

The references listed below form a part of this specification to the extent referenced.

1.6.1 THE CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI)

CSI Masterformat Master List of Section Titles and Numbers

1.6.2 OMAHA DISTRICT CADD STANDARDS MANUAL

a) Omaha District CADD Standards are available at the following internet address:

<ftp://ftp.nwo.usace.army.mil/pub/ED/CADD/ae/standards/>

file: ACADstd.pdf for AutoCAD.

b) Corps of Engineers Civil Standards

<ftp://ftp.nwo.usace.army.mil/pub/ED/CADD/ae/DesBld/file:>

file: civilstd.pdf

1.6.3 WEB SITES

In addition to the web sites listed in this section, Sections 01001 SUMMARY OF WORK through 01008 FIRE PROTECTION list web sites where design criteria references used in this solicitation package may be found.

NOTE: FOR ITEMS (a), (b), AND (c) BELOW, REFERENCES TO RECEIVING APPROVAL FROM OTHER GOVERNMENT AGENCIES FOR ALTERNATIVE DESIGNS ARE NOT APPLICABLE TO THIS PROJECT. THE CONTRACTOR IS THE DESIGNER WHEN READING THESE DOCUMENTS.

ALL ITEMS LISTED BELOW ARE CONSIDERED TO BE A PART OF THE RFP SOLICITATION DOCUMENT (AS APPLICABLE) AND THE RESULTANT CONTRACT.

(a) TECHNICAL MANUALS (TM), TECHNICAL INSTRUCTIONS (TI), AIR FORCE MANUALS (AFM), ENGINEERING TECHNICAL LETTERS (ETL), ARMY ARCHITECTURAL AND ENGINEERING DESIGN CRITERIA (AEI), SUSTAINABLE DESIGN DOCUMENTS, AND MILITARY HANDBOOKS (MIL HNDBK) can be obtained from the National Institute of Building Sciences Construction Criteria Base (CCB) on CD-ROM. Contact the CCB directly at (202) 289-7800 for an order form or obtain an order form at the following internet address:
<http://www.ccb.org/ccbsubscribe/Subsmain.asp>. There is a regular annual subscription fee to CCB of \$700 per year. The CCB is available on CD-ROM or DVD. Selected references are also available for downloading in Acrobat .pdf file format at the following internet address:

<http://www.hnd.usace.army.mil/techinfo>.

Additional web sites are as follows:

(1) TECHNICAL MANUALS, ETL's, ETC.:

www.usace.army.mil/inet/usace-docs

Click on "Information", then the desired publication.

(2) AIR FORCE DESIGN CRITERIA:

<http://afpubs.hq.af.mil>

<http://www.asc.wpafb.af.mil/cpdc/pubs/AF/index.html>

(3) UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS)

This includes UFGS sections referenced, but not provided in the solicitation and other UFGS sections required in developing the project specifications.

Note: UFGS guide specifications are included in a directory labeled "Guides" on the advertised CD_ROM. A listing of available UFGS guides is provided in the "Guides" folder (file: shelf.doc) on the CD-ROM for viewing. In addition, a copy of the current Specsintact software is located under a directory labeled "software" on the advertised CD-ROM (SI3.EXE) or can be downloaded on the CCB referred to paragraph (a) above or may be downloaded at the following internet address:

<http://si.ksc.nasa.gov/specsintact/software/software.htm>

SI Version 3.0 (Version SI3.1.325) or later shall be used. The new unified submittal format shall be selected for file format."

2. This amendment is a part of the proposing papers and its receipt shall be acknowledged on the Standard Form 1442. All other conditions and requirements of the request for proposal remain unchanged. If the proposals have been mailed prior to receiving this amendment, you will notify the office where proposals are received, in the specified manner, immediately of its receipt and of any changes in your proposal occasioned thereby.

a. Hand-Carried Proposals shall be delivered to the U.S. Army Corps of Engineers, Omaha District, Contracting Division (Room 301), 106 South 15th Street, Omaha, Nebraska 68102-1618.

b. Mailed Proposals shall be addressed as noted in Item 8 on Page 00010-1 of Standard Form 1442.

3. Offers will be received until 2:00 p.m., local time at place of receiving proposals, 10 JAN 2002.

Information Survey Drawings: Under folder "Survey" of the advertised CD-ROM, two survey drawings pertaining to the ball fields (G72_C03.dwg and G72_C04.dwg) are given. Two additional drawings can be downloaded for information and site planner's usage (base.dwg and warren.dtm). The first is a site survey of the Physical Fitness Facility site and the second is a Digital Terrain Model file (in Micro Station, requires conversion to AutoCadd for use with AutoCadd Survey).

To download these two drawings, go to:

ftp://155.77.110.11/project/daca45/01r0021

file: base.dwg
file: warren.dtm

U.S. Army Engineer District, Omaha
Corps of Engineers
106 South 15th Street
Omaha, Nebraska 68102-1618

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