



UNIVERSITY  
OF KENTUCKY

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Purchasing Division

Request for Proposal

UK-2353-23

Proposal Due Date – 5/23/2023

Project #2590.1

MDS 5th Floor Early Equipment Release



# UNIVERSITY OF KENTUCKY

## Purchasing Division

### REQUEST FOR PROPOSAL (RFP)

**ATTENTION: This is not an order. Read all instructions, terms and conditions carefully.**

<b>PROPOSAL NO.:</b>	<b>UK-2353-23</b>	<b>RETURN ORIGINAL COPY OF PROPOSAL TO:</b>
<b>Issue Date:</b>	<b>05/02/2023</b>	<b>UNIVERSITY OF KENTUCKY</b>
<b>Title:</b>	<b>MDS 5<sup>th</sup> Floor Early Equipment Release</b>	<b>PURCHASING DIVISION</b>
<b>Purchasing Officer:</b>	<b>Corey W. Leslie</b>	<b>411 S LIMESTONE</b>
<b>Phone:</b>	<b><a href="mailto:cckbidquestions@uky.edu">cckbidquestions@uky.edu</a></b>	<b>ROOM 322 PETERSON SERVICE BLDG.</b>
		<b>LEXINGTON, KY 40506-0005</b>

**IMPORTANT: PROPOSALS MUST BE RECEIVED BY: 5/23/2023 3 P.M. LEXINGTON, KY TIME.**

NOTICE OF REQUIREMENTS

1. The University's General Terms and Conditions and Instructions to Bidders, viewable at <https://purchasing.uky.edu/bid-and-proposal-opportunities>, apply to this RFP. When the RFP includes construction services, the University's General Conditions and Special Conditions for Construction and Instructions to Bidders, viewable at <https://purchasing.uky.edu/bid-and-proposal-opportunities>, apply to the RFP.
2. Contracts resulting from this RFP must be governed by and in accordance with the laws of the Commonwealth of Kentucky.
3. Any agreement or collusion among offerors or prospective offerors, which restrains, tends to restrain, or is reasonably calculated to restrain competition by agreement to bid at a fixed price or to refrain from offering, or otherwise, is prohibited.
4. Any person who violates any provisions of KRS 45A.325 shall be guilty of a felony and shall be punished by a fine of not less than five thousand dollars nor more than ten thousand dollars, or be imprisoned not less than one year nor more than five years, or both such fine and imprisonment. Any firm, corporation, or association who violates any of the provisions of KRS 45A.325 shall, upon conviction, be fined not less than ten thousand dollars or more than twenty thousand dollars.

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing as provided by KRS 523.040:

1. That I am the offeror (if the offeror is an individual), a partner, (if the offeror is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the offeror is a corporation);
2. That the attached proposal has been arrived at by the offeror independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other Contractor of materials, supplies, equipment or services described in the RFP, designed to limit independent bidding or competition;
3. That the contents of the proposal have not been communicated by the offeror or its employees or agents to any person not an employee or agent of the offeror or its surety on any bond furnished with the proposal and will not be communicated to any such person prior to the official closing of the RFP;
4. That the offeror is legally entitled to enter into contracts with the University of Kentucky and is not in violation of any prohibited conflict of interest, including, but not limited to, those prohibited by the provisions of KRS 45A.330 to .340, and 164.390;
5. That the offeror, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sale and use tax imposed by Chapter 139 to the extent required by Kentucky law and will remain registered for the duration of any contract award;
6. That I have fully informed myself regarding the accuracy of the statement made above.

SWORN STATEMENT OF COMPLIANCE WITH CAMPAIGN FINANCE LAWS

In accordance with KRS 45A.110 (2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to a bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

CONTRACTOR REPORT OF PRIOR VIOLATIONS OF KRS CHAPTERS 136, 139, 141, 337, 338, 341 & 342

The contractor by signing and submitting a proposal agrees as required by 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 that have occurred in the previous five (5) years prior to the award of a contract and agrees to remain in continuous compliance with the provisions of the statutes during the duration of any contract that may be established. Final determinations of violations of these statutes must be provided to the University by the successful contractor prior to the award of a contract.

CERTIFICATION OF NON-SEGREGATED FACILITIES

The contractor, by submitting a proposal, certifies that he/she is in compliance with the Code of Federal Regulations, No. 41 CFR 60-1.8(b) that prohibits the maintaining of segregated facilities.

**SIGNATURE REQUIRED:** This proposal cannot be considered valid unless signed and dated by an authorized agent of the offeror. Type or print the signatory's name, title, address, phone number and fax number in the spaces provided. Offers signed by an agent are to be accompanied by evidence of his/her authority unless such evidence has been previously furnished to the issuing office.

<b>DELIVERY TIME:</b>	<b>NAME OF COMPANY:</b>	<b>DUNS #</b>
<b>PROPOSAL FIRM THROUGH:</b>	<b>ADDRESS:</b>	<b>Phone/Fax:</b>
<b>PAYMENT TERMS:</b>	<b>CITY, STATE &amp; ZIP CODE:</b>	<b>E-MAIL:</b>
<b>SHIPPING TERMS: F. O. B. DESTINATION PREPAID AND ALLOWED</b>	<b>TYPED OR PRINTED NAME:</b>	<b>WEB ADDRESS:</b>
<b>FEDERAL EMPLOYER ID NO.:</b>	<b>SIGNATURE:</b>	<b>DATE:</b>

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## 1.0 DEFINITIONS

The term "addenda" means written or graphic instructions issued by the University of Kentucky prior to the receipt of proposals that modify or interpret the RFP documents by additions, deletions, clarifications and/or corrections.

The term "competitive negotiations" means the method authorized in the Kentucky Revised Statutes, Chapter 45A.085.

The terms "offer" or "proposal" mean the offeror's/offers' response to this RFP.

The term "offeror" means the entity or contractor group submitting the proposal.

The term "contractor" means the entity receiving a contract award.

The term "purchasing agency" means the University of Kentucky, Purchasing Division, Room 322 Peterson Service Building, Lexington, KY 40506-0005.

The term "purchasing official" means the University of Kentucky's appointed contracting representative.

The term "responsible offeror" means a person, company or corporation that has the capability in all respects to perform fully the contract requirements and the integrity and reliability that will assure good faith performance. In determining whether an offeror is responsible, the University may evaluate various factors including (but not limited to): financial resources; experience; organization; technical qualifications; available resources; record of performance; integrity; judgment; ability to perform successfully under the terms and conditions of the contract; adversarial relationship between the offeror and the University that is so serious and compelling that it may negatively impact the work performed under this RFP; or any other cause determined to be so serious and compelling as to affect the responsibility of the offeror.

The term "solicitation" means RFP.

The term "University" means University of Kentucky.

## **2.0 GENERAL OVERVIEW**

### **2.1 Intent and Scope**

This RFP has been issued to obtain pricing for two Air Handling Units for the MDS 5<sup>th</sup> Floor renovation project. Please refer to attached drawings and specifications for additional details and requirements for this equipment.

The scope includes supplying the listed equipment, delivering it to the site where it will be turned over to the General Contractor and their mechanical contractor who will be determined in a future bid package. This package includes the warranty and start-up services. The installation shall be by others in a future bid package.

Provide full submittal documentation prior to releasing the order. Provide a single point of contact during the warranty period for all repairs. This person shall be responsible for determining that all repairs are completed to the satisfaction of the Owner and the associated design team.

### **2.2 Background Information**

Current air handlers in the Multidisciplinary Science Building (MDS) at 725 Rose Street need to be replaced. These units are original to the building, constructed in 1983, and both units are beyond the manufacturer's suggested useful life. New construction in the building as well as the assumed increase in the number of students and faculty visiting the building are driving the need for replacements and upgrades to support additional services.

### **2.3 University Information**

Since his arrival, President Eli Capilouto has set forth an ambitious agenda to extend and enhance our role as Kentucky's land-grant and flagship research university. By focusing on infrastructure growth and improvement; creating opportunities for innovative teaching, learning, and academic excellence; fostering a robust research and creative scholarship enterprise; providing life-saving subspecialty care; empowering communities through service and outreach; and encouraging a transparent and shared dialogue about institutional priorities; the University of Kentucky will ensure a new century of promise for the people we impact.

Founded in 1865 as a land-grant institution adjacent to downtown Lexington, UK is nestled in the scenic heart of the beautiful Bluegrass Region of Kentucky. From its early beginnings, with only 190 students and 10 professors, UK's campus now covers more than 918 acres and is home to more than 30,000 students and approximately 14,500 employees, including more than 2,300 full-time faculty. UK is one of a small number of universities in the United States that has programs in agriculture, engineering, a full complement of health colleges including medicine and pharmacy, law and fine arts on a single campus, leading to groundbreaking discoveries and unique interdisciplinary collaboration. The state's flagship university consists of 17 academic and professional colleges where students can choose from more than 200 majors and degree programs at the undergraduate and graduate levels. The colleges are Agriculture, Food and Environment; Arts and Sciences; Business and Economics; Communication and Information; Dentistry; Design; Education; Engineering; Fine Arts; Graduate School; Health Sciences; Law; Medicine; Nursing;

Pharmacy; Public Health; and Social Work. These colleges are supported by a modern research library system.

Research at the University of Kentucky is a dynamic enterprise encompassing both traditional scholarship and emerging technologies, and UK's research faculty, staff and students are establishing UK as one of the nation's most prolific public research universities. UK's research enterprise attracted \$285 million in research grants and contracts from out-of-state sources, which generated a \$580 million impact on the Kentucky economy. Included in this portfolio is \$153 million in federal awards from the National Institutes of Health, non-NIH grants from the Department Health and Human Services, the National Science Foundation, Department of Energy, Department of Agriculture and NASA, among others. The National Science Foundation ranks UK's research enterprise 44th among public institutions.

With more than 50 research centers and institutes, UK researchers are discovering new knowledge, providing a rich training ground for current students and the next generation of researchers, and advancing the economic growth of the Commonwealth of Kentucky. Several centers excel in the services offered to the public. The Gluck Equine Research Center is one of only three facilities of its kind in the world, conducting research in equine diseases.

The Center for Applied Energy Research is pursuing groundbreaking discovery across the energy disciplines. CAER staff are pioneering new ways to sustainably utilize Kentucky natural resources through carbon-capture algae technology, biomass/coal to liquid products and the opening of UK's first LEED-certified research lab to support the development of Kentucky's growing alternative energy industry. Among the brightest examples of UK's investment in transformative research is the Markey Cancer Center. As a center of excellence and distinction at UK, Markey's robust research and clinical enterprise is the cornerstone of our commitment to Kentucky – fundamental to our success in uplifting lives through our endeavors and improving the general health and welfare of our state – burdened by the nation's highest rate of cancer deaths per 100,000 people. In 2013, Markey earned the prestigious National Cancer Institute-designation (NCI) – one of 68 nationally and the only one in Kentucky.

The University of Kentucky was awarded a \$20 million Clinical Translational Sciences Award (CTSA) from the National Institutes of Health (NIH). As one of only 60 institutions with this research distinction, UK was awarded the CTSA for its potential in moving research and discovery in the lab into practical field and community applications. The CTSA and NCI are part of a trifecta of federal research grants that includes an Alzheimer's Disease Center. UK is one of only 22 universities in the country to hold all three premier grants from NIH.

Established in 1957, the medical center at UK is one of the nation's finest academic medical centers and includes the University's clinical enterprise, UK HealthCare. The 569-bed UK Albert B. Chandler Hospital and Kentucky Children's Hospital, along with 256 beds at UK Good Samaritan Hospital, are supported by a growing faculty and staff providing the most advanced subspecialty care for the most critically injured and ill patients throughout the Commonwealth and beyond. Over the last several years, the number of patients served by the medical enterprise has increased from roughly 19,000 discharges to more than 36,000 discharges in 2014.

UK Chandler Hospital includes the only Level 1 Trauma Center for both adult and pediatric patients in Central and Eastern Kentucky. In addition, UK HealthCare recently opened one of the country's largest robotic hybrid operating rooms and the first of its kind in the region. While our new patient care pavilion is the leading healthcare facility for advanced medical procedures in the region, our talented physicians consult with and travel to our network of affiliate hospitals so Kentucky citizens



can receive the best health care available close to their home and never need to leave the Bluegrass for complex subspecialty care.

King's Daughters Medical Center based in Ashland Kentucky officially became part of the University of Kentucky. King's Daughters Medical Center serves a 16-county region across Kentucky, Ohio, and West Virginia. Its health system is comprised of two acute-care hospitals totaling 465 licensed beds, more than 50 ambulatory centers and practice locations, a long-term care facility, medical transport company, and six urgent care centers.

UK's agenda remains committed to accelerating the University's movement toward academic excellence in all areas and gain worldwide recognition for its outstanding academic programs, its commitment to students, its investment in pioneering research and discovery, its success in building a diverse community and its engagement with the larger society. It is all part of the University's fulfillment of our promise to Kentucky to position our state as a leader in American prosperity.

### **SUSTAINABILITY**

Sustainability is an institution-wide priority for the University of Kentucky. We strive to ensure that all activities are ecologically sound, socially just, and economically viable, and that they will continue to be so for future generations. This commitment also prioritizes the integration of these principles in curricula, research, athletics, health care, creative works, and outreach. This principled approach to operational practices and intellectual pursuits is intended to prepare students and empower the campus community to support sustainable development in the Commonwealth and beyond. The UK Sustainability Strategic Plan guides these efforts (<https://www.uky.edu/sustainability/sustainability-strategic-plan>).

## **2.4 Supplier Diversity and Procurement**

The University of Kentucky is committed to serve as an advocate for diverse businesses in their efforts to conduct business. Diverse Business Enterprises (DBE) consist of minority, women, disabled, veteran and disabled veteran owned business firms that are at least fifty-one percent owned and operated by an individual(s) of the aforementioned categories. Also included in this category are disabled business enterprises and non-profit work centers for the blind and severely disabled.

The University is committed to increasing the amount of goods and services acquired from businesses owned and controlled by diverse persons to 10% of all procurement expenditures. The University expects its suppliers to support and assist in this effort.

Among the University's goals for DBE participation in procurement are:

- To ensure the absence of barriers that reduce the participation of diverse suppliers
- Educate vendors on "how to" do business with the University
- Support diverse vendors seeking to do business with the University in the areas of goods, services, construction, and other areas of procurement
- Encourage participation of qualified diverse vendors by directing them to agencies that can benefit from their product or service
- Provide resources for diverse vendors
- Sponsor events to assist diverse vendors in becoming active, responsible, and responsive participants in the University's purchasing opportunities

For additional information regarding how diverse suppliers may participate in this Request for Proposal, submit any questions to the Purchasing Officer as indicated in Section 3.2 by the Deadline for Written Questions date.

### 3.0 PROPOSAL REQUIREMENTS

#### 3.1 Key Event Dates

Release of RFP	5/2/23
Pre-Proposal Conference (Voluntary)	10:00 AM EST 05/08/2023 via Zoom <a href="https://uky.zoom.us/j/83993844660">https://uky.zoom.us/j/83993844660</a> Meeting ID 839 9384 4660
Deadline for Written Questions	3:00 PM EST 5/10/23
Final Addendum	On or around 5/16/23
RFP Proposals Due	3:00 PM EST 5/23/23

#### 3.2 Offeror Communication

To ensure that RFP documentation and subsequent information (modifications, clarifications, addenda, Written Questions and Answers, etc.) are directed to the appropriate persons within the offeror's firm, each offeror who intends to participate in this RFP is to provide the following information to the purchasing officer. Prompt, thorough compliance is in the best interest of the offeror. Failure to comply may result in incomplete or delayed communication of addenda or other vital information. Contact information is the responsibility of the offeror. Without the prompt information, any communication shortfall shall reside with the offeror.

- Name of primary contact
- Mailing address of primary contact
- Telephone number of primary contact
- Fax number of primary contact
- E-mail address of primary contact
- Additional contact persons with same information provided as primary contact.

This information shall be transmitted via fax or e-mail to:

Corey W. Leslie  
Purchasing Division  
University of Kentucky  
322 Peterson Service Building  
Lexington, KY 40506-0005  
Phone: (859) 257-5405  
Fax: (859) 257-1951  
E-mail: cckbidquestions@uky.edu

All communication with the University regarding this RFP shall only be directed to the purchasing officer listed above.

### **3.3 Pre-Proposal Conference**

A pre-proposal conference will be held via Zoom on 05/08/2023 at 10:00AM EST to allow prospective contractors an opportunity to ask questions and clarify the University's expectations. This conference provides offerors an opportunity for questions. Meeting Link:

<https://uky.zoom.us/j/83993844660/>

Meeting ID: 839 9384 4660

The following items should be noted in reference to the pre-proposal conference:

- Attendance at the pre-proposal conference is optional. At this conference, the scope of services will be discussed in detail.
- Offerors are encouraged to submit written questions after the conference by the date listed in Section 3.1.

The University will prepare written responses to all questions submitted and make them available to all offerors. The questions and answers will be made part of the RFP and may become part of the contract with the successful contractor. Answers given orally at the conference are not binding.

### **3.4 Offeror Presentations**

All offerors whose proposals are judged acceptable for award may be required to make a presentation to the evaluation committee.

### **3.5 Preparation of Offers**

The offeror is expected to follow all specifications, terms, conditions and instructions in this RFP.

The offeror will furnish all information required by this solicitation.

Proposals should be prepared simply and economically, providing a description of the offeror's capabilities to satisfy the requirements of the solicitation. Emphasis should be on completeness and clarity of content. All documentation submitted with the proposal should be bound in the single volume except as otherwise specified.

An electronic version of the RFP, in .PDF format only, is available through the University of Kentucky Purchasing Division website at: <https://purchasing.uky.edu/bid-and-proposal-opportunities>.

### 3.6 **Proposed Deviations from the RFP**

The stated requirements appearing elsewhere in this RFP shall become a part of the terms and conditions of any resulting contract. Any deviations therefrom must be specifically defined in accordance with the transmittal letter, Section 4.3 (d). If accepted by the University, the deviations shall become part of the contract, but such deviations must not be in conflict with the basic nature of this RFP.

Note: Offerors shall not submit their standard terms and conditions as exceptions to the University's General Terms and Conditions. Each exception to the University's General Terms and Conditions shall be individually addressed.

### 3.7 **Proposal Submission and Deadline**

Offeror must provide the following materials prior to 3 p.m. (Lexington, KY time) on the date specified in Section 3.1 and addressed to the purchasing officer listed in Section 3.2:

- **Technical Proposal:** One (1) copy on electronic storage device (USB) clearly marked with the proposal number and name, firm name and what is included (Technical Proposal)  
One (1) printed original, and one (1) hard copy.
- **Financial Proposal:** One (1) copy on electronic storage device (USB) clearly marked with the proposal number and name, firm name and what is included (Financial Proposal)  
One (1) printed original, and one (1) hard copy.

Offerors should mark which printed proposals are original and which are the copies.

**Note: Proposals received after the closing date and time will not be considered. In addition, proposals received via fax or e-mail are not acceptable.**

**The University of Kentucky accepts deliveries of RFPs Monday through Friday from 8 a.m. to 5 p.m. Lexington, KY time. However, RFPs must be received by 3 p.m. Lexington, KY time on the date specified on the RFP in order to be considered.**

Proposals shall be enclosed in sealed envelopes to the above referenced address and shall show on the face of the envelope: the closing time and date specified, the solicitation number and the name and address of the offeror. The technical proposal shall be submitted in a sealed envelope and the financial proposal shall be submitted in a sealed envelope under separate cover. Both sealed envelopes shall have identical information on the cover, with the addition that one will state "Technical Information," and the other, "Financial Proposal."

Note: In accordance with the Kentucky Revised Statute 45A.085, there will be no public opening.

### **3.8 Modification or Withdrawal of Offer**

An offer and/or modification of an offer received at the office designated in the solicitation after the exact hour and date specified for receipt will not be considered.

An offer may be modified or withdrawn by written notice before the exact hour and date specified for receipt of offers. An offer also may be withdrawn in person by an offeror or an authorized representative, provided the identity of the person is made known and the person signs a receipt for the offer, but only if the withdrawal is made prior to the exact hour and date set for receipt of offers.

### **3.9 Acceptance or Rejection and Award of Proposal**

The University reserves the right to accept or reject any or all proposals (or parts of proposals), to waive any informalities or technicalities, to clarify any ambiguities in proposals and (unless otherwise specified) to accept any item in the proposal. In case of error in extension or prices or other errors in calculation, the unit price shall govern. Further, the University reserves the right to make a single award, split awards, multiple awards or no award, whichever is in the best interest of the University.

### **3.10 Rejection**

Grounds for the rejection of proposals include (but shall not be limited to):

- Failure of a proposal to conform to the essential requirements of the RFP.
- Imposition of conditions that would significantly modify the terms and conditions of the solicitation or limit the offeror's liability to the University on the contract awarded on the basis of such solicitation.
- Failure of the offeror to sign the University RFP. This includes the Authentication of Proposal and Statement of Non-Collusion and Non-Conflict of Interest statements.
- Receipt of proposal after the closing date and time specified in the RFP.

### **3.11 Addenda**

Any addenda or instructions issued by the purchasing agency prior to the time for receiving proposals shall become a part of this RFP. Such addenda shall be acknowledged in the proposal. No instructions or changes shall be binding unless documented by a proper and duly issued addendum.

**3.12 Disclosure of Offeror's Response**

The RFP specifies the format, required information and general content of proposals submitted in response to this RFP. The purchasing agency will not disclose any portions of the proposals prior to contract award to anyone outside the Purchasing Division, the University's administrative staff, representatives of the state or federal government (if required) and the members of the committee evaluating the proposals. After a contract is awarded in whole or in part, the University shall have the right to duplicate, use or disclose all proposal data submitted by offerors in response to this RFP as a matter of public record.

Any submitted proposal shall remain valid six (6) months after the proposal due date.

The University shall have the right to use all system ideas, or adaptations of those ideas, contained in any proposal received in response to this RFP. Selection or rejection of the proposal will not affect this right.

**3.13 Restrictions on Communications with University Staff**

From the issue date of this RFP until a contractor is selected and a contract award is made, offerors are not allowed to communicate about the subject of the RFP with any University administrator, faculty, staff or members of the board of trustees except: the purchasing office representative, any University purchasing official representing the University administration, others authorized in writing by the purchasing office and University representatives during offeror presentations. If violation of this provision occurs, the University reserves the right to reject the offeror's proposal.

**3.14 Cost of Preparing Proposal**

Costs for developing the proposals and any subsequent activities prior to contract award are solely the responsibility of the offerors. The University will provide no reimbursement for such costs.

**3.15 Disposition of Proposals**

All proposals become the property of the University. The successful proposal will be incorporated into the resulting contract by reference.

**3.16 Alternate Proposals**

Offerors may submit alternate proposals. If more than one proposal is submitted, all must be complete (separate) and comply with the instructions set forth within this document. Each proposal will be evaluated on its own merits.

**3.17 Questions**

All questions should be submitted by either fax or e-mail to the purchasing officer listed in Section 3.2 no later than the date listed in Section 3.1.

**3.18 Section Titles in the RFP**

Section titles used herein are for the purpose of facilitating ease of reference only and shall not be construed to infer the construction of contractual language.

**3.19 No Contingent Fees**

No person or selling agency shall be employed or retained or given anything of monetary value to solicit or secure this contract, except bona fide employees of the offeror or bona fide established commercial or selling agencies maintained by the offeror for the purpose of securing business. For breach or violation of this provision, the University shall have the right to reject the proposal, annul the contract without liability, or, at its discretion, deduct from the contract price or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee or other benefit.

**3.20 Proposal Addenda and Rules for Withdrawal**

Prior to the date specified for receipt of offers, a submitted proposal may be withdrawn by submitting a written request for its withdrawal to the University purchasing office, signed by the offeror. Unless requested by the University, the University will not accept revisions or alterations to proposals after the proposal due date.

**3.21 Requirement To Perform Vendor Onboarding and Registration**

As a condition of award, and for any renewals performed during the life of the contract, successful Contractor agrees to register their company with PaymentWorks, Inc., the University's vendor onboarding application. Registration information will be provided by the Purchasing Division as part of the award process. During the vendor registration process, successful Contractor agrees to provide any applicable information pertaining to diversity demographics for their company. Further, should any company or diversity information change during the life of the contract, successful Contractor agrees to update this information in PaymentWorks as applicable.



## 4.0 PROPOSAL FORMAT AND CONTENT

### 4.1 **Proposal Information and Criteria**

The following list specifies the items to be addressed in the proposal. Offerors should read it carefully and address it completely, and in the order listed, to facilitate the University's review of the proposal.

Proposals shall be organized into the sections identified below. The content of each section is detailed in the following pages. It is strongly suggested that offerors use the same numbers for the following content that are used in the RFP.

- Signed Authentication of Proposal and Statement of Non-Collusion and Non-Conflict of Interest Form
- Transmittal Letter
- Executive Summary and Proposal Overview
- Criteria 1 - Offeror Qualifications
- Criteria 2 - Services Defined
- Criteria 3 - Financial Proposal
- Criteria 4 - Evidence of Successful Performance and Implementation Schedule
- Criteria 5 - Other Additional Information

### 4.2 **Signed Authentication of Proposal and Statements of Non-Collusion and Non-Conflict of Interest Form**

The Offeror will sign and return the proposal cover sheet and print or type their name, firm, address, telephone number and date. The person signing the offer must initial erasures or other changes. An offer signed by an agent is to be accompanied by evidence of their authority unless such evidence has been previously furnished to the purchasing agency. The signer shall further certify that the proposal is made without collusion with any other person, persons, company, or parties submitting a proposal; that it is in all respects fair and in good faith without collusion or fraud; and that the signer is authorized to bind the principal offeror.

### 4.3 **Transmittal Letter**

The Transmittal Letter accompanying the RFP shall be in the form of a standard business letter and shall be signed by an individual authorized to legally bind the offeror. It shall include:

- A statement referencing all addenda and written questions, the answers and any clarifications to this RFP issued by the University and received by the offeror (If no addenda have been received, a statement to that effect should be included.).
- A statement that the offeror's proposal shall remain valid for six (6) months after the closing date of the receipt of the proposals.
- A statement that the offeror will accept financial responsibility for all travel expenses incurred for oral presentations (if required) and candidate interviews.

- A statement that summarizes any deviations or exceptions to the RFP requirements and includes a detailed justification for the deviation or exception.
- A statement that identifies the confidential information as described in Section 6.23.

#### 4.4 **Executive Summary and Proposal Overview**

The Executive Summary and Proposal Overview shall condense and highlight the contents of the technical proposal in such a way as to provide the evaluation committee with a broad understanding of the entire proposal.

As part of the Executive Summary and Proposal Overview, Offeror shall submit with their response a summarized profile describing the demographic nature of their company or organization:

1. When was your organization established and/or incorporated?
2. Indicate whether your organization is classified as local, regional, national, or international.
3. Describe the size of your company in terms of number of employees, gross sales, etc.
4. Is your company certified as small business, minority-owned, women-owned, veteran-owned, disabled-owned, or similar classification?
5. Include other demographic information that you feel may be applicable to the Request for Proposal submission.
6. Offeror shall describe in detail their company's commitment to diversity, equity, and inclusion. Information shall be provided as to the number of diverse individuals that the vendor employees as well as a description of vendors efforts to do business with Diverse Business Enterprises as they conduct their own business. In additional, please indicate the diversity nature of your company as well as ownership race/ethnicity.

<b>Check One Only</b>	<b>Diverse Business Description (If Diverse Business, determine the classification that is the best description)</b>	<b>Internal Code</b>
	Minority Owned (only)	10
	Veteran Owned and Small Business	100
	Minority and Woman and Small Business	110
	Minority and Woman and Veteran-Owned Business	120
	Minority and Veteran and Small Business	130
	Woman and Veteran and Small Business	140
	Minority and Woman and Veteran-Owned Small Business	150
	Woman Owned (only)	20
	Small Business (only)	30
	Veteran Owned (only)	40
	Minority and Woman Owned	50
	Minority and Small Business	60
	Minority and Veteran-Owned	70
	Woman Owned and Small Business	80

Woman and Veteran-Owned	90
Diversity not indicated	999

Race/Ethnicity	Check One
Asian	
Black/African American	
Hispanic or Latino	
Native American	
Native Hawaiian/Pacific Islander	
White	
Other	

**4.5 Criteria 1 - Offeror Qualifications**

The purpose of the Offeror Qualifications section is to determine the ability of the offeror to respond to this RFP. Offerors must describe and offer evidence of their ability to meet each of the qualifications listed below.

Our supply chains and business partnerships are an important aspect of this work. In your proposal, please (A) provide your company’s mission and vision relative to sustainability, and (B) how your company, through services, products, and partnerships, will help the University of Kentucky advance specific elements of the Sustainability Strategic Plan.

**4.6 Criteria 2 – Services Defined**

1. The Offerer’s ability to provide each of the services required listed in Section 7.1 as well as the project Drawings and Specifications.
2. The Offerer’s ability to provide Warranty repair information and services in a timely manner.

**4.7 Criteria 3 – Financial Proposal**

The Financial Summary Form shall contain the complete financial offer made to the University using the format contained in Section 8.0. All financial information must be submitted in a sealed envelope under separate cover.

**4.8 Criteria 4 – Evidence of Successful Performance and Implementation Schedule**

1. Provide production and delivery schedule to the Site for the equipment specified.
2. Provide evidence of successful experience performing the work requested on previous projects at the University or with similar institutions.

#### **4.9 Criteria 5 – Other Additional Information**

The offeror may present any creative approaches that might be appropriate. This applies to equipment delivery and how the manufacturer will deal with supply chain logistics that may prevent certain components from being delivered to the factory on time. The offeror may also provide supporting documentation that would be pertinent to this RFP.

Offeror shall describe in detail their company's commitment to diversity, equity, and inclusion. Information shall be provided as to the number of diverse individuals that the vendor employees as well as a description of vendors efforts to do business with Diverse Business Enterprises as they conduct their own business.

## 5.0 EVALUATION CRITERIA PROCESS

A committee of University officials appointed by the Chief Procurement Officer will evaluate proposals and make a recommendation to the Chief Procurement Officer. The evaluation will be based upon the information provided in the proposal, additional information requested by the University for clarification, information obtained from references and independent sources and oral presentations (if requested).

The evaluation of responsive proposals shall then be completed by an evaluation team, which will determine the ranking of proposals. Proposals will be evaluated strictly in accordance with the requirements set forth in this solicitation, including any addenda that are issued. The University will award the contract to the responsible offeror whose proposal is determined to be the most advantageous to the University, taking into consideration the evaluation factors set forth in this RFP.

The evaluation of proposals will include consideration of responses to the list of criteria in Section 4.0. Offerors must specifically address all criteria in their response. Any deviations or exceptions to the specifications or requirements must be described and justified in a transmittal letter. Failure to list such exceptions or deviations in the transmittal letter may be considered sufficient reason to reject the proposal.

The relative importance of the criteria is defined below:

### **Primary Criteria**

- Offeror Qualifications
- Services Defined
- Financial Proposal
- Evidence of Successful Performance and Implementation

### **Secondary Criteria**

- Other Additional Services

The University will evaluate proposals as submitted and may not notify offerors of deficiencies in their responses.

Proposals must contain responses to each of the criteria, listed in Section 4 even if the offeror's response cannot satisfy those criteria. A proposal may be rejected if it is conditional or incomplete in the judgment of the University.

## **6.0 SPECIAL CONDITIONS**

### **6.1 Purchase Order**

A Purchase Order will be issued to the successful Offeror of this RFP for the specified equipment.

### **6.2 Effective Date**

The effective date shall be the date the selected vendor receives the Purchase Order.

### **6.3 Competitive Negotiation**

It is the intent of the RFP to enter into competitive negotiation as authorized by KRS 45A.085.

The University will review all proposals properly submitted. However, the University reserves the right to request necessary modifications, reject all proposals, reject any proposal that does not meet mandatory requirement(s) or cancel this RFP, according to the best interests of the University.

Offeror(s) selected to participate in negotiations may be given an opportunity to submit a Best and Final Offer to the purchasing agency. All information received prior to the cut-off time will be considered part of the offeror's Best and Final Offer.

The University also reserves the right to waive minor technicalities or irregularities in proposals providing such action is in the best interest of the University. Such a waiver shall in no way modify the RFP requirements or excuse the offeror from full compliance with the RFP specifications and other contract requirements if the offeror is awarded the contract.

### **6.4 Appearance Before Committee**

Any, all, or no offerors may be requested to appear before the evaluation committee to explain their proposal and/or to respond to questions from the committee concerning the proposal. Offerors are prohibited from electronically recording these meetings. The committee reserves the right to request additional information.

### **6.5 Additions, Deletions or Contract Changes**

The University reserves the right to add, delete, or change related items or services to the contract established from this RFP. No modification or change of any provision in the resulting contract shall be made unless such modification is mutually agreed to in writing by the contractor and the Chief Procurement Officer and incorporated as a written modification to the contract. Memoranda of understanding and correspondence shall not be interpreted as a modification to the contract.

### **6.6 Contractor Cooperation in Related Efforts**

The University reserves the right to undertake or award other contracts for additional or related work to other entities. The contractor shall fully cooperate with such other contractors and University employees and carefully fit its work to such additional work. The contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by University employees. This clause shall be included in the contracts of all contractors with whom this contractor will be required to cooperate. The University shall equitably enforce this clause on all contractors to prevent the imposition of unreasonable burdens on any contractor.

**6.7 Entire Agreement**

The RFP shall be incorporated into any resulting contract. The resulting contract, including the RFP and those portions of the offeror's response accepted by the University, shall be the entire agreement between the parties.

**6.8 Governing Law**

The contractor shall conform to and observe all laws, ordinances, rules and regulations of the United States of America, Commonwealth of Kentucky and all other local governments, public authorities, boards, or offices relating to the property or the improvements upon same (or the use thereof) and will not permit the same to be used for any illegal or immoral purposes, business or occupation. The resulting contract shall be governed by Kentucky law and any claim relating to this contract shall only be brought in the Franklin Circuit Court in accordance with KRS 45A.245.

**6.9 Kentucky's Personal Information Security and Breach Investigation Procedures and Practices Act**

To the extent Company receives Personal Information as defined by and in accordance with Kentucky's Personal Information Security and Breach Investigation Procedures and Practices Act, KRS 61.931, 61.932 and 61.933 (the "Act"), Company shall secure and protect the Personal Information by, without limitation: (i) complying with all requirements applicable to non-affiliated third parties set forth in the Act; (ii) utilizing security and breach investigation procedures that are appropriate to the nature of the Personal Information disclosed, at least as stringent as University's and reasonably designed to protect the Personal Information from unauthorized access, use, modification, disclosure, manipulation, or destruction; (iii) notifying University of a security breach relating to Personal Information in the possession of Company or its agents or subcontractors within seventy-two (72) hours of discovery of an actual or suspected breach unless the exception set forth in KRS 61.932(2)(b)2 applies and Company abides by the requirements set forth in that exception; (iv) cooperating with University in complying with the response, mitigation, correction, investigation, and notification requirements of the Act, (v) paying all costs of notification, investigation and mitigation in the event of a security breach of Personal Information suffered by Company; and (vi) at University's discretion and direction, handling all administrative functions associated with notification, investigation and mitigation.

**6.10 Termination for Convenience**

The University of Kentucky, Purchasing Division, reserves the right to terminate the resulting contract without cause with thirty (30) days' written notice. Upon receipt by the contractor of a "notice of termination," the contractor shall discontinue all services with respect to the applicable contract. The cost of any agreed upon services provided by the contractor will be calculated at the agreed upon rate prior to a "notice of termination" and a fixed fee contract will be pro-rated (as appropriate).

## **6.11 Termination for Non-Performance**

### **Default**

The University may terminate the resulting contract for non-performance, as determined by the University, for such causes as:

- Failing to provide satisfactory quality of service, including, failure to maintain adequate personnel, whether arising from labor disputes, or otherwise any substantial change in ownership or proprietorship of the Contractor, which in the opinion of the University is not in its best interest, or failure to comply with the terms of this contract;
- Failing to keep or perform, within the time period set forth herein, or violation of, any of the covenants, conditions, provisions or agreements herein contained;
- Adjudicating as a voluntarily bankrupt, making a transfer in fraud of its creditors, filing a petition under any section from time to time, or under any similar law or statute of the United States or any state thereof, or if an order for relief shall be entered against the Contractor in any proceeding filed by or against contractor thereunder. In the event of any such involuntary bankruptcy proceeding being instituted against the Contractor, the fact of such an involuntary petition being filed shall not be considered an event of default until sixty (60) days after filing of said petition in order that Contractor might during that sixty (60) day period have the opportunity to seek dismissal of the involuntary petition or otherwise cure said potential default; or
- Making a general assignment for the benefit of its creditors, or taking the benefit of any insolvency act, or if a permanent receiver or trustee in bankruptcy shall be appointed for the Contractor.

### **Demand for Assurances**

In the event the University has reason to believe Contractor will be unable to perform under the Contract, it may make a demand for reasonable assurances that Contractor will be able to timely perform all obligations under the Contract. If Contractor is unable to provide such adequate assurances, then such failure shall be an event of default and grounds for termination of the Contract.

### **Notification**

The University will provide ten (10) calendar days written notice of default. Unless arrangements are made to correct the non-performance issues to the University's satisfaction within ten (10) calendar days, the University may terminate the contract by giving forty-five (45) days notice, by registered or certified mail, of its intent to cancel this contract.

## **6.12 Funding Out**

The University may terminate this contract if funds are not appropriated or are not otherwise available for the purpose of making payments without incurring any obligation for payment after the date of termination, regardless of the terms of the contract. The University shall provide the contractor thirty (30) calendar days' written notice of termination under this provision.



**6.13 Prime Contractor Responsibility**

Any contracts that may result from the RFP shall specify that the contractor(s) is/are solely responsible for fulfillment of the contract with the University.

**6.14 Assignment and Subcontracting**

The Contractor(s) may not assign or delegate its rights and obligations under any contract in whole or in part without the prior written consent of the University. Any attempted assignment or subcontracting shall be void.

**6.15 Permits, Licenses, Taxes**

The contractor shall procure all necessary permits and licenses and abide by all applicable laws, regulations and ordinances of all federal, state and local governments in which work under this contract is performed.

The contractor must furnish certification of authority to conduct business in the Commonwealth of Kentucky as a condition of contract award. Such registration is obtained from the Secretary of State, who will also provide the certification thereof. However, the contractor need not be registered as a prerequisite for responding to the RFP.

The contractor shall pay any sales, use, personal property and other tax arising out of this contract and the transaction contemplated hereby. Any other taxes levied upon this contract, the transaction or the equipment or services delivered pursuant hereto shall be the responsibility of the contractor.

The contractor will be required to accept liability for payment of all payroll taxes or deductions required by local and federal law including (but not limited to) old age pension, social security or annuities.

**6.16 Attorneys' Fees**

In the event that either party deems it necessary to take legal action to enforce any provision of the contract and in the event that the University prevails, the contractor agrees to pay all expenses of such action including attorneys' fees and costs at all stages of litigation.

**6.17 Royalties, Patents, Copyrights and Trademarks**

The Contractor shall pay all applicable royalties and license fees. If a particular process, products or device is specified in the contract documents and it is known to be subject to patent rights or copyrights, the existence of such rights shall be disclosed in the contract documents and the Contractor is responsible for payment of all associated royalties. To the fullest extent permitted by law the Contractor shall indemnify, hold the University harmless, and defend all suits, claims, losses, damages or liability resulting from any infringement of patent, copyright, and trademark rights resulting from the incorporation in the Work or device specified in the Contract Documents.

Unless provided otherwise in the contract, the Contractor shall not use the University's name nor any of its trademarks or copyrights, although it may state that it has a Contract with the University.

**6.18 Indemnification**

The contractor shall indemnify, hold and save harmless the University, its affiliates and subsidiaries and their officers, agents and employees from losses, claims, suits, actions, expenses, damages, costs (including court costs and attorneys' fees of the University's attorneys), all liability of any nature or kind arising out of or relating to the Contractor's response to this RFP or its performance or failure to perform under the contract awarded from this RFP. This clause shall survive termination for as long as necessary to protect the University.

**6.19 Insurance**

The successful Contractor shall procure and maintain, at its expense, the following minimum insurance coverages insuring all services, work activities and contractual obligations undertaken in this contract. These insurance policies must be with insurers acceptable to the University.

**COVERAGES**

Workers' Compensation  
 Employer's Liability  
 Commercial General Liability including operations/completed operations, products and contractual liability (including defense and investigation costs), and this contract  
 Business Automobile Liability covering owned, leased, or non-owned autos

**LIMITS**

Statutory Requirements (Kentucky)  
 \$500,000/\$500,000/\$500,000  
 \$1,000,000 each occurrence  
 (BI & PD combined) \$2,000,000 Products and Completed Operations Aggregate  
 \$1,000,000 each occurrence  
 (BI & PD combined)

The successful contractor agrees to furnish Certificates of Insurance for the above-described coverages and limits to the University of Kentucky, Purchasing Division. The University, its trustees and employees must be added as additional insured on the Commercial General Liability policy with regard to the scope of this solicitation. Any deductibles or self-insured retention in the above-described policies must be paid and are the sole responsibility of the contractor. Coverage is to be primary and non-contributory with other coverage (if any) purchased by the University. All of these required policies must include a Waiver of Subrogation (except Workers' Compensation) in favor of the University, its trustees and employees.

**6.20 Method of Award**

It is the intent of the University to award a contract to the qualified offeror whose offer, conforming to the conditions and requirements of the RFP, is determined to be the most advantageous to the University, cost and other factors considered.

Notwithstanding the above, this RFP does not commit the University to award a contract from this solicitation. The University reserves the right to reject any or all offers and to waive formalities and minor irregularities in the proposal received.

**6.21 Reciprocal Preference**

In accordance with KRS 45A.494, a resident offeror of the Commonwealth of Kentucky shall be given a preference against a nonresident offeror. In evaluating proposals, the University will apply a reciprocal preference against an offeror submitting a proposal from a state that grants residency preference equal to the preference given by the state of the nonresident offeror. Residency and non-residency shall be defined in accordance with KRS 45A.494(2) and 45A.494(3), respectively. Any offeror claiming Kentucky residency status shall submit with its proposal a notarized affidavit affirming that it meets the criteria as set forth in the above reference statute.

**6.22 NOT USED****6.23 Confidentiality**

The University recognizes an offeror's possible interest in preserving selected information and data included in the proposal; however, the University must treat such information and data as required by the Kentucky Open Records Act, KRS 61.870, et seq.

Information areas which normally might be considered proprietary, and therefore confidential, shall be limited to individual personnel data, customer references, formulae and company financial audits which, if disclosed, would permit an unfair advantage to competitors. If a proposal contains information in these areas and the offeror declares them to be proprietary in nature and not available for public disclosure, the offeror shall declare in the Transmittal Letter the inclusion of proprietary information and shall noticeably label as confidential or proprietary each sheet containing such information. Proposals containing information declared by the offeror to be proprietary or confidential, either wholly or in part, outside the areas listed above may be deemed non-responsive and may be rejected.

The University's General Counsel shall review each offeror's information claimed to be confidential and, in consultation with the offeror (if needed), make a final determination as to whether or not the confidential or proprietary nature of the information or data complies with the Kentucky Open Records Act.

**6.24 Conflict of Interest**

This Request for Proposal and resulting Contract are subject to provisions of the Kentucky Revised Statutes regarding conflict of interest and the University of Kentucky's Ethical Principles and Code of Conduct ([www.uky.edu/Legal/ethicscode.htm](http://www.uky.edu/Legal/ethicscode.htm)). When submitting and signing a proposal, an offeror is certifying that no actual, apparent or potential conflict of interest exists between the interests of the University and the interests of the offeror. A conflict of interest (whether contractual, financial, organizational or otherwise) exists when any individual, contractor or subcontractor has a direct or indirect interest because of a financial or pecuniary interest, gift or other activities or relationships with other persons (including business, familial or household relationships) and is thus unable to render or is impeded from rendering impartial assistance or advice, has impaired objectivity in performing the proposed work or has an unfair competitive advantage.

Questions concerning this section or interpretation of this section should be directed to the University purchasing officer identified in this RFP.

**6.25 NOT USED****6.26 Copyright Ownership and Title to Designs and Copy**

The contractor and University intend this RFP to result in a contract for services, and both consider the products and results of the services to be rendered by the contractor hereunder to be a work made for hire. The contractor acknowledges and agrees that the work and all rights therein, including (without limitation) copyright, belongs to and shall be the sole and exclusive property of the University. For any work that is not considered a work made for hire under applicable law, title and copyright ownership shall be assigned to the University.

Title to all dies, type, cuts, artwork, negatives, positives, color separations, progressive proofs, plates, copy and any other requirement not stated herein required for completion of the finished product for use in connection with any University job shall be the property of and owned by the University. Such items shall be returned to the appropriate department upon completion and/or delivery of work unless otherwise authorized by the University. In the event that time of return is not specified, the contractor shall return all such items to the appropriate University department within one week of delivery.

**6.27 University Brand Standards**

The contractor must adhere to all University of Kentucky Brand Standards. University Brand Standards are maintained by the University Public Relations Office (UKPR) and can be viewed at <http://www.uky.edu/prmarketing/brand-standards>. Non-adherence to the standards can have a penalty up to and including contract cancellation. Only the UKPR Director or designee can approve exceptions to the University standards.

Graphics standards for the UK HealthCare areas are governed by UK HealthCare Clinical Enterprise Graphic Standards, found at: <https://ukhealthcare.uky.edu/staff/brand-strategy>.

Contractor warrants that its products or services provided hereunder will be in compliance with all applicable Federal disabilities laws and regulations, including without limitation the accessibility

requirements of Section 255 of the Federal Telecommunications Act of 1996 (47 U.S.C. § 255) and Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d), and its implementing regulations set forth at Title 36, Code of Federal Regulations, Part 1194. For purposes of clarity, updated regulations under Section 508 standards now incorporate WCAG 2.0, and for purposes of this agreement WCAG 2.0 Level AA compliance is expressly included. Contractor agrees to promptly respond to, resolve and remediate any complaint regarding accessibility of products or services in a timely manner and provide an updated version to University at no cost. If deficiencies are identified, University reserves the right to request from Contractor, a timeline by which accessibility standards will be incorporated into the products or services provided by Contractor and shall provide such a timeline within a commercially reasonable duration of time. Failure to comply with these requirements shall constitute a material breach of this Agreement and shall be grounds for termination of this Agreement.

Where any customized web services are provided, Contractor represents that it has reviewed the University's Web Policy and all products or services will comply with its published standards.

Contractor will provide University with a current Voluntary Product Accessibility Template (VPAT) for any deliverable(s). If none is available, Vendor will provide sufficient information to reasonably assure the University that the products or services are fully compliant with current requirements.

**6.28 NOT USED**

**6.29 NOT USED**

**6.30 Payment Terms**

The University adheres to a strategic approach regarding payables management based on risk minimization, processing costs, and industry best practices. As such, suppliers and individuals doing business with the University will be paid based on the following protocol:

1. The University utilizes Payment Plus (e-payables) as its primary default form of payment. By enrolling in Payment Plus, suppliers can receive payments immediately (all invoices will be paid immediately upon confirmation of goods receipt and invoice). The process is electronic and the supplier receives real-time payment notices. Additional information regarding Payment Plus (and enrollment form) can be found at: <https://www.uky.edu/ufs/payment-plus-supplier-enrollment-form>.
2. Payments by check. Payment terms for check payments are Net-30.
3. Individuals receiving payments from the University that require ACH direct payments will only be processed under special circumstances as approved by the Controller's office. Payment terms for ACH are Net-40.

## **7.0 SCOPE OF SERVICES**

### **7.1 Detailed Services Defined**

The scope of this Equipment Early Release Package is to provide the purchase and delivery of (2) new Custom Air Handling Units and (1) new Return Fan Array System for UK's Multiple Disciplinary Science Building. The full scope is detailed in the accompanying documents (drawings and specifications).

The scope includes 1 Alternate (as indicate in the drawings/specification) for specific Chilled Water Coils.

### **B. Schedule of Construction**

Equipment will be accepted by the University of Kentucky and delivered to the general contractor, mechanical contractor or the rigger's yard prior to installation. Each Contractor is to submit a proposed logistics plan for delivery of the equipment required. Delivery is to be coordinated with the University of Kentucky and General contractor.

### **7.2 NOT USED**

## 8.0 FINANCIAL OFFER SUMMARY

Offerors are to provide a fixed price for the services offered.

### 8.1 Mandatory Services

Offerors are directed to complete and submit “**Attachment A – Financial Offer**” with all mandatory pricing.

### 8.2 NOT USED

### 8.3 Alternate Pricing

In addition to the above financial offer, the offeror may submit alternative financial proposals, however the information requested above must be supplied and will be used for proposal evaluation purposes.

#### **Additional Financial Commitment**

In addition to the financial offers, please propose a financial commitment to assist the University. Options may include a signing bonus, scholarships, internships, commitment to hire University Graduates or a (%) percentage rebate.





**SECTION 23 02 00**

**HVAC EQUIPMENT AND HYDRONIC SPECIALTIES**

1. GENERAL

- A. The Contractor's attention is directed to the General and Special Conditions, General Conditions-Mechanical and to all other Contract Documents as they apply to this branch of the work. Attention is also directed to all other sections of the Contract Documents which affect the work of this section and which are hereby made a part of the work specified herein.
- B. The Contractor shall provide in complete working order the following heating, ventilation and air conditioning equipment located as indicated and installed, connected and placed in operation in strict accordance with the manufacturer's recommendations. All equipment shall be factory painted and, where applicable, factory insulated and shall, where such standards exist, bear the label of the Underwriters Laboratory.
- C. Each subcontractor shall be responsible for their own completion of System Verification Checklists/Manufacturer's Checklist.
- D. Factory startup is required for all HVAC equipment. In general, as part of the verification process, equipment suppliers shall perform start-up by their factory rep and shall complete and submit start-up reports/checklists. This shall include air handling units, chillers, VFDs, etc.
- E. All HVAC equipment shall comply with the latest provisions of ASHRAE Standard 90 and/or International Energy Conservation Code 2006, whichever is more stringent.
- F. Installation of all heating, ventilating and air conditioning systems shall be performed by a master HVAC contractor licensed in the state the work will be performed.
- G. Note to Suppliers and Manufacturers Representative furnishing proposals for equipment for the project:
  - (1) Review the Controls Section of these Specifications (if applicable) to determine controls to be furnished by the equipment manufacturer, if any. The Contractor shall provide all controls with equipment unless specifically listed otherwise.
  - (2) Review the section of these specifications entitle: REQUIRED SHOP DRAWINGS, DESCRIPTIVE LITERATURE, MAINTENANCE MANUALS, PARTS LISTS, SPECIAL KEYS, TOOLS, ETC., and provide all documents called for therein.
  - (3) Insure that the equipment which you propose to furnish may be installed, connected, placed in operation and easily maintained at the location and in the space allocated for it.
  - (4) Determine from the Bid Documents the date of completion of this project and insure that equipment delivery schedules can be met so as to allow this completion date to be met.
  - (5) Where manufacturers' temperature controls are specified, they shall be in full compliance with International Mechanical Code Section 606 including automatic smoke shut down provisions.

- (6) Provide factory start-up on site by a factory representative (not a third party contractor) for all HVAC equipment, including pumps, VFDS, chillers, etc. Submit factory start-up reports to the Engineer.
- (7) Provide general orientation training to the Owner. Training shall occur only when the systems are complete and 100% functional. All training shall be videotaped. Refer to Section 15000 for training session requirements.
- (8) Review the Section on Motor Starters and Electrical Requirements for Mechanical Equipment.
- (9) Requirements for motors controlled by variable frequency drives:
  - a. All motors shall be inverter duty rated.
  - b. Motors less than 100 HP in size shall be furnished with shaft grounding kit, Aegis SGR Bearing Protection Ring or equal. One shaft grounding ring and related hardware shall be provided on drive end or non-drive end of motor per manufacturer's instructions. These shall be factory mounted and installed on the exterior of the motor to allow for visual inspection. Ground motor frame per manufacturer's instructions. Install kit in strict accordance with manufacturer's instructions.
- (10) All condensate producing equipment shall be provided with a condensate trap as recommended by the equipment manufacturer.
- (11) Provide a complete air tight enclosure with opening door that seals air tight for all filters on air moving equipment.
- (12) All equipment shall be furnished for a single point electrical connection unless specifically excluded as a requirement.

## 2. EQUIPMENT

### A. QUALIFICATIONS

- (1) Manufacturer shall be a company specializing in the design and manufacture of commercial / industrial custom HVAC equipment. Manufacturer shall have been in production of custom HVAC equipment for a minimum of 5 years.
- (2) Each unit shall bear an ETL or UL label under UL Standard 1995 indicating the complete unit is listed as an assembly. ETL or UL listing of individual components, or control panels only, is not acceptable.
- (3) Manufacturer shall have at least 10 unique installations of fan array (minimum 4 fans in fan array) air handling units.

### B. WARRANTY

- (1) The complete unit shall be covered by a parts and labor warranty issued by the manufacturer covering the first year of operation. This warranty period shall start upon substantial completion.

C. ACCEPTABLE MANUFACTURERS

- (1) Provide custom air handling units as manufactured by:

**NOTE: AIR HANDLING UNITS ARE OWNER PURCHASED, CONTRACTOR INSTALLED. BELOW SPECIFICATIONS FOR AIR HANDLING EQUIPMENT IS FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR ONSITE TESTING LISTED BELOW.**

- a. CES Group (Governair, Temptrol, Ventrol, etc.) – (Basis of Design)
- b. Climatecraft
- c. York Custom
- d. Trane Custom
- e. Air Flow Equipment

D. GENERAL

- (1) Install where shown on the plans, custom air handling units construction features as specified below. The units shall be provided and installed in strict accordance with the specifications. All units shall be complete with all components and accessories as specified. Any exceptions must be clearly defined. The contractor shall be responsible for any additional expenses that may occur due to any exception made.
- (2) AHU-1 and AHU-2 shall be a factory built unit with shipping splits. All shipping splits shall be made such that it can fit through the existing AC-1 and AC-2's outside air louvers. (AC-1's Louver Size = 14'-0" W x 10'-8" H, AC-2' Louver Size = 14'-0" W x 10'-8" H) The contractor shall coordinate the exact spatial parameters depending on their approach with the temporary units and the existing areaway. It shall be the contractors and unit manufacturer's responsibility to confirm component sizing such that the unit can be installed in the location indicated. All components shall be protected during shipment.
- a. The unit shall be tested by a certified testing agency on site after completion by the contractor. All testing shall be the responsibility of the unit manufacturer. Provide all testing equipment and instrumentation needed for the testing.
  - b. The manufacturer shall provide a full time on site construction supervisor during the entire unit assembly process. The supervisor shall manage the unit assembly and provide a lead contact for project meetings, owner/engineer/general contractor relations and answer questions from associated trades.

E. ON SITE/FACTORY TESTING AND QUALITY CONTROL

- (1) Factory Tests: The fans shall be factory run tested to ensure structural integrity and proper RPM. All electrical circuits shall be tested to ensure correct operation before shipment of unit. Units shall pass quality control and be thoroughly cleaned prior to shipment.
- (2) On Site Leak Testing: The unit manufacturer shall provide an on site leak test after the unit has been constructed. This shall be performed by a certified company in accordance with AMCA Standard 210. The cabinet shall be tested at 1.5 times the static pressure of differential static pressure across the cabinet exterior walls) for both the high and low pressure sides. Cabinet leakage shall not exceed 0.5% of design airflow. All supply and return air openings shall be sealed. The air shall then be pumped into the unit until the appropriate operating

pressures are achieved. Air flow measurements shall be performed in compliance with AMCA Standard 210. The unit shall also be tested to show that the specified airflow is produced at the specified static pressure for both supply and return fans.

- (3) On Site Panel Deflection Testing: The unit manufacturer shall provide a deflection test on one unit at 8" of differential static pressure across the cabinet exterior walls. A deflection limit of  $L/200$  will be demonstrated at this time. "L" is defined as the height panel on the side of the unit. Measurements shall be at midpoint of "L" along the vertical seam of the largest panel on one side.  
Height of panel =  $H \times (.005)$  = inches deflection allowed
  - a. The manufacturer shall notify contractor and/or owner 10 days prior to test for witnessing. Owner's representative shall select one unit to be tested at the time of release. A written test report shall be prepared by the manufacturer and issued to the Owner's representative. This test shall be performed when the factory leak test is performed.
- (4) Acoustic Requirements: The equipment manufacturer shall furnish calculations showing the estimated sound power levels at the supply and, return connections, as well as unit casing radiation for each air conditioning unit. Calculations shall be based on fan sound power levels which were determined in accordance with AMCA Standard 300 and 301. These shall meet or exceed the sound power levels indicated on the drawings. Sound data from a single fan or group of fans shall not be acceptable. Sound calculation shall calculate resultant sound valves entering or leaving the unit.
- (5) On Site Basin Leakage Testing: The basin shall be tested for leakage. The base sections shall be filled with 2" of water and must hold for 24" hours. Any leaks shall be repaired and the basin re-tested.

## 2.02 UNIT CONSTRUCTION DESCRIPTION

- A. General: Provide factory-fabricated air handling units with capacity as indicated on the schedule. Units shall have overall dimensions as indicated and fit into the space available with adequate clearance for service as determined by the Engineer. Units shall be completely assembled. Multiple sectioned units shall be shipped as a single factory assembled piece (except where shipping limitations prevent) de-mounted into modular sections in the field by the contractor. Units shall be furnished with sufficient gasket and bolts for reassembly in the field by the contractor. Unit manufacturer shall provide certified ratings conforming to the latest edition of AMCA 210, 310, 500 and AHRI 410. All electrical components and assemblies shall comply with NEMA standards. Unit internal insulation must have a flame spread rating not over 25 and smoke developed rating no higher than 50 complying with NFPA 90A, "Standard for the Installation of Air Conditioning and Ventilating Systems." Units shall comply with NFPA 70, "National Electrical Code," as applicable for installation and electrical connections of ancillary electrical components of air handling units. Tags and decals to aid in service or indicate caution areas shall be provided. Electrical wiring diagrams shall be attached to the control panel access doors. Operation and maintenance manuals shall be furnished with each unit. Units shall be UL or ETL listed.
- B. Rigging Provision – Multiple Piece Units: Units shipped in multiple sections shall be engineered for field assembly. The base frame shall have integral lifting lugs. The lifting lugs shall be fabricated from structural steel with an appropriate rigging hole. Lifting lugs shall be located at the corner of each section (and along the sides if required) and sized to allow rigging and handling of the unit. All gasket and

necessary assembly hardware shall ship loose with unit. Junction boxes with a factory supplied numbered terminal strip shall be supplied at each shipping split for reconnection of control wiring.

- C. Unit Base - Floor: Unit perimeter base rail shall be fabricated using heavy gauge steel. C-Channel cross supports shall be welded to perimeter base steel and located on maximum 24" centers to provide support for internal components. Base rails shall include lifting lugs at the corner of the unit or each section if demounted. Internal walk-on floor shall be 0.188" aluminum tread plate. The outer sub-floor of the unit shall be made from 20 gauge galvanized steel. The floor cavity shall be spray foam insulated with floor seams gasketed for thermal break and sealed for airtight / watertight construction. Where access is provided to the unit interior, floor openings shall be covered with walk on phenolic coated steel safety grating. Provide floor base with a 1" upturn with welded seam. Single wall floors with glued and pinned insulation and no sub floor are not acceptable. Base frame shall be attached to the unit at the factory.
- D. Unit Casing – The construction of the air handling unit shall consist of a (1" x 2") roll formed steel frame with formed 16 gauge galvanized steel exterior casing panels. The exterior casing panels shall be attached to the gasketed (1 x 2) steel frame with corrosion resistant fasteners. All casing panels shall be completely removable from the unit exterior without affecting the unit's structural integrity. (Units without framed type of construction shall be considered, provided the exterior casing panels are made from 16 gauge galvanized steel, maximum panel center lines are less than 20 inches and deflection is less than L/200 @ 8" positive pressure). The air handling unit casing shall be of the "no-through-metal" design. The casing shall incorporate insulating thermal breaks as required so that, when fully assembled, there's no path of continuous unbroken metal to metal conduction from inner to outer surfaces. All panel seams shall be caulked and sealed for an airtight unit.

The exterior panel finish shall be: Corrosion resistant Galvanized (No paint)

- E. Double Wall Liner - Each unit shall have double wall construction with 20 gauge solid galvanized liner in the entire unit. The double wall interior panel shall be removable from the outside of the unit without affecting the structural integrity of the unit.
- F. Insulation - Entire unit to be insulated with a full 3" (R24) thick closed cell foam insulation. Foam shall be ecomate 0-, 0-, (Non VOC) UL 94HF1 rated. All insulation edges shall be encapsulated within the panel. All field penetrations must be completely sealed by installing contractor. Note: Non UL 94HF1 rated foam is not allowed.
- G. Access Doors - The unit shall be equipped with a solid double wall insulated, hinged access doors as shown on the plans. The doorframe shall be extruded aluminum, foam filled with a built in thermal break barrier and full perimeter gasket. The door hinge assembly shall be powder coated steel. There shall be a minimum of two heavy duty handles per door. Provide ETL, UL 1995, and CAL-OSHA approved tool operated safety latch on all fan section access doors.

Note: If manufacturer cannot provide thermal break door design it must be noted as an exception on the bid.

- a. Access doors in all sections shall be provided with a 10 x 10 dual thermal pane safety glass window.

## 2.03 UNIT COMPONENT DESCRIPTION

- A. FANWALL (FWT)

1. The multiple fan array systems shall include multiple, direct driven, arrangement 4 plenum fans constructed per AMCA requirements for the duty specified class III as required. Class I fans are not acceptable. Fans shall be rated in accordance with and certified by AMCA for performance. All fans shall be selected to deliver the specified airflow quantity at the specified operating Total Static Pressure and specified fan/motor speed. The fan array shall be selected to operate at a system Total Static Pressure that does not exceed 90% of the specified fan's peak static pressure producing capability at the specified fan/motor speed. Each fan/motor cube or cell shall include a minimum 10 gauge, G 90 Galvanized steel intake wall, .100 aluminum spun fan inlet funnel, and an 10 gauge G90 Galvanized steel motor support plate rail and structure. All motors shall be standard foot mounted type TEAO selected at the specified operating voltage, RPM, and efficiency as specified or as scheduled elsewhere. Motors shall meet the requirements of NEMA MG-1 Part 30 and 31, section 4.4.2. Motors shall be as manufactured by Baldor or Toshiba for use in multiple fan arrays that operate at varying synchronous speeds as driven by an approved VFD. Motor HP shall not exceed the scheduled HP as indicated in the AHU equipment schedule(s). Steel cased motors and/or ODP motors are not acceptable. All motors shall include permanently sealed (L10-500,000 hr) bearings and shaft grounding to protect the motor bearings from electrical discharge machining due to stray shaft currents. Motors provided with hybrid ceramic bearings, when specified, do not require shaft grounding devices. Each fan/motor assembly shall be dynamically balanced to meet AMCA standard 204-96, exceeding category BV-5, to meet or exceed an equivalent Grade G.55, producing a maximum rotational imbalance of .022" per second peak, filter in ( .55mm per second peak, filter in). Fan and motor assemblies submitted for approval incorporating larger than 22" wheel size and 215 T frames size motors shall be balanced in three orthogonal planes to demonstrate compliance with the G.55 requirement with a maximum rotational imbalance of .022" per second peak filter in ( .55 mm per second peak, filter in). Copies of the certified balancing reports shall be provided with the unit O&M manuals at the time of shipment. Submittals that do not include a statement of compliance with this requirement will be returned to the contractor without review.
2. The fan array shall consist of multiple fan and motor "cubes" or "cells", spaced in the air way tunnel cross section to provide a uniform air flow and velocity profile across the entire air way tunnel cross section and components contained therein. In order to assure uniform velocity profile in the AHU cross section, the fan cube dimensions must be variable, such that each fan rests in an identically sized cube or cell, and in a spacing that must be such that the submitted array dimensions fill a minimum of 90% of the cross sectional area of the AHU air way tunnel. There shall be no blank off plates or "spacers" between adjacent fan columns or rows to position the fans across the air way tunnel. The array shall produce a uniform air flow profile and velocity profile within the airway tunnel of the air handling unit to equal the specified cooling coil and/or filter bank face velocity by +/- 10% when measured at a point 36" from the intake side of the fan array intake plenum wall, and at a distance of 72" from the discharge side of the fan array intake plenum wall. Submittals for units providing less than the scheduled quantity of fans and/or spacing of the fans for multiple fan arrays shall submit CFD modeling of the air flow profile for pre-bid approval that indicates uniform velocity and flow across all internal components without increasing the length of the AHU unit or changing the aspect ratio of the unit casing as designed.
3. Each individual cube or cell in the multiple fan arrays shall be provided with an integral back flow prevention device that prohibits recirculation of air in the event a fan or multiple fans become disabled. The system effects for the back flow prevention device(s) shall be included in the criteria for TSP determination for fan selection purposes, and shall be indicated as a separate line item SP loss in the submittals. Submitted AHU performance that does not indicate allowance for system effects for the back flow prevention device(s) and the system effect for the fan and motor enclosure in which each fan is mounted , will be returned to the contractor disapproved and will need to be resubmitted with all of the requested information included for approval. Back Draft Damper performance data that is per AMCA ducted inlet and discharge arrangements will not be accepted. Damper data must

be for the specific purpose of preventing back flow in any disabled fan cube and that is mounted directly at the inlet of each fan. Motorized dampers for this purpose are not acceptable. Submitted fan performance data which only reflect published performance for individual fans in AMCA arrangement "A" free inlet and discharge will not be accepted. AHU Manufacturers that do not manufacture the fans being submitted on must provide certified performance data for fans as installed in the AHU unit with Back Draft damper effects included. At the sole discretion of the engineer, such performance testing may be witnessed by the engineer and/or the owner's representative.

4. Each fan motor shall be individually wired to a MSP Panel with disconnects. **A separate field installed fan VFD(s) as specified in the future installation bid document specifications by the controls contractor.** Each VFD shall be sized for the total connected HP for all fan motors contained in the fan array. Wire sizing shall be determined, and installed, in accordance with applicable NEC standards and local code requirements.
5. At the sole discretion of the engineer, AHU manufacturers that are approved for bidding purposes only, other than the basis of design manufacturer, and that are submitting multiple fan arrays, shall test one or more of the submitted AHU's for flow, pressure, leakage, BHP and acoustics as submitted and approved, prior to shipment. The testing shall be witnessed by an owner's representative and approved by the engineer prior to shipment of any of the submitted AHU equipment. A test report shall be provided for each tested AHU unit and the report shall be included in the O&M manuals for the units.
6. Each fan & motor assembly shall be removable through a minimum 24" wide, free area, access door located on the discharge side of the fan wall array without removing the fan wheel from the motor. All fan/motor access doors shall open against pressure.
7. Motors
  - a. Motors shall be standard foot mounted type, TEFC or TEAO motors selected at the specified operating voltage, RPM, and efficiency as specified or as scheduled elsewhere. The motor shall incorporate hybrid ceramic bearings on both bearings to prevent electrical arcing across bearing races and balls. Fiber type grounding devices are not permitted.
  - b. Provide NEMA Premium Efficiency induction motors that meet the requirements of NEMA MG-1 Part 30 and 31, section 4.4.2. Motors shall be available in ½ HP increments as nameplate HP ratings from 1 HP through 15 HP. Motors shall be manufactured by Toshiba or Baldor.

B. FANS – Direct Drive

1. The fan shall include direct driven, arrangement 6 plenum fan constructed per AMCA requirements for the duty specified. Class I fans are not acceptable. Fan wheels shall be aluminum construction and rated in accordance with and certified by AMCA for performance. All fans shall be selected to deliver the specified airflow quantity at the specified operating Total Static Pressure and specified fan/motor speed. The fan shall be selected to operate at a system Total Static Pressure that does not exceed 90% of the specified fan's peak static pressure producing capability at the specified fan/motor speed. Each fan/motor assembly shall include a minimum 14 gauge spun steel fan inlet funnel, and a G90 galvanized steel motor support plate and fan base with internal RIS isolation.
2. All motors shall be standard foot mounted type TEAO selected at the specified operating voltage, RPM, and efficiency as specified or as scheduled elsewhere. Motors shall meet the requirements of NEMA MG-1 Part 30 and 31, section 4.4.2. Motors shall be as manufactured by Baldor,

Siemens, or Toshiba that operate at varying synchronous speeds as driven by an approved VFD. Motor HP shall not exceed the scheduled HP as indicated in the AHU equipment schedule(s). Steel cased motors and/or ODP motors are not acceptable. All motors shall include permanently sealed L10-400,000 hr bearings with shaft grounding to protect the motor bearings from electrical discharge machining due to stray shaft currents. Motors shall be provide with shaft grounding rings. Each fan/motor assembly shall be dynamically balanced to meet AMCA standard 204-96, exceeding category BV-5, to meet or exceed an equivalent Grade G.55, producing a maximum rotational imbalance of .022" per second peak, filter in ( .55mm per second peak, filter in).

C. MOTOR CIRCUIT PROTECTION:

1. All motors in the Fan Array shall be provided with individual Motor Protection for thermal overload protection. All motor circuit protectors can be located in starting device enclosure or, if required by design, in a separate enclosure. Motor circuit protector enclosure must be located and mounted at a minimal distance from motors in the FANWALL Array. Provide remote indication by means of aux contacts wired in series.

- a. Pilot Lights: Multiple (one per fan) cover mounted pilot lights for local monitoring.

D. Heat Transfer Coils – Water Coil

- a. All coil assemblies shall be leak tested under water at 315 PSIG and PERFORMANCE is to be CERTIFIED under AHRI Standard 410. Coils exceeding the range of AHRI standard rating conditions shall be noted.
- b. Cooling coils shall be mounted on stainless steel support deck to permit coils to slide out individually from the unit. Provide intermediate drain pans on all stacked cooling coils. The intermediate pan shall drain to the main drain pan through a copper downspout. Water coils shall be constructed of seamless copper tubing mechanically expanded into fin collars. All fins shall be continuous within the coil casing to eliminate carryover inherent with a split fin design. Fins are die formed Plate type.
- c. Headers are to be seamless copper with die formed tube holes.
- d. Connections shall be male pipe thread (MPT) Schedule 40 Red Brass with 1/8" vent and drain provided on coil header for coil drainage. All coil connections shall be extended to the exterior of the unit casing by the manufacturer. Coils shall be suitable for 250 PSIG working pressure. Intermediate tube supports shall be supplied on coils over 44" fin length with an additional support every 42" multiple thereafter.
- e. Water coils shall have the following construction:
  - i. 5/8" o.d. x .035" wall copper tube with .049 return bends
  - ii. .010" aluminum fins
  - iii. 16 gauge galvanized steel for hot water coil casing
  - iv. 16 gauge 304 stainless steel casing for chilled water coils only

- E. Condensate / Drain Pans - IAQ style drain pans shall be provided under all cooling coils as shown on the drawings. The drain pan shall be fabricated from 16 gauge 304 stainless steel. All pans are to be triple pitched for complete drainage with no standing water in the unit. They shall be insulated minimum 3-inch



"Double Bottom" construction with welded corners. Provide stainless steel, 1-1/4" MPT drain connection extended to the exterior of the unit base rail. Units in excess of 200 inches shall have drain connections on both sides, or two connections on the same side. All drain connections shall be piped and trapped separately for proper drainage.

- F. Filters - Provide filters of the type indicated on the schedule. Factory fabricated filter sections shall be of the same construction and finish as the unit. Face loaded pre and final filters shall have Type 8 frames as manufactured by AAF, FARR or equal. Side service filter sections shall include hinged access doors on both sides of the unit. Internal blank-offs shall be provided by the air unit manufacturer as required to prevent air bypass around the filters. The filters shall be as manufactured by Farr, Purolator, AAF or equal. Filters shall be in compliance with ANSI/UL 900 – Test Performance of Air Filters.
- a. Filter Gauge: Each Filter bank shall be furnished with: (Magnehelic / Photohelic) filter gauge with a 4 3/4" OD white static pressure dial with black figures and zero pointer adjustment. / Dwyer Series 2000 Air filter gauge Dwyer Mark 25 Inclined manometer (DWYER 250 AF).
  - b. Flat Racks - Filter racks shall be completely factory assembled and designed for industrial applications. Filter racks shall be fabricated from no less than 16 gauge galvanized steel. Filter racks shall be applied in low efficiency filter applications and will be either upstream or side accessible. Side accessible filter racks shall have an oversized access door on the exterior of the air handler, centered on the filter rack for easy filter removal. Upstream access filter racks shall have one central access cover per row of filters centered in the unit for easy access. Filter racks over 72" in length shall require an angle center reinforcement support. Filter racks shall be designed for a maximum of 500 fpm, or meet or exceed the area specified in the mechanical schedule.
  - c. Medium Efficiency Pleated Filters - Filters shall be 2" thick, 30% efficient. Filter media shall be 100% synthetic. The filter shall have an average efficiency of 25-30% and an average arrestance of 90-92%. The filters shall be listed as Class II under UL Standard 900. Filters shall be tested per ASHRAE Standard 52-76. The effective media shall not be less than 4.6 square feet of media per 1.0 square foot of filter face area, and shall contain not less than 15 pleats per linear foot. Initial resistance at 500 fpm approach shall not exceed 0.28" wg.
    - i. Filters shall be 24"x24" or 12"x24" only. Filter clips shall be Camfil Farr Type C-78-2 or similar.
- G. Dampers – Provide Class 1 rated, ultra low leak dampers (less than 3 cfm/sq ft. @ 1" w.g.) as indicated on the unit drawings. Low leakage dampers shall have extruded aluminum airfoil blades. Flat or formed metal blades are not acceptable. The damper blade shall incorporate santoprene rubber edge seals and zinc plated or stainless steel tubular steel shaft for a non-slip operation. Shaft bearings shall be spherical – non corrosive nylon to eliminate friction and any metal to metal contact. Damper jamb seals shall be UV rated, nylon glass reinforced or stainless steel spring arcs designed for a minimum air leakage and smooth operation. Damper linkage shall be concealed within a 16 gauge galvanized steel frame. **(Operator furnished and installed by controls contractor under future installation bid document specifications).**

#### 2.04 ELECTRICAL POWER AND CONTROLS

- A. All electrical and automatic control devices not previously called out or listed below are to be furnished and installed in the field by OTHERS.
- B. All wiring shall be (75°C) Insulated copper wires.

- C. The unit shall feature a mounted permanent nameplate displaying at a minimum the manufacturer, serial number, model number and current and amps voltage. The unit must have an ETL or UL Listing and bear the appropriate mark.
- D. Conduit shall consist of a combination of EMT or flexible metal conduit as required. Liquidtight flexible metal conduit may be used outside the air tunnel for wet locations.
- E. The fan motor shall be wired to a motor disconnect mounted on unit exterior.
- F. Unit Convenience Features
  - 1. Each section shall be equipped with a vapor- proof 100-watt equivalent LED service light with guard.
  - 2. Lights shall be controlled by one light switch mounted adjacent to the supply air fan access door.
  - 3. Furnish a 120 volt GFI duplex convenience outlet on the exterior of the unit next to fan sections as indicated on the unit drawing.
  - 4. All lights, switches and outlets shall be wired to a fused or non-fused disconnect for a separate 120 volt external source.

G.

## 2.05 BIPOLAR IONIZATION AIR PURIFICATION SYSTEM

### A. CAPACITIES AND CHARACTERISTICS

- 1. Provide NPBI air cleaning system at locations indicated on Drawings.
- 2. Project Design:
  - a. Submit calculations using formulas required by ASHRAE 62.1 to validate acceptable indoor air quality at quantity of outside air scheduled and air cleaning technology specified.
  - b. Electronic air cleaning systems based on the following technologies are unacceptable:
    - i. Powered particulate filters.
    - ii. Polarized media filter.
    - iii. Unipolar ion generators.
    - iv. "Plasma" particulate filters.
    - v. High-powered ionization devices.
    - vi. Ozone generators.
    - vii. Photocatalytic Oxidation (PCO) products.
    - viii. Dry hydrogen peroxide products.
  - c. Maximum Ozone Emissions: In accordance with limits stated in UL 2998.
    - i. Products not certified in accordance with UL 2998 are unacceptable.
    - ii. Provide products listed on UL SPOT and Intertek Sustainability product database(s) as UL 2998-compliant. Products not listed in UL SPOT and Intertek Sustainability database(s) are unacceptable. Submit manufacturer's test report showing compliance with UL 2998.
  - d. Humidity: Provide ionization devices:
    - i. That do not require preheat protection when relative humidity of entering air exceeds 85 percent.

- ii. That are suitable for relative humidity from zero to 100 percent, condensing, without causing damage, deterioration, or dangerous conditions within air ionization system.
- e. Ionization Requirements:
  - i. Ionization Output: Provide systems that produce positive and negative ions. Unipolar ionization devices are unacceptable.
- f. NPBI Components:
  - i. Tested by UL or Intertek, proving compliance with UL 2998 ozone standard when tested using UL 867, 5th ed. (2011), methodology. Perform large chamber environment testing and peak ozone test for electronic devices in accordance with UL 2998.
    - a. Submit UL 867 test data collected later than December 21, 2007, by independent NRTL, including ozone results.
    - b. Increasing interior ion concentration levels, both positive and negative collectively, to minimum 2000 ions/cc measured 5 ft. from floor where air is delivered from the duct system.
  - a. Provide ionization systems suitable for air exchange rates through full operating range of system.
  - b. Minimum Air Velocity: 300 fpm.
- g. Ion Systems:
  - i. Ionization Device Enclosures: Provide corrosion-resistant, non-metallic materials. Configure enclosure without thermal bridging.
  - ii. Provide units certified to UL 2998, "Environmental Claim Validation Procedure for Zero Ozone Emissions from Air Cleaners."
  - iii. Provide integral alarm dry contacts, SPST (NO), rated 0.3 A at 125 Vac.
  - iv. Mounting: Magnets or self-tapping sheet metal screws.
- h. Design Requirements for Coil Cleaning Installations:
  - i. Provide ionization units having manufacturer's recommended number of electrodes and power generators, sized to system air flow.
  - ii. NPBI Electrodes:
    - a. Materials: Carbon fiber clusters having minimum 45000 needles each.
      - i. Metal electrodes are unacceptable.
      - ii. Bipolar ionization tubes manufactured of glass, composite, mica, or similar dielectric materials are unacceptable.
    - b. Provide electrodes in 6-inch sections for field assembly by installer to cover entire finned width of coil.
    - c. Provide one modular ionization bar for every 5 ft. of coil height.
    - d. Electrode Spacing: 0.5 to 1 inch apart.
    - e. Output: 140 million ions/cc per inch of bar, measured 1 inch from carbon fiber brushes.

f. Ionization Bars:

- i. Length: 12 ft. maximum.
- ii. Power Supply:
  1. Energize ionization system continuously.
  2. Provide ac power supply for field installation, capable of powering four ionization bars requiring 20 W each.
  3. Include integral on/off switch and LED "power on" light.
  4. Include BAS interface alarm dry contacts, SPST (NO), rated 1.0 A at 250 V ac.
  5. Power Source: 110 V ac.

- i. Power Supply Enclosure Class: NEMA 250, Type 4.

3. Control Requirements:

a. NPBI Devices:

- i. Internal short-circuit protection.
- ii. Overload protection.
- iii. Automatic fault reset circuit breakers. Units having fuses are unacceptable.
- iv. Provide integral alarm dry contacts, SPST (NO), rated 0.3 A at 125 V ac.

b. Ionization Output: Provide unit that varies ion output in proportion to airflow velocity.

- i. Output: Minimum 140 million ions/cc per inch of bar, measured 1 inch from carbon fiber brushes.

c. Options:

- i. Ion Sensor: Provide Ion Sensor compatible with ionization device.

F. FAN MOTOR REMOVAL TROLLEY SYSTEM

- (1) Provide unit with I beam trolley system inside of fan section. Provide on exterior of unit a cantilever beam with swing arm that shall handle a minimum lifting weight of 250 lbs. Swing angle of swing arm shall be 200 degrees.

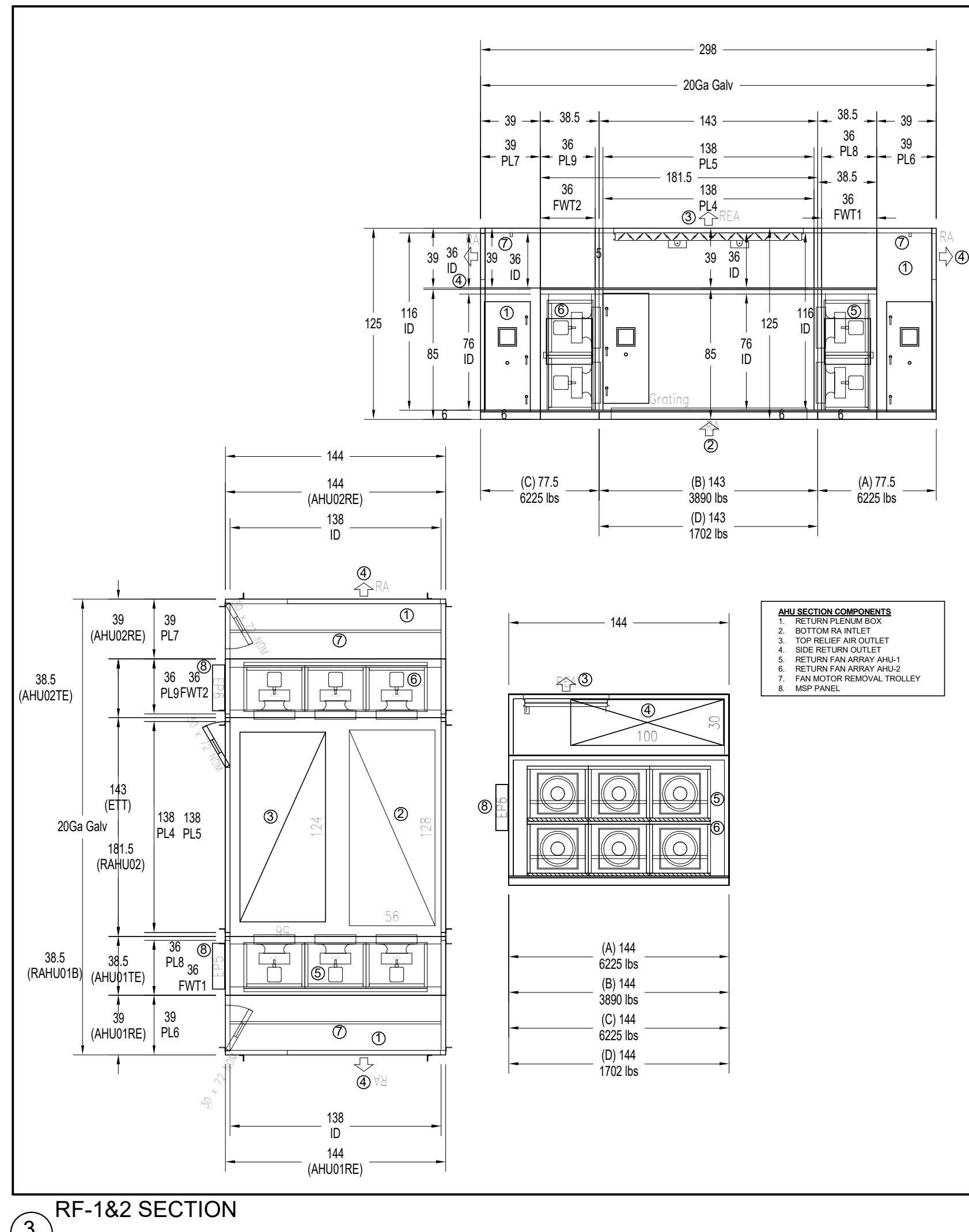
G. FACTORY START-UP REPORTS **(to be provided by manufacturer's vendor rep)**

- (1) Provide factory start-up on site by a factory representative (not a third party contractor) for all HVAC equipment, including pumps, VFD's, boilers, chillers, cooling towers, heat pumps, rooftop units, etc. Submit factory start-up reports to the Engineer. The Mechanical Contractor and the Controls Contractor shall have a representative on site to correct all deficiencies noted by the factory representative. For each deficiency noted, documentation of corrective action taken shall be submitted to Engineer.
- (2) At a minimum, the report submitted to the Engineer shall include the following data:

(3) Air Handling Units

- a. Verify economizer operation
- b. Verify operating per sequence of control
- c. Discharge air temperature sensor calibration
- d. Discharge static pressure
- e. Dirty filter differential pressure switch function
- f. Outside air temperature sensors calibration
- g. Return air temperature sensor calibration
- h. Airflow monitoring station calibration
- i. VFD response to pressure sensors or other DDC input
- j. Smoke detection shut down
- k. Freeze protection sequence
- l. Fan bearings lubrication
- m. Fan not vibrating
- n. Fan motor volts / amps
- o. Check drive belt tension
- p. Check sheave alignment
- q. Coils clean
- r. Dampers operating properly
- s. Filters clean
- t. Fan rotation direction

**END OF SECTION**



OWNER PURCHASE / CONTRACTOR INSTALLED - AIR HANDLING UNIT SCHEDULE																								
MARK	MANUFACTURER	MODEL #	UNIT CONFIGURATION	SERVICE	LOCATION	PHYSICAL DATA				SUPPLY FAN											REMARKS			
						WIDTH (IN.)	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LBS)	TOTAL SA CFM	MIN. OA CFM	FAN MOTOR TYPE	# OF FANS	FAN RPM	E.S.P. ("WC)	T.S.P. ("WC)	RATED H.P. (PER FAN)	B.H.P. (PER FAN)	VOLT.	PH.		MCA	MOCF	VFD
AHU-1	TEMPTRON	CUSTOM	INDOOR	SOUTH SIDE	PENTHOUSE	128	298	109	15361	30700	6140	PLENUM PLUG	6	2820	2.50	5.48	10.0	6.3	208 V	3	163 A	175	Yes	ALL
AHU-2	TEMPTRON	CUSTOM	INDOOR	NORTH SIDE	PENTHOUSE	126	298	109	15459	30250	6050	PLENUM PLUG	6	2801	2.75	5.48	10.0	6.2	208 V	3	163 A	175	Yes	ALL

- REMARKS:**
- AIR HANDLING UNIT (AHU-1) SHALL BE PROVIDED WITH AN ECONOMIZER MIXING SECTION WITH TOP RETURN AND BACK OUTSIDE AIR CONNECTIONS, MERV 8/13 COMBO PRE FILTER, HOT WATER HEATING COIL, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL AND DISCHARGE PLENUM WITH BOTTOM DISCHARGE (AHU-1) AND FRONT DISCHARGE (AHU-2).
  - PROVIDE PREMIUM EFFICIENT MOTOR COMPLETE WITH TYPE H INSULATION.
  - UNIT SHALL HAVE THE FOLLOWING ELECTRICAL POWER CONNECTIONS: (1) 208V/3PH FOR SUPPLY FAN VFD, (1) 120V/1PH TO INTERIOR LIGHTS VIA FACTORY MOUNTED EXTERNAL J-BOX.
  - REFER TO AHU-1 SECTION DETAIL ON THIS SHEET FOR DOOR, COIL, CONNECTIONS LOCATIONS.
  - MANUFACTURER SHALL PROVIDE FACTORY START UP SERVICES AS PART OF THE BID.
  - PROVIDE FAN REMOVAL RAIL AT SUPPLY FAN ARRAY FOR FAN MOTOR REMOVAL.
  - PROVIDE STAINLESS STEEL DRAIN PANS AT COOLING COIL SECTIONS.
  - PROVIDE CAMFL. C78 FILTER CLIPS AT FILTER RACKS. CLIPS SHALL BE SIZED TO MATCH FILTER DIMENSIONS.
  - PROVIDE INDIVIDUAL BACKDRAFT DAMPERS AT ALL FANS.
  - FAN ARRAY VFD'S, DAMPER ACTUATORS, AND ALL OTHER CONTROLS APPURTENANCES TO BE PROVIDED BY CONTROLS CONTRACTOR IN SEPARATE BID PACKAGE.
  - LOCATION OF AHU-1'S SUPPLY DROP IS CRITICAL AND SHALL BE MATCHED DIMENSIONALLY FROM THE BACK OF THE UNIT AS INDICATED IN THE SECTION DETAIL ON THIS SHEET.
  - ALTERNATIVE 1: PROVIDE UNIT WITH COONEY COOLING COIL IN LIEU OF A STANDARD COOLING COIL.

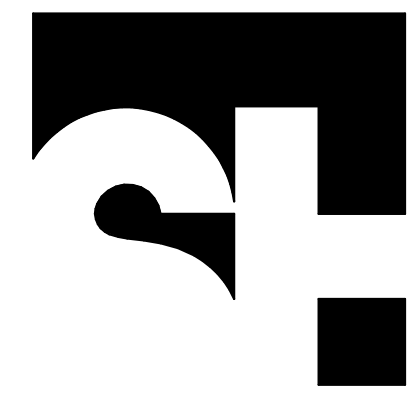
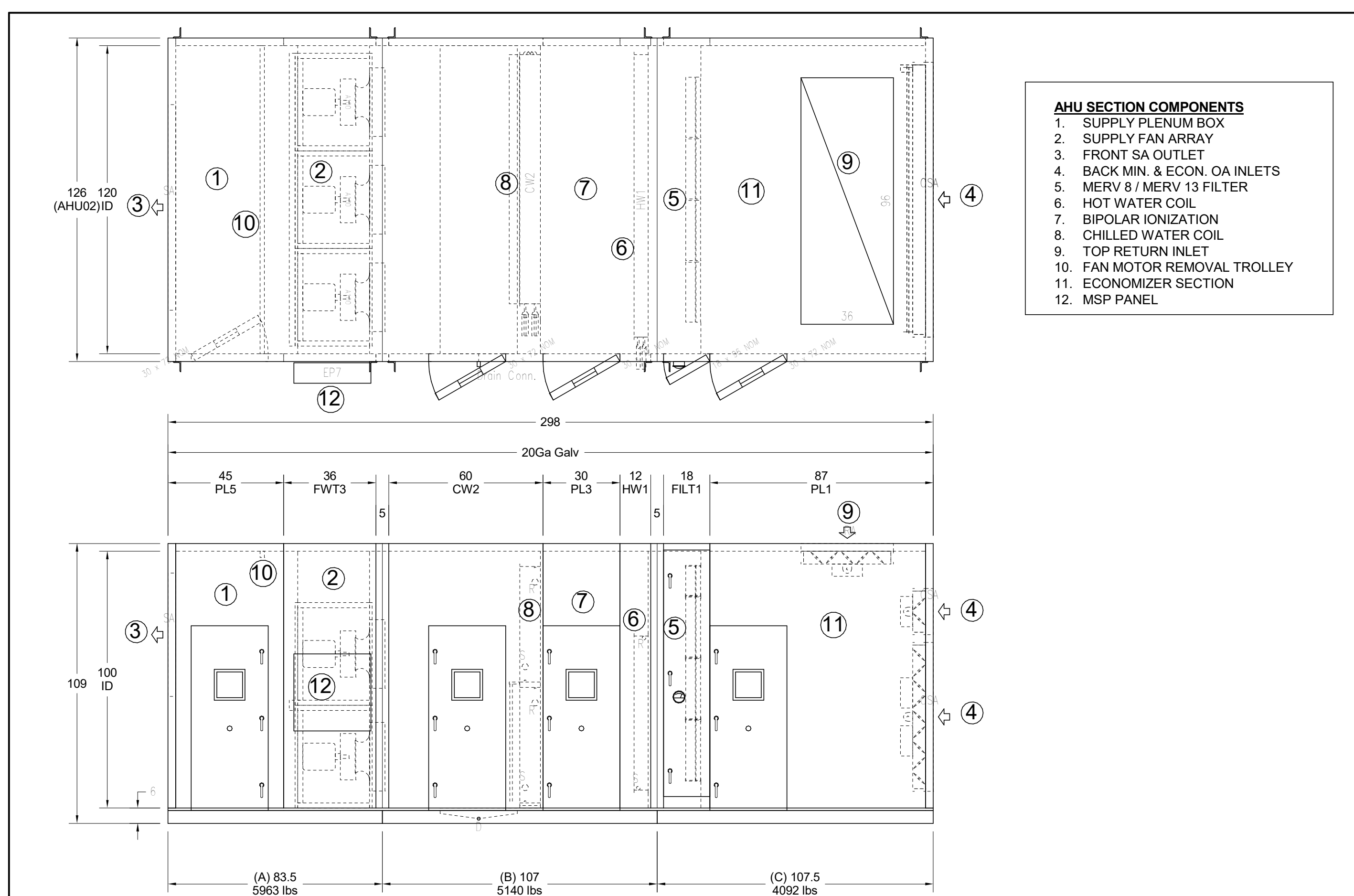
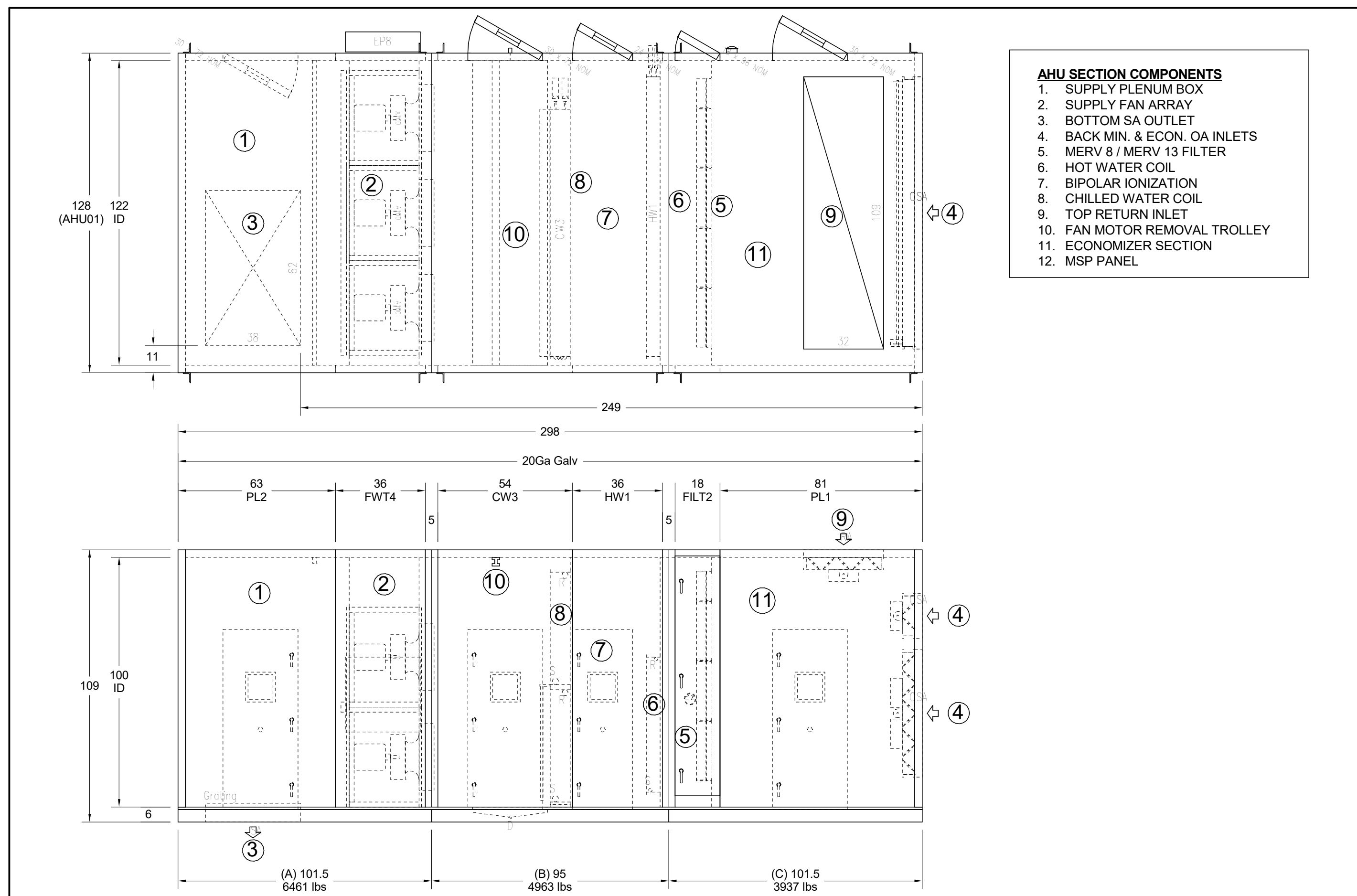
OWNER PURCHASE / CONTRACTOR INSTALLED - AIR HANDLING UNIT SCHEDULE - CHILLED WATER COIL															
MARK	COOLING CAPACITY (MBH)	COOLING CAPACITY SENSIBLE (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	MAX. FACE VELOCITY (FPM)	MAX. AIR PRESSURE DROP (IN. WG)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	MAX. WATER PRESSURE DROP (FT)	MAX. COIL ROWS	NO. OF COILS	MAX. FIN SPACING (FINS/IN)
AHU-2	1025.2	764.0	76.5	64.1	52.5	52.1	499	0.64	42	56	146	12.68	4	2	12

OWNER PURCHASE / CONTRACTOR INSTALLED - AIR HANDLING UNIT SCHEDULE - HOT WATER COIL													
MARK	TOTAL HEATING CAP (MBH)	EAT (°F)	LAT (°F)	MAX. FACE VELOCITY (FPM)	MAX. AIR PRESSURE DROP (IN. WG)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	MAX. WATER PRESSURE DROP (FT)	MAX. COIL ROWS	NO. OF COILS	MAX. FIN SPACING (FINS/IN)	
													AHU-1
AHU-2	330.5	46.5	60.8	462	0.05	140	110	22.3	2.03	1	1	6	

OWNER PURCHASE / CONTRACTOR INSTALLED - AIR HANDLING UNIT SCHEDULE - FILTER SECTION												
MARK	TYPE	FILTER EFFICIENCY	FACE VELOCITY (FPM)	PRESSURE DROP (CLEAN) ("WC)	PRESSURE DROP (DIRTY) ("WC)	TYPE	FILTER EFFICIENCY	FACE VELOCITY (FPM)	PRESSURE DROP (CLEAN) ("WC)	PRESSURE DROP (DIRTY) ("WC)	REMARKS	
												AHU-1
AHU-2	2" PLEATED	MERV 8	495	0.24	1.00	4" RIGID BOX FILTER	MERV 13	495	0.58	1.50	ALL	

OWNER PURCHASE / CONTRACTOR INSTALLED - RETURN FAN UNIT SCHEDULE																								
MARK	MANUFACTURER	MODEL #	UNIT CONFIGURATION	SERVICE	LOCATION	PHYSICAL DATA				RETURN FAN											REMARKS			
						WIDTH (IN.)	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LBS)	TOTAL RA CFM	FAN MOTOR TYPE	# OF FANS	FAN RPM	E.S.P. ("WC)	T.S.P. ("WC)	RATED H.P. (PER FAN)	B.H.P. (PER FAN)	VOLT.	PH.	MCA		MOCF	VFD	
AHU-1	TEMPTRON	CUSTOM	INDOOR	SOUTH SIDE	PENTHOUSE	128	298	109	15361	29850	29850	PLENUM PLUG	6	1924	2.50	3.07	5	3.6	208 V	3	86 A	100	Yes	ALL
AHU-2	TEMPTRON	CUSTOM	INDOOR	NORTH SIDE	PENTHOUSE	126	298	109	15459	29850	29850	PLENUM PLUG	6	1924	2.50	3.07	5	3.6	208 V	3	86 A	100	Yes	ALL

- REMARKS:**
- RETURN FAN UNIT SHALL BE PROVIDED WITH AN RELIEF SECTION WITH TOP RELIEF CONNECTION. BOTH FAN ARRAYS ARE TO BE LOCATED IN A SINGLE ENCLOSURE.
  - PROVIDE PREMIUM EFFICIENT MOTOR COMPLETE WITH TYPE H INSULATION.
  - UNIT SHALL HAVE THE FOLLOWING ELECTRICAL POWER CONNECTIONS: (1) 208V/3PH FOR RETURN FAN (AHU-1) VFD, (1) 208V/3PH FOR RETURN FAN (AHU-2) VFD, (1) 120V/1PH TO INTERIOR LIGHTS VIA FACTORY MOUNTED EXTERNAL J-BOX.
  - REFER TO RF-1&2 SECTION DETAIL ON THIS SHEET FOR DOOR LOCATIONS.
  - MANUFACTURER SHALL PROVIDE FACTORY START UP SERVICES AS PART OF THE BID.
  - PROVIDE FAN REMOVAL RAIL AT EACH FAN ARRAY FOR FAN MOTOR REMOVAL.
  - PROVIDE STAINLESS STEEL DRAIN PANS AT COOLING COIL SECTIONS.
  - PROVIDE INDIVIDUAL BACKDRAFT DAMPERS AT ALL FANS.
  - FAN ARRAY VFD'S, DAMPER ACTUATORS, AND ALL OTHER CONTROLS APPURTENANCES TO BE PROVIDED BY CONTROLS CONTRACTOR IN SEPARATE BID PACKAGE.



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MECHANICAL SCHEDULES & DETAILS  
MCS FIFTH FLOOR RENOVATION  
UNIVERSITY OF KENTUCKY  
LEXINGTON, KENTUCKY

7 APRIL 2023  
UKY2205

M1.0

EARLY PROCUREMENT PACKAGE - EQUIPMENT