University of Kentucky®

Procurement Services

Request for Proposal
UK-2564.0-13-25
Proposal Due Date – 10/04/2024

UK Health Education Building
Early Equipment Purchases

UK Project #2564.0

Revised 8-23-2024.

University of Kentucky
Procurement Services

REQUEST FOR PROPOSAL (RFP)

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

PROPOSAL NO.:	**UK-2564.0-13-25**	**RETURN ORIGINAL COPY OF PROPOSAL TO:**
Issue Date:	**09/05/2024**	**UNIVERSITY OF KENTUCKY**
Title:	**UK Health Education Building – Early Equipment Purchases**	**PROCUREMENT SERVICES**
Purchasing Officer:	**Ken Scott**	**411 S LIMESTONE**
Phone:	**859.257.9102**	**ROOM 322 PETERSON SERVICE BLDG.**
Email:	**Kenneth.Scott@uky.edu**	**LEXINGTON, KY 40506-0005**

IMPORTANT: PROPOSALS MUST BE RECEIVED BY: 10/04/2024 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, and164.390;
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 KRS45A.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

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

Table of Contents

ATTACHMENTS:

- **Attachment A – Financial Offer for RFP**
- **Attachment B - Project General Conditions**
- **Attachment C - Project Special Conditions**
- **Attachment D - BP-04 Bid Schedule**
- **Attachment E - BIM General Requirements**
- **Attachment F- LEAN Subcontract Exhibit**
- **Attachment G -SK-001**

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/offerors’ 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, Procurement Services, 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 Requests for Proposals (RFP) is issued to solicit proposals from qualified, experienced, financially sound, and responsible firms to provide equipment and materials for a complete electrical equipment package for the University of Kentucky.

- TC-017A – Generators
- TC-017B – Automatic Transfer Switches
- TC-018 – Air Handling Units
- The Contractor who is chosen to implement the system must provide a single point of contact during the project period. This single point of contact will have full responsibility for ensuring the project requirements are completed.
- This Contractor shall include all Testing and Certification of all equipment

To be considered a responsible bidder, the contractor must have successfully completed previous projects with similar size, scope of work, and quality requirements as the project being quoted. The University and Construction Manager reserves the right to contact any person materially involved with the referenced projects.

The scope of services for this contract is further detailed in section **7.0 Scope of Services**.

No labor will be required – This package is for material only – delivered to the job site. The scope of work of this Project consists of the supply and warranty of all materials and products including transportation, as herein specified in this RFP and Attachments. Requirements Include:

- Provide full submittal documentation prior to releasing the order.
    - The design shall comply with all applicable codes, Owners standards http://www.uky.edu/Services/CPMD/ukstandards/Divisions/Master.html, rules, and regulations.
- Provide a single point of contact during the warranty period for all repairs. This single point of contact will have full responsibility for ensuring repairs are completed.
- After the warranty period has expired the Offeror must offer a maintenance contract on the system with a single point-of-contact for all repairs.

2.2 Background Information

This package involves the Electrical Equipment and Air Handler procurement for the Rankin Health Education Building at the University of Kentucky.

2.3 University Information

Upon his arrival in 2011, President Eli Capilouto set 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 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 help ensure a Kentucky tomorrow that is healthier, wealthier and wiser than it is today.

Our mission is to advance Kentucky.

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 900 acres. The university enrolled more than 32,000 students in Fall 2022 and has approximately 25,000 employees, including nearly 3,000 full-time faculty.

UK is one of a small number of universities in the United States that has programs in agriculture, engineering, law, fine arts and a full complement of health colleges including medicine and pharmacy, on a single campus alongside an academic health system, leading to groundbreaking discoveries and unique interdisciplinary collaboration.

The state's flagship university consists of 18 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; Honors; 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. UK's research faculty, staff and students are establishing UK as one of the nation's most prolific public research universities. UK researchers were awarded more than $452.9 million in extramural grant and contract funding in fiscal year 2022. Fifty-six percent of this funding comes from agencies in the federal government ($256 million) such as the National Institutes of Health, National Science Foundation, Department of Energy, Department of Defense and numerous other federal, state and industry sponsors. Expenditures from research and development (R&D) activities at the university generate more than $772 million in economic development across the Commonwealth of Kentucky and support more than 4,395 jobs.

With more than 70 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 equine disease research.

The Center for Applied Energy Research (CAER) is internationally recognized for research in algae for carbon dioxide clean up, carbon materials, concrete and cement, emissions control in utilities, energy policy, fuels research, hydrogen, materials characterization and plant optimization.

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 designation was renewed in 2018.

Both CAER and Markey are cornerstones of seven Research Priority Areas (RPAs) at the University of Kentucky. These areas — chosen based on local relevance, existing funding strength, sustainability and disciplinary scholarly diversity — focus UK's top research talent on the most pressing challenges confronting our state.

The University of Kentucky is the recipient of a 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 29 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. Licensed for 965 beds across UK Albert B. Chandler Hospital, Kentucky Children's Hospital and UK Good Samaritan Hospital, the system is 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. Since 2014, the number of patients served by the medical enterprise has nearly doubled, with more than 38,000 discharges in 2022.

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 the new patient care pavilion is the leading health care facility for advanced medical procedures in the region, our talented physicians consult with and travel to our network of affiliate hospitals so Kentuckians can receive the best health care available close to their home and never need to leave the Bluegrass for complex subspecialty care.

As of December 1, 2022, 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 composed 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.

The University of Kentucky Board of Trustees on Friday April 26, 2024 approved plans to proceed with the acquisition of St. Claire HealthCare in Morehead. The move for St. Claire to become part of UK will expand clinical and academic programs as well as result in greater access to high-quality patient care for more Kentuckians. St. Claire can continue its 60-year tradition of serving Northeastern Kentucky for decades to come, operating under the name UK St. Claire. St. Claire HealthCare is one of the largest employers in the region, with over 1,200 staff members, including a growing medical staff of more than 125 physicians and nearly 70 advanced practice professionals representing more than 30 medical specialties. It includes the largest rural hospital in Northeastern Kentucky, seven primary care locations located within five counties, a multi-specialty medical

pavilion, two urgent care centers, a pediatrics clinic, as well as a retail pharmacy, counseling center, medical equipment and supply store, and an outpatient center. Additionally, St. Claire HealthCare provides home health and hospice services in eight counties within its 11-county service region. The acquisition was finalized on July 1, 2024.

UK's agenda remains committed to accelerating the university's academic excellence in all areas and gaining 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. This commitment is all part of the university's mission as a 21st century flagship and land-grant research university. From its Nobel Laureates to cutting-edge work in addressing health disparities, and from the artistic wonders that stir souls to our scientific creativity that inspires minds, UK seeks a brighter future through the contributions of our faculty, staff, students and alumni.

We are the University of Kentucky. We are committed to advancing Kentucky in everything that we do.

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 Economic Engagement and Procurement

The University of Kentucky is committed to serving as an advocate for Kentucky located businesses as part of its on-going workforce development and economic development efforts.

The University desires to increase the amount of goods and services acquired from Kentucky located businesses. The University encourages its suppliers to support and assist in this effort.

The University's goals for increasing participation in procurement projects include but are not limited to the following:

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

For additional information regarding how Kentucky located suppliers may participate in this Request for Proposal, submit any questions to the Procurement 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	09/05/2024
Pre-Proposal Conference (Optional)	09/13/2024 *Via Zoom
Deadline for Written Questions	3 p.m. Lexington Time on 09/20/2024
RFP Proposals Due	3 p.m. Lexington Time on 10/04/2024

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
- 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:

Ken Scott
Procurement Services
University of Kentucky
322 Peterson Service Building
Lexington, KY 40506-0005
Phone: (859) 257-9102
Fax: (859) 257-1951
E-mail: Kennneth.Scott@uky.edu

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

3.3 Pre-Proposal Conference

A pre-proposal conference will be held on 09/13/2024 at 1:30 P.M. via Zoom: https://uky.zoom.us/j/89812102797 . This meeting is to allow prospective contractors an opportunity to ask questions and clarify the University's expectations. This conference provides offerors with an opportunity for oral questions.

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 Procurement Services 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 should 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 should 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 should 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) electronic storage device (USB) clearly marked with the proposal number and name, firm name and what is included (Technical Proposal) and one (1) printed copy.

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

  Do not password protect the electronic storage devices.

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 should be enclosed in sealed envelopes to the above referenced address and should 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 should be submitted in a sealed envelope and the financial proposal should be submitted in a sealed envelope under separate cover. Both sealed envelopes should 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 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 should 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 Procurement Services, 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 should 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 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 Procurement Services as part of the award process. Further, should any company or business information change during the life of the contract, successful Contractor agrees to update this information in PaymentWorks as applicable. Supplier agrees to and should be responsible for all updates on their PaymentWorks account as it relates to submitting new remit-to addresses or other required supplier profile information. PaymentWorks provides support to all suppliers transacting with the University of Kentucky on the platform. Supplier agrees to and should be responsible for engaging PaymentWorks Support for any needed issues regarding updates or other matters to ensure their supplier account remains connected to the University.

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 should 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 should 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 should be in the form of a standard business letter and should be signed by an individual authorized to legally bind the offeror. It should 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 should 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 should 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 Invitation for Bids submission.

Business Description	Check All That Apply
Minority-Owned	
Woman-Owned	
Small Business	
Veteran-Owned	
LGBTQ-Owned	
Disability-Owned Business Entity (DOBE)	
Diversity Not Indicated	

Race/Ethnicity	Check One
Asian	
Black/African American	
Hispanic or Latino	
Native American	
Native Hawaiian/Pacific Islander	
White	
Other	
Prefer Not to Say	

Kentucky Located	Yes/No?
Kentucky Located – Please indicate whether your business entity is physically located within the Commonwealth of Kentucky.	

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 should 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.

1. Professional qualifications including history and organization, how the offeror would service a project in Kentucky, knowledge of the local market, offerors financial strength, and other information relevant to this project.
2. Provide an organization chart and resumes for key personnel whom will be involved with the project including but not limited to executives, designers, engineers, project managers, and/or field personnel.

4.6 Criteria 2 – Services Defined

Provide a brief narrative explaining how your company will accomplish the services described in this RFP, including number and type of staff (engineering, project management, etc.). In the narrative, please describe each phase of the work (design, equipment selection, installation, training and after warranty service).

4.7 Criteria 3 – Financial Proposal

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

4.8 Criteria 4 – Evidence of Successful Performance and Implementation Schedule

Please provide your company's approach to scheduling related to identification of long lead items, adhering to the time frame to complete Construction Drawings, and input to the Master Schedule regarding sequences and installation durations.

Provide indicated lead times for the following:

a. Electrical Studies
b. Shop Drawings
c. Lead Teams for all Equipment provided from approved submittals
d. Reference Attachment G- Project Schedule for Milestone Equipment Date

4.9 Criteria 5 – Other Additional Information

The offeror may present any creative approaches that might be appropriate. The offeror may also provide supporting documentation that would be pertinent to this RFP.

Lastly, please answer the following questions:

- Describe any investments and capabilities regarding AI/ML
- What is the average tenure of your clients (# of years a client uses your solution)?

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 should specifically address all criteria in their response. Any deviations or exceptions to the specifications or requirements should 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 should 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 Contract Term

The contract resulting from this RFP shall be awarded by Turner Construction. Please review Turner's Subcontractor Agreement Form 36 attached to this RFP. Offerors shall **NOT** submit their standard terms and conditions as exceptions to the Turner Subcontract Agreement.

6.2 Effective Date

The effective date of the contract should be the date upon which the parties execute it and all appropriate approvals, including that of the Commonwealth of Kentucky Government Contracts Review Committee, have been received.

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 should 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 should 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 to all contractors to prevent the imposition of unreasonable burdens on any contractor.

6.7 Entire Agreement

The RFP should be incorporated into any resulting contract. The resulting contract, including the RFP and those portions of the offeror's response accepted by the University, should 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, Procurement Services, reserves the right to terminate the resulting contract without cause with thirty (30) day 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 may 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	LIMITS
Workers' Compensation	Statutory Requirements (Kentucky)
Employer's Liability	$500,000/$500,000/$500,000
Commercial General Liability including operations/completed operations, products and contractual liability (including defense and investigation costs), and this contract	$1,000,000 each occurrence (BI & PD combined) $2,000,000 Products and Completed Operations Aggregate
Business Automobile Liability covering owned, leased, or non-owned autos	$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, Procurement Services. 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 Reports and Auditing (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 should 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). When submitting and signing a proposal, an offeror certifies 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 Personal Service Contract Policies (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, belong 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 may 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 Printing Statutes (NOT USED)

6.29 Requirement for Contract Administration Fee (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-30.

7.0 SCOPE OF SERVICES

The terms “Supplier”, Sub-contractor”, “Trade contractor” & “Contractor” will be used interchangeably throughout the contract documents. A Sub-contractor, Trade contractor, supplier, or contractor has a contract with Turner Construction Company, the Construction Manager. This Trade Contractor is responsible for all contract documents (specifications, drawings and scope of work). In the event of a conflict, this scope of work takes precedence.

The scope of work in this Trade Contract includes all labor, material, equipment, services, and supervision necessary to complete all work specified herein, in accordance with the Contract Documents. All work will be completed in accordance with local codes and ordinances. This work shall include but not be limited to the following (see section 7.1 for details):

7.1 Detailed Services Defined

The following information is intended to clarify and or further define the scope of work included in the bid documents. This shall not be construed as the entire scope of work for this work category. All work described or indicated in the respective specification sections or divisions listed shall be included, except as specifically excluded herein.

A.	GENERAL
1.	Provide material, equipment, and all else necessary to furnish and install complete the Scope of Work as required by the contract documents and as outlined below
2.	The following scope of work is intended to be general in nature. The purpose of this scope of work is not to identify or list every scope of work item already shown or described in the contract documents, but rather to coordinate, clarify, modify, and/or expand the scope.
3.	Detail references are included for convenience but are not intended to identify all applicable details. If the Contract Drawings and Specifications conflict, then the greater quantity and quality shall apply. The Scope of Work takes precedence over the drawings and specifications in the event of a conflict in trade assignment or responsibility. Attention is called to the Bid Manual and the Subcontractor shall include all costs necessary to provide all work to meet the requirements of this scope of work.
4.	This Trade Contractor (Supplier) is responsible for all work required to provide turnkey, complete, and operational systems in accordance with the Contract Documents, ready for installation and final connections by “others” (onsite electrical subcontractor). In this Scope of Work, the term "provide" shall be defined as meaning "furnish and deliver."
5.	Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed
6.	SITE LOGISTICS: Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance.
7.	Subcontractor understands that time is of the essence in the prosecution of Work under this agreement.
8.	All work of this Trade Contractor (Supplier) shall be properly coordinated with the Lexington Fayette Urban County Government (LFUCG), University of Kentucky, and any other authorities having jurisdiction

B.	**DOCUMENTS**
1.	All documents in bid manual including but not limited to: Drawings Specifications General Conditions Special Conditions
2.	Bid Manual including all **Sketches** and **Attachments** listed below
3.	**Attachments**
	Attachment A – Financial Offer for RFP

	Attachment G - BP-04 Bid Schedule Attachment H - BIM General Requirements Attachment I - LEAN Subcontract Exhibit
4.	**Sketches**
	SK-001
5.	**Specifications**
	The following specification sections are listed as the responsibility of the Subcontractor in defining its area of work on this project. Unless specifically indicated otherwise or excluded below, this Contractor is responsible for the complete specification sections indicated below. **Division 20 Complete** **Division 23 Complete** **Division 26 Complete**
6.	Divisions 00 and 01 of the Specifications are general in nature and apply to all Subcontracts. These sections are included “complete” as part of this Subcontract Agreement.
7.	The Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Bidding Requirements, Contracting Requirements and the use of the Construction Documents as a whole.

C.	SPECIFIC SCOPE ITEMS
1.	This contractor shall include necessary supervision normal and customary to the scope of work of this size, difficulty, and scale.
2.	This Trade Contractor (Supplier) to include all storage, shipping, and associated cost with material supplied and delivered to project site. All unloading, material handling and setting of equipment in the project site will be completed by others.
3.	Onsite storage is limited. Include off-site storage as necessary to ensure “Just-in-Time” deliveries of all equipment.
4.	**TC-017A**: Provide **Generator, Load Bank, and Inlet/Outlet Cabinet** COMPLETE in accordance with the documents. The intent of this scope is to provide information to the Generator for a lump sum price. The Generator supplier must provide all necessary costs for a complete package of all equipment as shown on the contract drawings and specifications. This supplier shall assume multiple deliveries for equipment to comply with project schedule and need. All warranties are to start from the substantial completion date. This supplier shall include participation in all start up, testing and commissioning of the supplied equipment.
5.	**TC-017B**: Provide **ATS’s** COMPLETE in accordance with the documents. The intent of this scope is to provide information to the Generator for a lump sum price. The ATSs’ supplier must provide all necessary costs for a complete package of all equipment as shown on the contract drawings and specifications. This supplier shall assume multiple deliveries for equipment to comply with project schedule and need. All warranties are to start from the substantial completion date. This supplier shall include participation in all start up, testing and commissioning of the supplied equipment.
6.	**TC-018**: Provide Air Handling Units (AHUs) COMPLETE in accordance with the documents. The intent of this scope is to provide information to the AHU mechanical equipment supplier for a lump sum price. The AHU Supplier must provide all necessary costs for a complete package of all mechanical equipment as shown on the contract drawings and specifications. This supplier shall adhere to all DIVISION 20 and 23 Specifications for all equipment supplied. This supplier shall provide all Air Handling Units per Mechanical schedules, schedule notes and details. This supplier shall provide all Filters per specifications and schedules, including all sets as noted, all sets to be delivered in multiple deliveries to site when and as directed. The fan motors shall be wired to a junction box mounted Motor Control Panel on unit exterior. A single junction box will be provided for each set of 2 Supply Fans and each set of 2 Return Fans. The junction boxes shall provide a single point wiring buss for supply fan power and return fan power from their respective VFD’s.

	This supplier shall provide Factory Startup and provide Field Supervision for assembly of the shipping splits by the installing subcontractor. The Units shall be field leak tested for Air Leakage after full assembly. The Manufacturer's representative shall inspect the installed units onsite prior to testing and review all testing results. Assume that each Air Handler will be tested separately. All warranties are to start from the substantial completion date. This supplier/manufacturer shall include participation in all start up, testing and commissioning of the supplied equipment.

D.	EXCLUSIONS
	The Scope of Work shall exclude the following:
1.	Payment & Performance Bond
2.	Unloading and Placing of Equipment at the project site

E.	ALLOWANCES
	The Contract Sum shall be the addition of a base bid amount plus allowances. It is expressly understood and agreed that all allowance work will be completed within the original schedule. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & written Allowance Authorization from Turner. Any unused funds remaining in these allowances will be credited back to the Project. Only direct Labor, Material, and Equipment costs authorized in writing by Turner after approval by the Owner are to be charged to the Allowance. The Subcontractor’s cost for all overhead and profit on the allowance amount shall be included in the base bid amount and not in the allowance amount.
1.	None

F.	SCHEDULE
1.	Schedule information is included within the bid manual **(Attachment G)** to aid the Subcontractor in anticipating material deliveries, and manpower and equipment requirements. The information describes only the major activities of this scope of work and does not attempt to describe any out of sequence work required.
2.	**The Contractor must confirm that you will meet the project schedule as indicated in the bid manual.** It is **absolutely critical** that the work of this contract be completed by the dates define. Shift work, multiple mobilizations, and out of sequence work will be required. It is imperative that all milestones be met. The Bidders shall include all necessary costs, including, but not limited to, premium time, shift work, out of sequence work, equipment, supervision, etc. to meet these milestones.
3.	Due to the critical nature of the schedule, the Trade Contactor must supply the Construction Manager a detailed plan for his production on the project within 20 calendar days of Contract Award. Please note that this plan must be compatible and complimentary to the Project Schedule. Plan shall include the following items: Starting, peak, and final manpower requirements, including subcontractors. Include production rates if requested Shift work plan. Number of Foremen Anticipated lead times and permit approval. The Trade Contractor shall work with the Construction Manager and Contractors in “Pull Planning” and the 6-week look-ahead schedule, including manpower information, on a weekly basis. Compliance is a prerequisite for payment.

G.	ALTERNATES
1.	The following “Alternate(s)” may be accepted and incorporated herein as part of the Scope of Work for the respective price. Inasmuch as these Alternates were anticipated from the inception of the project and were priced accordingly, all overhead, profit and escalation has been included within the lump sum amount and the price shall remain firm throughout the duration of the project, unless specifically noted. Indicate Add/Deduct Price on the Form of Proposal.
ALT.1	None

7.2 Optional Services (NOT USED)

8.0 FINANCIAL OFFER SUMMARY

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

8.1 Mandatory Services (Section 7.1)

See Attachment A

8.2 Optional Services (Section 7.2)

None

8.3 Alternate Pricing

None

8.4 Bond Cost

See Attachment A

8.5 Cost Breakdown

See Attachment A

8.6 Unit Prices

None

ATTACHMENT A

Financial Offer for UK-2564.0-13-25

8.1 Mandatory Services (Section 7.1)

Base Price for Equipment Package TC-01_____

Equipment Provided: _____

Equipment Price

Please complete and attach Section 7.1 to provide support for your firm fixed price offer.

The offeror agrees to furnish all materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the RFP including Attachments and as modified by the Addenda listed above.

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____)
(USE FIGURES)

Equipment Delivery

Freight included in Price: YES_____ NO_____

6% Sales Tax included in Price (Owner is Tax Exempt): YES_____ NO_____

Method of Shipment: _____

Transportation will take approximately: _____Days

Shipment date after receipt of order: _____

Shipment date after receipt of approval drawings: _____

Drawings/Manuals

Approval Drawings to be submitted _____# of weeks after order.

“AS Built” Drawings to be submitted _____ # of weeks after construction completion.

Help with Assembly (if required)

Provide contactor help with assemble? YES_____ NO_____

Start-up and Training

Number of Start-up Days Included: _____

Number of Training Days Included: _____

ATTACHMENT A

Financial Offer for UK-2564.0-13-25

8.4 Bond Cost

Cost of Performance and Payment Bond $_____

DO NOT INCLUDE THIS COST IN YOUR BASE OFFER

8.5 Cost Breakdown

Fill in the following breakdown of costs included in your base offer. Each item is to include labor, material & equipment. These will neither be considered unit prices nor will the numbers listed here limit obligations required in the solicitation documents. It will be used only to aid in verifying completeness of the offers.

	Description of Work	Quantity	Unit	Unit Cost	Total
1	Engineering & Design				$
2	Shop Drawings and Submittals				$
3	TC-017A Generator				$
4	TC-017A Load Bank				$
5	TC-017A Inlet/Outlet Cabinet				$
6	TC-017B ATSs				$
7	TC-018 AHUs				$
8	Freight				$
9	Remaining work not listed above				$
	TOTAL BID AMOUNT (This amount should match the Lump Sum listed above)				**$**
	Cost of Payment & Performance Bond **(DO NOT INCLUDE THIS COST IN BID AMOUNT)**				$

Financial Offer for UK-2564.0-13-25

9.0 DRAWINGS AND SPECIFICATIONS

The Offeror, in compliance with your Request for Proposal for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Offeror understands that successful offeror will enter into a contract with Turner Construction.

The Offeror hereby acknowledges receipt of the following Addenda:

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

TABLE OF CONTENTS
GENERAL CONDITIONS OF THE CONTRACT
FOR CONSTRUCTION BY TRADE CONTRACTORS
via CONSTRUCTION MANAGER AT RISK CONTRACT
University of Kentucky
Capital Construction Division

Contents

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION BY A CONSTRUCTION MANAGER AT RISK
University of Kentucky Capital
Construction Division

These General Conditions are binding upon the Construction Manager and all Sub-contractors as each are subject to the provisions contained herein.

ARTICLE 1 - DEFINITIONS

1.1 Wherever used in these General Conditions or in other Contract Documents, the following terms have the meaning indicated which are applicable to both the singular and plural thereof:

1.1.1 ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS (ASI) - The term "ASI" means a written order issued by the Consultant that clarifies or interprets the Contract Documents, that orders minor changes in the Work, that does not require an adjustment in either cost or time, and that does not require a Change Order.

1.1.2 BUSINESS DAY – The term "Business Day" means a Calendar Day that is not a Saturday, Sunday or legal holiday in Fayette County, Kentucky.

1.1.3 CALENDAR DAY - The term "Calendar Day" means a day of twenty-four hours measured from midnight to the next midnight

1.1.4 CHANGE ORDER - The term "Change Order" means a written order to the Construction Manager, signed by the Owner and issued after the execution of the Contract, directing a change in the Work or an adjustment in the Contract Amount or the Contract Time. A Change Order may be an agreed change by the Construction Manager and the Owner or it may be a unilateral change by the Owner.

1.1.5 CONSULTANT - The term "Consultant" means the person and/or entity, whether singular or plural, either Architect, Engineer or other Consultant, who is or are identified as such in the Contract Documents.

1.1.6 CONSTRUCTION MANAGER or CONSTRUCTION MANAGER AT RISK (CM) - The term "Construction Manager" or "Construction Manager at Risk" (CM) means the person or entity who will or has entered into a contract with the Owner that assumes the risk for construction of the Project as the construction manager, and who will provide consultation and collaboration regarding the construction during and after design of the Project. The CM shall execute and hold all construction Trade Contracts and Purchase Orders for the Project.

1.1.7 CONTRACT - The term "Contract" means the Contract between Owner and Construction Manager and consists of all Contract Documents as defined in Article 1.1.10 of these General Conditions.

1.1.8 CONTRACT AMOUNT - The term "Contract Amount" means the sum stated in the Agreement which represents the total amount payable by the Owner to the Construction Manager for the performance of the Work under the Contract Documents, plus or minus adjustments as provided for in the Contract Documents or by approved Change Orders.

1.1.9 CONTRACT DOCUMENTS - The "Contract Documents" include the Agreement of Contract between the Owner and the Construction Manager (the "Agreement"); the Request for Proposal; the General Conditions; the Special Conditions; the Construction Manager's Form of Proposal; the Construction Manager's Bonds; the Specifications, Drawings and Addenda for the construction of the Project which are to be used for bidding of the bid pack/Trade Contracts; and any Change Orders issued after execution of this Contract. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Owner and any Sub-contractor, or any person or entity other than the Construction Manager. Documents not included or expressly contemplated in this Article do not, and shall not, form any part of the Contract for Construction. Without limiting the generality of the foregoing, shop drawings and other submittals from the Construction Manager or its Sub-contractors and suppliers do not constitute a part of the Contract Documents. Except as

otherwise provided, where these Contract Documents obligate the Construction Manager to certain responsibilities or require the Construction Manager to perform certain actions, the Construction Manager may require these same responsibilities and/or actions of one or more Sub-contractors. However, assignment of such responsibilities or actions to one or more Sub-contractors shall not be construed to relieve the Construction Manager of its obligation to the University under this contract.–

1.1.10 CONTRACT TIME - The term "Contract Time", unless otherwise provided, means the specified number of consecutive Calendar Days following the stipulated commencement of the Work as stated in the Work Order, plus or minus adjustments as provided for by approved Change Orders, within which the Trade Contractor shall complete the Work required by the Contract and shall achieve certification of substantial and final completion.

1.1.11 KRS REFERENCES - Reference to “KRS” means the "Kentucky Revised Statutes" adopted by the Commonwealth of Kentucky, including all laws that may have been revised, amended, supplemented or new laws enacted.

1.1.12 OWNER - The term "Owner" means the University of Kentucky, a statutory body corporate existing pursuant to Sections 164.100 et seq. of the Kentucky Revised Statutes.

1.1.13 PROJECT - The term "Project" means the total construction of the Work performed under the Contract Documents, which may be the whole or a part, and which may include construction by the Owner or by separate contracts.

1.1.14 PROJECT MANAGER - The term "Project Manager", when used alone, means the Owner's representative responsible for administration and management of the Project. The Owner's Project Manager during construction shall be the designated University of Kentucky Capital Projects Management Project Manager that is in charge of the Project. The term “CM Project Manager” means the individual employed by the Construction Manager who is assigned to the Project to provide overall management during both the design and construction phases of the Project, and who has total responsibility for the successful completion of the Project

1.1.15 PROVIDE - The term "Provide," as used throughout the specifications, shall mean furnish, install and pay for.

1.1.16 SHOP DRAWINGS - The term "Shop Drawings" means drawings, diagrams, schedules, and other data specially prepared for the Work by the Trade Contractor or any Sub-contractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

1.1.17 SUBSTANTIAL COMPLETION - The term "Substantial Completion" is the point at which, as certified in writing by the Owner, a project is at the level of completion, in strict compliance with the contract, where (a) necessary approval by public regulatory authorities (and by other authorities having jurisdiction or as identified in Article 11.2, as necessary) has been given; (b) the Owner has received all required warranties and documentation, and (c) the Owner may enjoy beneficial use or occupancy and may use, operate, and maintain the project in all respects, for its intended purpose. Partial use or occupancy shall not necessarily result in the project being deemed substantially complete and shall not be evidence of Substantial Completion. In order for the Owner to enjoy beneficial use or occupancy and use, operate, and maintain the project in all respects, for its intended purpose, the stage or progress of the Work or a designated portion thereof shall be sufficiently complete, accessible, operable and usable, and all parts, systems and site Work shall be 100% complete, cleaned and available for the Owner’s full use without interruption in accordance with the Contract Documents, including but not limited to the provisions of Article 28 of these General Conditions. The Work will not be considered acceptable for Substantial Completion review until all Project systems included in the Work are operational as designed and scheduled, all designated or required governmental inspections and certifications have been made and approvals provided to the Owner, designated instruction of the Owner’s personnel in the operation of systems has been completed, and all final finishes within the Contract Documents are in place. In general, the only remaining Work shall be minor in nature so that the Owner and/or the Owner’s tenants could occupy the Project on that date and the completion of the Work by the Trade Contractor would not materially

interfere or hamper the Owner's or the Owner's tenants' normal business operations. As a further condition of Substantial Completion acceptance, the Construction Manager shall certify in writing that all remaining Work, the same being solely of a "punch list" nature, will be completed within thirty (30) consecutive Calendar Days following the date of Substantial Completion.

1.1.17.1The parties agree that "substantial completion" as defined in Article No. 2 of the Agreement and Article 1 of the General Conditions, as extended by approved Change Order(s) pursuant to Article 18.1 of the General Conditions, shall be the "date of completion specified in the contract" for purposes of KRS. 45A.250(2).

1.1.18 SUB-CONTRACTOR (Trade Contractor) - The term "Sub-contractor" ("Trade Contractor ") means the person, company, corporation, joint venture or other legal entity with whom the Construction Manager has executed a Contract for a portion of the Work.

1.1.19 WORK - The term "Work" means the scope of construction and services required by the Contract Documents and all approved Change Orders, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Trade Contractor to perform and complete the Construction Manager's obligations under the Contract in an expeditious, orderly and workmanlike manner. The Work may constitute the whole or a part of the Project.

1.1.20 WORK ORDER - The term "Work Order" means a written notice by the Owner to the Construction Manager authorizing the Construction Manager to commence Work under the Contract and establishing the beginning date from which the time for Substantial and Final Completion shall be established.

1.1.21 UNIT PRICE - The term "Unit Price" means the amount per unit of measurement for materials or services as described in the bid documents.

ARTICLE 2 - CONSULTANT

2.1 The Consultant will be the Owner's representative during construction and until the Work is complete. The Consultant will advise and consult with the Owner. The Owner's instructions to the Construction Manager may be forwarded through the Consultant.

2.2 The Consultant will regularly, but no less frequently that monthly, visit the site to become familiar with the progress of the Work, the quality of the Work being provided and to determine if the Work is proceeding in accordance with the Contract Documents. On the basis of these on-site inspections, the Consultant will inform the Owner of the progress of the Work, will advise the Owner of any defects and deficiencies observed in the Work and, when appropriate, will certify to the Owner that the Work in place equals or exceeds the amount requested by the Construction Manager on all applications for progress payments.

2.2.1 If applicable for the Work, the Consultant will verify to the Owner that the Trade Contractor(s) is performing erosion prevention and sediment control inspections as required by the Kentucky Division of Water Construction General Permit (KYR10) at least once every 7 days and shall include the findings in the site visit reports.

2.3 The Consultant will be the interpreter of the requirements of the drawings and specifications and any changes made to the drawings and specifications.

2.4 Claims, disputes, and other matters in question that arise relating to the execution or the progress of the Work shall be referred in writing to the Construction Manager by the Trade Contractor. The Consultant will provide a response in accordance with and subject to the provisions of Article 38 of these General Conditions.

2.5 The Consultant will have the authority to reject Work which does not conform to the Contract Documents or to the required level of quality and performance.

2.6 The Consultant will review and approve, or take other appropriate action upon receipt of the Trade Contractor(s) submittals such as Shop Drawings, product data, and samples. The review of submittals will be for general conformance with the design concept of the work, and for compliance with the information provided by the Contract Documents. Such review will not relieve the Trade Contractor(s) of any responsibility for errors or omissions in submittals, and will in no way constitute a waiver of or change to the requirements of the Contract Documents.

2.6.1 The Consultant's review and response will be completed with reasonable promptness with a goal of ten (10) business days or less. The Consultant's review of a specific item shall not indicate approval of an assembly of which the item is a component.

2.7 The Consultant will prepare Change Orders for the Owner to direct changes in the Work. Minor changes in the Work, not involving modifications to the contract cost or completion times and that are consistent with the purpose of Work, may be directed by the Consultant through Architect's Supplemental Instructions (ASI).

2.8 When requested by the Construction Manager, the Consultant will conduct inspections to determine if the Project is at the level of completion required by and is in strict compliance with the Contract such that the Owner may enjoy beneficial use or occupancy and may use, operate, and maintain the project in all respects for its intended purpose, as further defined in the Contract. If the level of completion warrants, the Consultant will confirm that all necessary approvals by public regulatory authorities or other authorities having jurisdiction have been given, will confirm that the Owner has received all required warranties and documentation, will recommend dates for certification of Substantial Completion and Final Completion by the Owner, and will complete and submit the Notice of Termination of coverage under the KPDES General Permit for Storm Water Discharges Associated with Construction Activity.

2.9 The Construction Manager will accept direction for the Work on the Project only from the Owner's Project Manager or from the Consultant. Requests for information from the Trade Contractor(s) shall be directed to the Consultant.

ARTICLE 3 - CORRELATION AND INTENT OF CONTRACT DOCUMENTS

3.1 Execution of the Contract by the Trade Contractor(s) is a representation that the Trade Contractor(s) has or shall thoroughly and carefully examine the site of the of Work; shall timely investigate all conditions which can affect the Work or its cost, including but not limited to availability of labor, materials, supplies, water, electrical power, roads, access to the site, uncertainties of weather, water tables, the character of equipment and facilities needed to perform the Work, and local conditions under which the Work is to be performed; and further, that the Construction Manager shall insure that the documents issued for bidding by Sub-contractors reflect the results of this investigation and are adequate to complete the Work. It is the responsibility of the Trade Contractor(s) to be familiar with and comply with all Federal, State, and local laws, ordinances, and regulations which might affect those engaged in the Work, and to be familiar with the materials, equipment, or procedures to be used in the Work, or which in any other way could affect the completion of the Work. The Trade Contractor(s) shall carefully study and compare the Contract Documents with each other and with other information provided to the Trade Contractor(s) by the Construction Manager, Consultant, or the Owner pursuant to the Contract Documents and shall notify the Owner and the Consultant via the Construction Manager in writing of any errors, inconsistencies or omissions in the Contract Documents recognized by the Trade Contractor(s). Any failure to properly familiarize itself with the proposed Work shall not relieve the Trade Contractor(s) from the responsibility for completing the Work in accordance with the Contract Documents.

3.2 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Trade Contractor(s). All labor or materials which are reasonably inferable from the Contract Documents and which are necessary to produce the desired result, even though not specifically mentioned in the Contract Documents, shall be included in the Work at no additional cost to the Owner.

3.3 In the event a question arises regarding the meaning or intent of the Contract Documents, the Trade Contractor(s) shall report it by preparing an RFI in eCommunication® to the Consultant. The Consultant shall

furnish, with reasonable promptness and with a goal of three (3) business days and by whatever means as may be appropriate, additional instructions necessary for the proper execution of the Work. All such drawings and instructions shall be consistent with the Contract Documents, true developments thereof, and reasonably inferable therefrom. The Work shall be executed in conformity therewith and the Construction Manager shall do no Work without proper drawings and instructions. Items indicated on drawings as "N.I.C." or "Not In Contract" are shown for explanation purposes only and are not to be included in this Contract.

3.4 The Contract Documents are complementary, and what is required by one shall be binding as if required by all. In case of conflicts between the various documents, the order of precedence will be as follows: (1) Addenda, (2) Special Conditions, (3) General Conditions, (4) Technical provisions of the Specifications and (5) Drawings.

3.5 Any notice to the Construction Manager from the Owner regarding this Contract shall be in writing and delivery and service of such notice shall be considered complete when sent by certified mail to the Construction Manager at Construction Manager's last known address. Such notice may also, at the Owner's election, be hand-delivered to the Construction Manager or the Construction Manager's authorized representative.

ARTICLE 4 - PRE-CONSTRUCTION CONFERENCE

4.1 Following the execution of the Contract, a pre-construction conference will be held. Representatives of the Capital Project Management Division, Consultant, Construction Manager, and all major Sub-contractors shall be present to discuss the time for construction, methods and plan of operation, authority of the Consultant, procedures for handling shop drawings, progress estimates and requests for payments, and other relevant issues. The time and location of this meeting will be the responsibility of the Construction Manager in consultation with the Consultant, Owner and other interested parties.

4.2 Environmental aspects of the project, including erosion prevention and sediment control (EPSC) and storm water management shall be discussed during this conference. The Group shall discuss the Storm Water Pollution Prevention Plan (SWPPP) to ensure that all parties understand the requirements. During this meeting the responsibility for reading the rain gage on a daily basis will be established. The Construction Manager will identify the initial measures to be installed prior to land disturbing activities beginning. Any modifications to the SWPPP due to constructability issues should be discussed at this conference.

ARTICLE 5 - SHOP DRAWINGS

5.1 The Trade Contractor(s) shall submit a shop drawing and product sample submittal schedule to the Construction Manager establishing dates for the submission of Shop Drawings and product samples prior to the submittal of the Trade Contractor(s)'s first application for payment for construction phase services. The schedule shall have been coordinated with all Sub-contractors and material suppliers as well as the Construction Manager's construction schedule and shall allow for adequate and reasonable time for review of the samples and submittals by the Consultant. The Trade Contractor(s) shall be responsible for compliance with the submittal schedule and shall insure that the submittal schedule is maintained in order to accurately reflect the status of processing all required submittals.

5.2 The Trade Contractor(s) shall review product samples and Shop Drawings for compliance with the requirements of the Contract Documents, and shall submit them to the Consultant via the Construction Manager in accordance with submittal procedure and schedule established. The Trade Contractor(s) review and submittal to the Consultant via the Construction Manager of any Shop Drawing or sample shall constitute a representation to the Owner and Consultant that a) the Trade Contractor(s) has determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or assumes full responsibility for doing so, and that b) each Shop Drawing or sample has been reviewed or coordinated with the requirements of the Work and the Contract Documents. Shop Drawings and submittal requirements shall not be deemed satisfied until approvable documents are received by the Consultant. Incorrect or incomplete submittals will be returned to the Trade Contractor(s) without action. No claim for additional time or extension of the

contract will be considered if such claim is the result of failure by the Trade Contractor(s) to provide correct, accurate, complete and approvable submittals.

5.3 The Consultant will review submittals with reasonable promptness, and take appropriate action or return submittals to the Trade Contractor(s) for corrections as may be required. The Trade Contractor(s) shall make any corrections required by the Consultant for compliance with the Contract and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until approved. The Trade Contractor(s) shall direct specific attention, in writing, or on resubmitted Shop Drawings, to revisions other than the corrections called for by the Consultant on previous submissions.

5.4 Where a Shop Drawing or sample submission is required by the specifications, no related Work shall be commenced until the submission has been accepted in writing by the Consultant. The review and acceptance shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The acceptance of a separate item will not indicate acceptance of the assembly in which the item functions. A copy of each accepted Shop Drawing and product sample shall be kept in good order by the Trade Contractor(s) at the site and shall be made available to the Consultant on request.

5.5 The Consultant's acceptance of Shop Drawings or samples shall not relieve the Trade Contractor(s) from the responsibility for any deviations from the requirements of the Contract Documents unless the Trade Contractor(s) has in writing called the Consultant's attention to such deviation at the time of submission and the Consultant has given written approval to the specific deviation. Any acceptance by the Consultant does not relieve the Trade Contractor(s) from responsibility for errors or omissions in the Shop Drawings.

ARTICLE 6 - LAYING OUT WORK

6.1 The Trade Contractor(s) will secure all data at the site of the building such as grades of lot, convenience of receiving and sorting material, location of public services, and other information which will have a bearing proposals or on the execution of the Work and shall address these issues in the preparation of scopes of work for the Subcontract bid packages. No allowance shall be made for failure of the Trade Contractor(s) to obtain such site information prior to submitting their proposal or to include such information in the Subcontract bid packages, and no adjustment to the Trade Contractor(s) Contract amount or stipulated time for completion shall be allowed when due to failure by the Trade Contractor(s) to do so.

6.2 The Trade Contractor(s) shall be responsible for all lines, levels and measurements of all Work executed under the Contract. The Trade Contractor(s) shall verify all dimensions before laying out the Work and will be held responsible for any error resulting from failure to do so. Working from lines and levels established by the property survey or by other Contract Documents, and as shown in relation to the Work, the Trade Contractor(s) will establish and maintain bench marks and other dependable markers to set lines and levels for Work at each area of construction and elsewhere on the site as needed to properly locate each element of the entire Project. The Trade Contractor(s) shall calculate and measure from the bench marks and dependable markers required dimensions as shown (within recognized tolerances if not otherwise indicated), and shall not scale drawings to determine dimensions. The Trade Contractor(s) shall advise Sub-contractors and trades persons performing Work of marked lines and levels provided for their use in layout work. The Trade Contractor(s) shall verify layout information shown on drawings as required for the Work.

6.3 The Trade Contractor(s) shall be responsible for coordination of the installation of all elements of the Work, including preparation of coordination drawings if required by the Contract Documents or deemed necessary by the Trade Contractor(s) for performance of the Work.

6.4 If any encroachments are made by the Trade Contractor(s) or any Sub-contractor on any adjacent property, the Trade Contractor(s) shall, at the Trade Contractor(s) expense, and within thirty (30) Calendar Days after written notice from the Owner or the Consultant, correct any encroachments and obtain approval from the owner of such adjacent property for any encroachments that cannot be feasibly corrected. The Trade Contractor(s) shall not be entitled to any adjustment to the Contract Amount or the Contract Time as a result of any such encroachment or the correction thereof.

ARTICLE 7 - PLANS, DRAWINGS, SPECIFICATIONS AND RECORD DRAWINGS

7.1 Unless otherwise provided in the Contract Documents, the Owner will furnish the Construction Manager free of charge one electronic or reproducible copy of the Drawings and Specifications for execution of the Work. The Trade Contractor(s) shall pay for the cost of duplication of all sets required over and above this amount.

7.2 The cost of additional plans, specifications and official contract documents for use by Sub- contractors for bidding and for construction shall be borne by the Trade Contractor(s) or by the Sub-contractors. Arrangements for orders and payment for plans, specifications and other contract documents must be made with Lynn Imaging, Lexington, Kentucky (http://www.ukplanroom.com) or by phone at 1.800.888.0693 or 859.255.1021) before a set of documents will be issued.

7.3 The Trade Contractor(s) shall keep one copy of all Contract Documents, including Drawings, Specifications and Shop Drawings on the site and in good order. A qualified representative of the Trade Contractor(s) shall record on these documents, from day to day as Work progresses, all changes and deviations from the Contract Documents. Prior to Substantial Completion, each Trade Contractor (via the Construction Manager) shall complete and turn over to the Consultant the As-Built drawings, with a digital copy (in PDF format) submitted to the Owner simultaneously. The As-Built drawings shall consist of a set of drawings which indicate all field changes that were made to adapt to field conditions, changes resulting from Change Orders and all concealed and buried installations of piping, conduit and utility services. All buried and concealed items, both inside and outside the facility, shall be accurately located on the As-Built drawings as to depth and in relationship to not less than two permanent features such as interior or exterior wall faces. The As-Built drawings shall be clean and all changes, corrections and dimensions shall be given in a neat and legible manner in a contrasting color. For any changes or corrections in the Work which are made subsequent to the Substantial Completion Inspection, revisions shall be made to the As-Built drawings and submitted to the Consultant prior to final payment. Approval of the final payment request shall be contingent upon compliance with these provisions.

7.4 All drawings, specifications and copies thereof, furnished by the Consultant to the Owner, are the property of the University of Kentucky. They shall not be used by the Consultant, Construction Manager, or any Sub-contractor or Supplier on any other Project.

ARTICLE 8 - TEMPORARY UTILITIES

8.1 The Trade Contractor(s) shall provide and pay for, unless modified in the Special Conditions, all temporary conveniences including, but not limited to, wiring, lighting, power and electrical outlets, heat, water, and sanitary facilities required for construction. In the event the Owner elects to make available, at no cost to the Trade Contractor(s), the electric power required for construction activities, the electric power supplied shall not be utilized as a means to provide temporary heat or for welding.

8.2 The Trade Contractor(s) is responsible for paying all utility costs, whether the costs are from an outside utility company or from the University, for utility services used in the course of completing the Work. The Trade Contractor(s) shall provide temporary heating, ventilation, telephones, water, electricity, portable gas, lighting for the Work, safety lighting, security lighting, and trash removal/dumpster service for both Trade Contractor(s) and Sub-contractor use during the Project. Work and safety lighting shall be provided continuously during working hours. Security lighting shall be provided at all hours of darkness.

ARTICLE 9 - MATERIALS, EQUIPMENT, APPLIANCES, AND EMPLOYEES

9.1 Unless otherwise provided in the Contract Documents, the Trade Contractor(s) shall provide and pay for all materials, labor and personnel, tools, equipment, construction equipment and machinery, utilities, supplies, appliances, transportation, taxes, temporary facilities, licenses, permits and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and the proper execution and completion of the Work safely, without damage to persons and property, and in compliance with all applicable law. The

Trade Contractor(s) shall furnish, erect, maintain, and remove at the completion of the Contract, all temporary installations as may be required during the construction period.

9.2 Immediately following the execution of each of the Trade Contracts, the Trade Contractor(s) shall determine the source of supply for all materials required under that Trade Contract and the length of time required for their delivery, and shall assure that orders are placed for such materials in sufficient time to assure delivery to the site so that such materials are available to be incorporated into the Work when needed to comply with the schedule of Work.

9.3 The Trade Contractor(s) shall immediately notify the Consultant (via the Construction Manager) in writing of any known problems with the procurement, fabrication or ordering of any materials. Unless changes are approved in writing by the Consultant, the Trade Contractor(s) will not be excused for delays in securing materials specified.

9.4 The Trade Contractor(s) or Sub-contractors shall not place purchase orders or issue contracts for materials, supplies, equipment and services necessary to complete this Project using the name of the University of Kentucky. All orders placed by the Trade Contractor(s) that are related to this Project must use the name of the Trade Contractor(s) or Sub-contractor placing the order. The use of the University of Kentucky's name for ordering purposes is strictly prohibited. Payment for all goods and services required for the completion of the Work is the sole responsibility of the Trade Contractor(s). Any invoices received at the University that are related to this Project will be immediately forwarded to the Trade Contractor(s). Copies of these invoices will be made and placed in the Trade Contractor(s)'s file and proof must be provided that these invoices have been paid in full prior to the processing of the next scheduled application for progress payment.

9.5 The route for delivery of all materials to the Project shall be coordinated with the Owner's Project Manager.

9.6 The Trade Contractor(s) shall be responsible for the proper and adequate storage of materials and equipment. Unless otherwise provided in the Contract Documents, all materials shall be of good quality and new. Workmanship and materials supplied and incorporated into this Work shall be of first quality. The Trade Contractor(s), if required, shall furnish satisfactory evidence as to the kind and quality of materials.

9.7 The Trade Contractor(s) shall at all times enforce strict discipline and good order among all employees and Sub-contractors. The conduct of all individuals performing Work or operations related to the Work is the responsibility of the Trade Contractor(s). The consumption of alcohol or drugs on the job by any workers is strictly prohibited. Any individual apprehended under the influence of alcohol or drugs on the premises at any time shall be subject to automatic removal from the Project by the Construction Manager, the Consultant or the Owner. Improper conduct of any kind will not be permitted and may result in the offending individual, Sub-contractor or Trade Contractor(s) being barred from the Owner's premises. The Trade Contractor(s) shall not permit the employment on the Project of any person unfit or not skilled in the Work assigned.

ARTICLE 10 - ROYALTIES AND PATENTS

10.1 The Trade Contractor(s) shall pay all royalties and license fees. If a particular process, product 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 Trade Contractor(s) is responsible for payment of all associated royalties. The Trade Contractor(s) hereby agrees to indemnify, defend and hold the Owner, and any subsidiary, parent, or affiliates of the Owner, or other persons or entities designated by the Owner, and their respective directors, officers, agents, employees and designees (collectively, the “Indemnities”) harmless from all losses, claims, liabilities, injuries, damages and expenses, including attorneys’ fees and legal expenses, that the Indemnities may incur as a result of the Trade Contractor(s)’s failure to strictly comply with its obligations under this Paragraph 10.1.

ARTICLE 11 - SURVEYS, PERMITS, REGULATIONS, AND STANDARD CODES

11.1 The Owner will furnish only such surveys that are specifically required by the Contract Documents. Approvals, assessments, and easements for permanent structures or permanent changes in existing structures shall be secured and paid for by the Owner, unless otherwise specified. All required utility tap-on fees shall be secured and paid for by the Trade Contractor(s), or included in a Trade Contract, including the Lexington-Fayette Urban County Government (LFUCG) sewer tap-on fee**.** All construction permits, where required by local ordinances, except excavation permit, shall be obtained by the Trade Contractor(s), but no fee shall be charged to or paid by the Trade Contractor(s) as the Owner is exempt from such charges. A Contractor's license fee for doing business in the locale, if applicable, shall be paid for by the Trade Contractor(s).

11.2 All branches of Work shown on the plans and specifications shall be executed in strict compliance with all state and federal regulations and codes, with all national codes, and with the requirements of both ADA and JCAHO when applicable.

11.3 The Contractor, on projects disturbing 1 acre or more, or projects less than 1 acre that are part of a large common development plan, including grading, clearing, excavation, material laydown or other earth moving activities, shall assure full compliance with the requirements of the KYR10 and shall:

11.3.1 File a Notice of Intent (KPDES FORM eNOI-SWCA) with the Kentucky Division of Water and copy the UKCPM Project Manager and Water Quality Manager prior to the start of any excavation, grading or site development work.

11.3.2 The permittee (contractor) shall develop a Stormwater Pollution Prevention Plan (SWPPP) based on the Erosion Prevention and Sediment Control Plan (EPSC) as a minimum design standard. Ensure all requirements of KYR10 are fully addressed in the SWPPP. **Once the SWPPP is written, forward a copy to the Capital Projects Project Manager and to the Water Quality Manager for approval. Work cannot begin until SWPPP is approved and permit coverage obtained.**

11.3.3 Install BMP's such as, basins, traps, drainage, and sediment barriers before beginning land disturbing activities, including the construction entrance/exit. Once prevention measures have been installed, grading can commence. In the event a new construction entrance is added to the site, this new entrance must be built according to the EPSC design details with a wheel wash, a water supply and a sediment catch basin for washed wheel sediment.

11.3.4 Maintain all measures in working condition. Perform maintenance activities identified during inspections prior to the next rain event. Remove sediment from BMPs when 1/3 the storage volume has been filled.

11.3.5 Stabilize disturbed areas within 14 days of inactivity or reaching final grade on any portion of the site according to permit requirements.

11.3.6 Inspect the site every 7 calendar days and after each rainfall of ½"or more. Document site conditions, rainfall, maintenance activities needed and performed, stabilization needed and performed, and where new measures are needed. Discuss deficiencies with UK Project Manager and Water Quality Manager and note on the SWPPP Inspection Sheets.

Per the KPDES Permit, Section 2.1.7. "Inspections – Permittee Conducted". "Inspections shall be performed by personnel knowledgeable and skilled in assessing conditions at the construction site that could impact storm water quality and assessing the effectiveness of erosion prevention measures, sediment control measures, and other site management practices chosen to control the quality of the storm water discharges. Inspectors shall have training in storm water construction management such as Kentucky Erosion Prevention & Sediment Control (KEPSC), Certified Professional in Stormwater Quality (CPSWQ), Certified Erosion, Sediment and Stormwater Inspector (CESSWI), or other similar training."

Inspections shall include a tour of the total site and verification that all BMPs are performing as constructed. Inspector shall certify that all observations are correct as stated and sign and date the inspection form.

11.3.7 Keep Permit, SWPPP, weekly/rain event inspections sheets in binder in construction trailer. Any BMP change/alteration from SWPPP and EPSC plan must be noted on the EPSC and SWPPP.

11.3.8 No soil and sediment shall leave the construction site. BMPs shall be repaired immediately if failure has occurred. No Mud shall be permitted on any street. All entrances/exits shall have a means by which to wash wheels. If an entrance/exit does not have a wheel wash, that exit shall not be used in muddy conditions. If for any reason mud is tracked offsite, the area must be cleaned in such a way as to prevent sediment from entering the storm sewer system. The use of tractor brooms solely will not be permitted.

11.3.9 When it is necessary to dewater an excavation, proper BMPs must be implemented. Dewatering filter bags must be sized and used according to manufacturer's requirements and Standard Operating Procedures for Dewatering Bags.

11.3.10 UK (the MS4) routinely inspects sites for compliance with the EPSC/SWPPP. Any deficiencies noted become record for the Kentucky Division of Water and shall be remedied/installed as soon as site conditions are favorable but no more than 7 days from the inspection date.

11.3.11 At the conclusion of the project and all bare areas, slopes and ditches are 70% vegetated with the permanent ground cover, the contactor shall notify the UK Project Manager and Water Quality Manager and request a final site inspection prior to filing a "Notice of Termination (NOT) with the state. This inspection verifies that Construction BMPs can be removed, and Post-Construction BMPs are in place and functioning.

11.3.12 Failure of the site contractor (permitee of the KPDES Permit) to timely comply with requirements of KPDES, the Construction Manager shall inform the site contractor that a third party contractor shall be retained to remediate all BMP deficiencies immediately, and all third party costs shall be passed to the permitee of the KPDES Permit. Any fines or other costs resulting from failure to comply, levied against the Owner will be assessed against the site contractor's or General Constructor's funds.

11.3.13 Refer to 334000S01 STORM DRAINAGE UTILITIES – Information for Consultants & Contractors.

11.3.14 Reference to standards, codes, specifications, and regulations refer to the latest edition of printing in effect at the date of issue shown in the Contract Documents unless another date is implied by the suffix

number of the standard.

11.4 Reference to standards, codes, specifications, and regulations refer to the latest edition of printing in effect at the date of issue shown in the Contract Documents unless another date is implied by the suffix number of the standard

11.5 The Construction Manager shall furnish a final occupancy permit from the proper agency or agencies as required.

11.6 The Trade Contractor(s) shall, by provision within each applicable subcontract or by inclusion in the lump sum fee proposed to the Owner, insure the payment of all sales, consumer, use and similar taxes for materials, equipment and supplies incorporated into the Work, by unless otherwise specified in the bid documents.

ARTICLE 12 - PROTECTION OF WORK, PROPERTY, AND PUBLIC

12.1 The Trade Contractor(s) shall continuously maintain adequate protection of all Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. Except as otherwise covered by Builder's Risk insurance, the Trade Contractor(s) shall pay for any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the Owner. The Trade Contractor(s) shall adequately protect adjacent property as provided by law and the Contract Documents.

12.2 In an emergency affecting the safety of life, or of the Work, or of adjoining property, the Trade Contractor(s), without special instruction or authorization from the Consultant or the Owner, is obligated to act to prevent such threatened damage, loss or injury.

12.3 The Trade Contractor(s) shall maintain fire protection as required by the Kentucky Building Code. Access to the Project site and surrounding buildings for local fire truck access during construction must be maintained. The Trade Contractor(s) shall maintain construction to allow access to new, existing or temporarily relocated standpipes, fire hydrant connections and fire alarm communication panels pursuant to Section 3018.8 of the Kentucky Building Code. If the Trade Contractor(s) utilizes the Owner's fire protection equipment, the Trade Contractor(s) shall replace any such materials lost, consumed or misplaced during the Contract period. The Trade Contractor(s) is responsible for any false alarms caused by dust created in the Work area or dust traveling to areas beyond the Work area due to inadequate dust protection barriers. Should there be a need for any existing or newly installed fire alarm system, or parts of a system that requires service, to be removed from service or disconnected, prior approval must be obtained from the Owner and the Trade Contractor(s) shall immediately provide alternate protection such as a fire watch until such systems are returned to full normal operations. When work or service is completed on a disabled fire alarm system, the Owner shall be immediately notified so the system can be placed in service.

12.4 The Trade Contractor(s) and Sub-contractors are responsible for the security of their own materials, tools and equipment at the Project site.

12.5 The Construction Manager shall provide to the Owner's Project Manager a key to Construction Manager's field office or job trailer.

ARTICLE 13 - BLASTING

13.1 Blasting is not allowed unless permission is granted in the Special Conditions. Should blasting be allowed by the Special Conditions, it shall be completed in accordance with all laws, regulations, ordinances and instructions contained in the Special Conditions.

ARTICLE 14 - CONSTRUCTION AND SAFETY DEVICES

14.1 The Trade Contractor(s) shall provide safety controls for protection of the life and health of employees and visitors. The Trade Contractor(s) will utilize precautionary methods for the prevention of damage to property, materials, supplies, and equipment, and for avoidance of work interruptions in the performance of this Contract. In order to provide such safety control, the Trade Contractor(s) shall comply with all pertinent provisions of the Kentucky Fire Prevention Code, Kentucky Building Code, Kentucky Labor Cabinet's Division of Occupational Safety and Health Program Construction Standards and Federal Occupational Safety and Health (Construction) Standards that are in effect at the time the Contract is entered into and during the period in which the Contract is to be performed.

14.2 The Trade Contractor(s) shall provide a written safety program which includes all pertinent written specialty standards such as, but not limited to, Control of Hazardous Energy Sources (Lockout/Tagout), Hazard Communications Program, First Aid, Blood Borne Pathogen Program, Respirator Use Program and Hearing Conservation Program. The Construction Manager shall require all Sub-contractors to have an effective written safety program or be required to follow the Construction Manager's written safety program.

14.3 The Construction Manager shall maintain an accurate record of and shall report to Kentucky Labor Cabinet's Division of Occupational Safety and Health in the manner and on the forms prescribed by that Division, exposure data and all accidents resulting in death, traumatic injury, or occupational disease. The Construction Manager shall maintain an accurate record of and shall report to the Owner's Project Manager, any damage to property, materials, supplies, or equipment incident to Work under this Contract.

14.4 The Kentucky Labor Cabinet's Division of Occupational Safety and Health may notify the Trade Contractor(s) of any noncompliance with the foregoing provisions. The Trade Contractor(s) shall, upon receipt of such notice, immediately correct the cited conditions. Notice delivered to the Trade Contractor(s) or the Trade Contractor(s)'s representative at the site of the Work shall be deemed sufficient for this purpose. If the Trade Contractor(s) fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. Failure or refusal to comply with the order will be grounds for reducing or stopping all payments due under the Contract to the Trade Contractor(s). No part of the construction time lost due to any such stop order shall be cause for, or the subject of a claim for, extension of time or for additional costs or damages by the Trade Contractor(s).

14.5 The Trade Contractor(s) or any Sub-contractor shall immediately contact the University of Kentucky's Department of Occupational Health and Safety through the Construction Manager should they be selected for an inspection by the Kentucky Occupational Safety and Health Compliance Division.

14.6 Compliance with the provisions of the foregoing sections by Sub-contractors shall be the responsibility of the Trade Contractor(s).

14.7 Nothing in the provisions of this Article 14 shall prohibit the U.S. Department of Labor or the Kentucky Department of Labor Division of Occupational Safety and Health from enforcing pertinent occupational safety and health standards as authorized under Federal or State Occupational Safety and Health Standards.

14.8 The Trade Contractor(s) shall take all necessary precautions for the safety of employees on the Work, and shall comply with all applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed. If the Trade Contractor(s) or any Sub-contractor has questions related to the health or safety required by their written safety program, they should contact the Kentucky Labor Cabinet Occupational Safety and Health Program Division of Education and Training. The Trade Contractor(s) shall designate a responsible member of the on-site work force as the safety officer and shall report to the Consultant and to the Owner the name of the person selected. The duties of the safety officer include the enforcement of safety regulations.

ARTICLE 15 - HAZARDOUS MATERIALS

15.1 If the Trade Contractor(s) encounters material reasonably believed to be or suspected to be asbestos containing material, lead, polychlorinated biphenyls (PCBs), fluorescent light bulbs and ballasts, mercury or

other hazardous material, the following procedures must be followed:

15.1.1 The Trade Contractor(s) shall immediately stop work in the affected area and notify the Owner's Project Manager (via the Construction Manager). The Owner's Project Manager will contact the Owner's Environmental Health and Safety unit to arrange for collection of samples, review of existing data, or other testing necessary to confirm the presence of hazardous materials. The Owner's Project Manager will notify the Construction Manager in writing of the results. Until that notification is received, the Work must not continue in the affected area.

15.1.2 If the material is confirmed to be asbestos, lead, polychlorinated biphenyls (PCBs), fluorescent light bulbs and ballasts, mercury or other hazardous material, the Owner will take appropriate action to remove the material before the Trade Contractor(s) can continue Work in the affected area.

15.1.3 The Trade Contractor(s) shall not be required to perform any Work related to asbestos, lead, polychlorinated biphenyls, or other hazardous material. The Trade Contractor(s) is advised that certain classes of building materials (thermal system insulation, sprayed or troweled surfacing materials, and resilient flooring) installed before 1981 are required by law to be treated as asbestos containing until proven otherwise. These presumed asbestos containing materials must not be disturbed without confirmation from the Owner that asbestos is not present.

15.2 The Owner, the Construction Manager, the Trade Contractor(s), and Sub-contractors will be under the requirements of the OSHA Hazard Communication Standard (29) CFR 1910.1200. The Trade Contractor(s) and Sub-contractors must provide their own written Hazard Communication Program. The Hazard Communication Standard must include: (1) A list of the hazardous chemicals to which the Trade Contractor(s)'s employees may be exposed; (2) Statement of the measures that Trade Contractor(s)'s employees and Sub-contractors may take to lessen the possibility of exposure to the hazardous materials; (3) The location of and access to the Material Safety Data Sheets (MSDS's) related to the hazardous chemicals located in the Work area; (4) Procedures that the Trade Contractor(s)'s employees and Sub-contractors are to follow if they are exposed to hazardous chemicals above the Permissible Exposure Limit (PEL). Material Safety Data Sheets may be reviewed upon request by the Trade Contractor(s) or any Sub-contractor as they pertain to the Work areas of the Project. Photocopies of the MSDS's may be made by Trade Contractor(s) at its expense.

15.3 The Trade Contractor(s) and Sub-contractors shall provide the Construction Manager with a list of any hazardous materials that will be used on the job site. The Trade Contractor(s) and Sub-contractors shall provide the Owner with copies of Material Data Sheets for all such materials to be used via the Construction Manager.

15.4 It is the policy of the Owner that PCB containing equipment will be treated by the Construction Manager and the Owner in a manner that conforms to the intent of all applicable laws and regulations (primarily 40 CFR Part 761). The following procedures shall be followed by the Trade Contractor(s) and Sub-contractors while present on the Owner's Project or other property: (1) Only authorized, trained personnel may inspect, repair, or maintain PCB transformers; and (2) No combustible materials may be stored within a PCB transformer room or within five meters of a PCB transformer. Such materials include, but are not limited to, paints, solvents, plastic, paper, and wood. The Trade Contractor(s) shall not use rooms containing PCB transformers for storage rooms, staging areas, job site offices or break rooms. Violation of this policy may be grounds for dismissal of the offending Trade Contractor(s) and/or Sub-contractor from the Project. All PCB transformers at the University of Kentucky are identified by a PCB label as defined in federal regulations. If the Trade Contractor(s) should have a question as to the location of a PCB transformer, it should contact the Owner's Project Manager.

15.5 The Trade Contractor(s) shall ensure that NO asbestos-containing materials (including but not limited to: drywall, joint compound, roof mastic or floor tile adhesive) will be install on any University project without prior written approval of the University's Environmental Health and Safety Division. Additionally, the Trade Contractor(s) shall submit MSDS sheets and have prior approval before installing any materials that contains hazardous substances or could pose an environmental hazard. If any environmental hazardous materials are installed without written approval of the University, the Trade Contractor(s) will be responsible for all material

replacement cost, all removal and all other associated damages. Any materials removed shall be taken out in accordance with all applicable federal, state and local regulations.

ARTICLE 16 - INSPECTION OF WORK

16.1 Inspections, tests, measurements or other acts of the Consultant are for the sole purpose of assisting the Consultant in determining if the Work, materials, rate of progress, and quantities comply with the Contract Documents. These acts or functions shall not relieve the Trade Contractor(s) from performing the Work in full compliance with the Contract Documents, nor relieve the Trade Contractor(s) from any of the responsibility for the Work assigned to it by the Contract Documents. No inspection by the Consultant shall constitute or imply acceptance. Approval of material is general and shall not constitute waiver of the Owner's right to demand full compliance with Contract Documents.

16.2 All Work completed and all materials incorporated for the Project are subject to inspection by the Owner, the Consultant or their representatives to determine conformance with the Contract Documents. The Owner, Consultant and their representatives shall at all times have access to the Work whenever it is in preparation or progress. The Trade Contractor(s) shall provide, at no additional cost to the Owner, any facilities necessary for sufficient and safe access to the Work to complete any inspections required. The Consultant shall be given timely notification in orderto arrange for the proper inspections to be performed on any Work outside of the normal working day or week. If the Consultant provides the Construction Manager with a list of construction milestones that require inspection, the Trade Contractor(s) shall provide the Consultant with at least five (5) Business Days written notice prior to the commencement of Work with respect to such milestone in order to permit the Consultant time to coordinate an inspection of the commencement of the applicable Work.

16.2.1 Normal Work hours are defined as a period between 7:00 a.m. and 5:00 p.m. Monday through Friday. The Trade Contractor(s) shall notify the Owner’s Project Manager (via the Construction Manager) at least one working day prior to performance of any Work for permission to do any Work during non-normal Work hours.

16.3 If the Specifications, the Consultant's instructions, laws, ordinances, or any public authority require any Work to be specially inspected, tested or approved, the Trade Contractor(s) shall give the Consultant (via the Construction Manager) timely notice of the readiness of the Work for inspection. The Consultant shall promptly make all required inspections. If any portion of the Work should be covered contrary to the request of the Consultant, or to the requirements specifically expressed in the Contract Documents, the Work must be uncovered for inspection and observation and shall be uncovered and replaced at the Trade Contractor(s)'s expense.

16.4 If any other portion of the Work has been covered, which the Consultant has not specifically requested to observe prior to being covered, the Consultant, with the Owner's approval, may request to see such Work and it shall be uncovered by the Trade Contractor(s). If such Work is found to be in accordance with the Contract Documents, the cost of uncovering and replacement shall be charged to the Owner by appropriate Change Order. If such uncovered Work is not in accordance with the Contract Documents, the Trade Contractor(s) shall pay all costs for uncovering and replacement of such Work.

ARTICLE 17 - SUPERINTENDENT - SUPERVISION

17.1 The Trade Contractor(s) shall completely and thoroughly direct and superintend the Work in accordance with the highest standard of care for the Trade Contractor(s)'s profession so as to ensure expeditious, workmanlike performance in accordance with requirements of the Contract Documents. Except as otherwise dictated by specific requirements of the Contract Documents, the Trade Contractor(s) shall be solely responsible for and have control over all construction means, methods, techniques, sequences and procedures. The Trade Contractor(s) shall be responsible for the acts and omissions of all Sub-contractors and persons directly or indirectly employed by the Trade Contractor(s) in the completion of the Work. The Trade Contractor(s) shall be responsible for coordinating and scheduling all portions of the Work unless the Contract Documents give other specific instructions. The Trade Contractor(s) shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by the activities of the Consultant in the

administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Trade Contractor(s).

17.2 The Trade Contractor(s) shall have a competent superintendent on the Project site at all times during the process of the Work. The superintendent shall have authority to act on the Trade Contractor(s)'s behalf with regard to all aspects of performance of this Contract. The superintendent shall have such assistants with individual specialized competencies as may be necessary to fully understand and oversee all aspects of the Work. The Trade Contractor(s) shall also provide administrative, supervisory and coordinating personnel required to fully perform the Work and for interfacing the Work with other work of the Project. The superintendent and all assistants shall be physically fit for their work and capable of going to all locations where Work is being performed. A communication given to the superintendent shall be binding on the Trade Contractor(s). Immediately after the award of Contract, the Trade Contractor(s) shall submit to the Consultant (via the Construction Manager) a list of Trade Contractor(s)'s employees and consultants, including names, positions held, addresses, telephone numbers and emergency contact numbers.

17.3 The superintendent assigned shall not be changed except under the following circumstances: (1) Where the superintendent ceases to be employed by the Trade Contractor(s), in which case the Trade Contractor(s) shall give timely written notice to the Owner (via the Construction Manager) of the impending change of the superintendent and a reasonable explanation for the change; or (2) Where the Owner or the Consultant have reasonable grounds for dissatisfaction with the performance of the superintendent and give written notice to the Trade Contractor(s) of the grounds. In either case, the Trade Contractor(s) shall obtain prior written approval from the Owner of the qualifications of the proposed replacement superintendent. Such prior approval will not be unreasonably withheld.

17.4 If the Owner or Consultant determines that the superintendent is not performing, or is incompetent to perform the required Work, the Owner may direct the Trade Contractor(s) to remove the superintendent from the Project and replace the superintendent with an employee who has the necessary expertise and skills to satisfactorily perform the Work.

ARTICLE 18 - CHANGES IN THE WORK

18.1 The Owner, at any time after execution of the Contract, may make changes within the general scope of the Contract or issue additional instructions, require additional Work, or direct the deletion of Work. The Owner's right to make changes shall not invalidate the Contract or relieve the Trade Contractor(s) of any obligations under the Contract Documents. All such changes to the Work shall be authorized in writing by Change Order and shall be executed under the conditions of the Contract Document. Any adjustment of the Contract Amount or Time of Completion, as may be appropriate, shall be made only at the time of ordering such change. Change order proposals based on a reservation of rights, whether for additional compensation to be determined at a later date or for an extension of time to be determined at a later date, will not be considered for approval and shall be returned to the Trade Contractor(s) via the Construction Manager without action.

18.2 The cost or credit resulting from a change in Work shall be determined in one or more of the following ways:

18.2.1 By unit prices named in the Contract or additional unit prices subsequently agreed upon;

18.2.2 By agreement on a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

18.2.3 By an amount agreed upon by the Construction Manager and the Owner as a mutually acceptable fixed or percentage fee.

18.3 All lump sum proposals shall include a detailed cost breakdown satisfactory to the Consultant and to the Owner for each component of Work indicating both labor and material costs. This cost breakdown shall be submitted to the Consultant promptly and with a goal of seven (7) Calendar Days or less after receipt of the proposal request.

18.3.1 In computing labor costs, the hourly labor rates shall not exceed a mutually agreeable combined hourly labor rate plus fringe benefits negotiated with the Owner based on a presentation of acceptable documentation by the CM. For the purposes of this Article, the term "fringe benefits" shall mean those funds transferred irrevocably to a third party for payment/distribution. In addition, there may be added by the Sub-contractor an amount agreed upon, but not to exceed ten percent (10%) of the actual cost, for overhead and profit.

18.3.2 The CM is entitled to a mark-up for bonds and insurance on all change orders. For change orders coded "End User Requested Changes" or "Other Owner Requested Changes" the CM may add overhead & profit in addition to the bonds and insurance referenced above. The mark-ups shall not exceed the combined percentage for overhead and profit, bonds, and insurance stated in the CM's "Financial Proposal Summary". These mark-ups will not be added to the individual change orders but will be reconciled by amendment at the completion of the project and/or on an annual basis for those projects exceeding 12 months in duration.

18.4 If none of the above methods are mutually agreed upon or if the Trade Contractor(s) does not respond promptly, a change may be made by unilateral determination by the Construction Manager, Owner, and/or the Consultant of reasonable costs or savings attributable to the change, including a reasonable allowance for overhead and profit. If this method is utilized, the Trade Contractor(s) shall promptly proceed with the Work involved in the change upon receipt of a written order signed by the Owner. In such case, the Trade Contractor(s) shall keep and present an itemized accounting of labor, equipment, material and other costs, in such form as may be prescribed by the Consultant.

18.5 In all cases where Change Orders are determined by unit prices set forth in the Contract Documents, no amount is to be added for additional overhead and profit.

18.6 The Trade Contractor(s) shall keep and present in such form as the Consultant may direct, a correct account of all items comprising the net cost of such Work, together with vouchers. The determination of the Consultant and/or the Owner shall be final upon all questions of the amount and cost of extra Work and changes in the Work, and it shall include in such cost, the cost to the Construction Manager of all materials used, the cost of all labor (including social security, old age and unemployment insurance, fringe benefits to which the employee is entitled, and Workers Compensation insurance), and the fair rental of all machinery used upon the extra Work, for the period of such use, which was upon the Work before or which shall be otherwise required by or used upon the Work before or after the extra Work is done. If the extra Work requires the use of machinery not already on the Project site, or to be otherwise used upon the Work, then the cost of transportation of such machinery to and from the Project site shall be added to the fair rental value. Transportation costs shall not be allowable for distances exceeding one hundred (100) miles.

18.7 The Trade Contractor(s) shall not include or allow to be included in the cost of change in the Work any cost or rental of small tools, or any portion of the time of the Trade Contractor(s) or the superintendent, or any allowance for the use of capital, or for the cost of insurance or bond premium or any actual or anticipated profit, or job or office overhead. These items are considered as being covered under the added amount for general overhead addressed in Article 18.3

18.8 The Owner will not pay claims made for lost opportunities, claims made for lost production or production inefficiencies or claims made that are formula based.

18.9 Pending final determination of value, partial payments on account of changes in the Work may be made on recommendation of the Consultant. All Change Orders shall be in full payment and final settlement of all claims for direct, indirect and consequential costs, including all items covered and affected. Any such claim not presented by the Trade Contractor(s) for inclusion in the Change Order shall be waived.

18.10 The Consultant may authorize minor changes in the Work which do not involve additional cost or extension of the Contract Time, and which are not inconsistent with the intent of the Contract Documents. Such changes shall be made by an ASI issued by the Consultant, and shall be binding on the Owner and the Trade

Contractor(s). The Trade Contractor(s) shall carry out such orders promptly. If the Trade Contractor(s) should claim that an ASI involves additional cost or delay to the completion of the Work, the Trade Contractor(s) shall give the Consultant via the Construction Manager written notice thereof within ten (10) Calendar Days after receipt of the written ASI. If this notification does not occur, the Trade Contractor(s) shall be deemed to have waived any right to claim or adjustment to the contract sum or to the contract completion time.

18.10.1 If the Trade Contractor(s) claims that any instructions by the Consultant involve additional cost or time extension, the Trade Contractor(s) shall give the Consultant via the Construction Manager written notice thereof within ten (10) Calendar Days after the receipt of such instructions and before proceeding to execute the change in Work. The written notice shall state the date, circumstances, whether a time extension will be requested, and the source of the order that the Trade Contractor(s) regards as a Change Order. Unless the Trade Contractor(s) acts in accordance with this procedure, any oral order shall not be treated as a change and the Construction Manager hereby waives any claim for an increase of the Contract amount or extension of the contract time.

18.11 Requests for extension of time related to changes in the Work shall be submitted in accordance with the requirements of Article 21 of these General Conditions.

18.12 Prior to final payment, the Construction Manager shall provide to the Owner a full accounting of executed change orders by and between the Construction Manager and the Trade Contracts. The Construction Manager shall also provide a reconciliation of that accounting against the executed change orders by and between the Owner and the Construction Manager.

ARTICLE 19 - RULES AND MEASUREMENTS FOR EXCAVATION

19.1 If applicable, the following Rules and Measurements shall apply to the use of Unit Prices for the excavation portion of the Work:

19.1.1 Except as provided in this Article 19 for arbitrary measurements, the quantity of excavation shall be its in-place volume before removal.

19.1.2 No allowance will be made for excavating additional material of any nature taken out for the convenience of the Trade Contractor(s) beyond the quantity computed under these "Rules and Measurements."

19.1.3 The quantities of excavation shall be computed from instrument readings taken by the Consultant’s representative in vertical cross sections located at such intervals that will assure accuracy.

19.1.4 "Trench Excavation" for pipes shall arbitrarily be assumed to be two feet (2') wider than the outside diameter of the pipe barrel and with sides vertical.

19.1.5 The quantities shall be computed from plan size, or if there are no drawings, from actual measurements of the Work in place.

19.1.6 Each unit price shall cover, among other things, engineering (surveying) costs and keeping excavating dry.

19.1.7 Earth excavation for structures will be measured between the vertical planes passing 18 inches beyond the outside of the footings and from the surface of the ground to the neat lines of the bottom of the structure.

19.1.8 Rock excavation for structures will be measured between the vertical planes passing 18 inches beyond the outside of the footings and from the surfaces of the rock to the neat lines of the bottoms of the structures or the actual elevation of the rock ledge.

19.1.9 Rock excavation for pipelines trenches, unless otherwise provided for in the Specifications, shall be measured as follows: An arbitrary width of 18 inches plus the nominal diameter of the pipe multiplied by the

depth from the surface the rock to six (6) inches below the invert for pipe 24 inches in diameter or less and eight (8) inches below the invert for all pipe greater than 24 inches in diameter. No additional compensation will be allowed for excavation for bell holes, gates or other purposes. The measurement of rock excavation for manholes shall be in accordance with Section
19.1.8 above.

19.1.10 Unclassified excavation shall be measured in the same manner as earth excavation.

ARTICLE 20 - CONCEALED CONDITIONS

20.1 The Contract Drawings show the approximate location of the existing and new utility lines. These lines have been identified and located as accurately as possible using available information. The Trade Contractor(s) is responsible for verifying all actual locations. If utilities require relocation or rerouting that is not shown or indicated to be relocated or rerouted, the Trade Contractor(s) shall contact and cooperate with the Consultant to make the required adjustments. Any request for change in the Contract Amount by the Trade Contractor(s) shall be made pursuant to Article 18 of the General Conditions.

20.2 If any charted or uncharted utility service is interrupted by activities of the Construction Manager or the Construction Manager's Trade Contractor(s) for any reason, the Trade Contractor(s) shall work continuously to restore service to the satisfaction of the Owner.

20.2.1 If any charted utility service, or any uncharted utility service the existence of which could have been discovered by careful examination and investigation of the site of the Work by the Trade Contractor(s), is interrupted by activities of the Trade Contractor(s) or the Trade Contractor(s)'s Sub-contractor(s) for any reason, the entire cost to restore service to the satisfaction of the Owner shall be paid by the Trade Contractor(s). Should the Trade Contractor(s) fail to proceed with appropriate repairs in an expedient manner, the Owner reserves the right to have the work/repairs completed and the cost of such work/repairs deducted from the monies due or to become due to the Trade Contractor(s) pursuant to Article 22 of the General Conditions.

20.3 The Trade Contractor(s) shall promptly, but in no case more than ten (10) Calendar Days from the time of discovery, and before the conditions are disturbed, notify Consultant via the Construction Manager in writing of:

20.3.1 Subsurface or latent physical conditions or any condition encountered at the site which differ materially from those indicated in the Contract Documents and which were not known by Trade Contractor(s) or could not have been discovered by careful examination and investigation of the site of the proposed Work;

20.3.2 Unknown and unexpected physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered in the locale or generally recognized as inherent in the Work provided for in this Contract or,

20.3.3 Concealed or unknown conditions in an existing structure which are at variance with the conditions indicated by the Contract Documents, which are of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the Work provided for in this Contract, and which were not known by the Trade Contractor(s) and could not have been discovered by careful examination and investigation of the site of the Work.

20.4 The Consultant shall promptly investigate the conditions discovered. If the Consultant finds that conditions, which are materially different from those ordinarily encountered and generally recognized as inherent in the Work provided for in this Contract, were not known by the Trade Contractor(s), and could not have been discovered by careful examination and investigation of the site of the Work, have caused or would cause a material increase or decrease in the Trade Contractor(s)'s cost of construction or the time required for performance of any part of the Work under this contract, the Consultant will recommend and the Owner will make an equitable adjustment in the Contract Amount and/or the time allotted for performance in the Contract Documents. Failure by the Trade Contractor(s) to provide written notice to the Owner of such claims for

additional compensation or time for performance within ten (10) Calendar Days of discovery of such conditions shall constitute a waiver by the Trade Contractor(s) of the right to make such claims. The Owner will not pay claims made for lost opportunities, claims made for lost production or production inefficiencies or claims made that are formula based.

20.5 If the Consultant determines that changed conditions do not exist or are not materially different and no adjustment in the Contract Amount or time is warranted, the Trade Contractor(s) shall continue performance of the Contract as directed by the Consultant. No claim by the Trade Contractor(s) under this clause shall be allowed unless the required written notice is given and the Consultant is given adequate opportunity to investigate the conditions encountered prior to disturbance. The failure of the Trade Contractor(s) to give the Consultant proper notice of a differing site condition shall not affect the Owner's right to an equitable adjustment of the contract price or time if there is a decrease in the Contract Amount or time required to perform the Work.

ARTICLE 21 - DELAYS AND EXTENSION OF TIME

21.1 It is agreed that time is of essence for each and every portion of this Contract and where additional time is allowed for the completion of the Work or any part of the Work under this Contract, the new time limit fixed by such time extension shall be of the essence of this Contract. An extension of time shall not be cause for extra compensation under this Contract, except as set forth in Article 21.10 below.

21.2 The Trade Contractor(s) will, subject to the provisions of Articles 21.7, 21.8 and 21.9 below, be granted an extension of time and/or relief from liquidated damages when the delay in completion of the Work is due to:

21.2.1 Any preference, priority, or allocation order duly issued by the government;

21.2.2 Unforeseeable causes beyond the control and without the fault or negligence of the Trade Contractor(s) including, but not limited to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, floods, epidemics, quarantine restrictions, strikes, and freight embargoes.

21.2.2.1 For such delays which stop all work on the Project for thirty (30) Calendar Days or more, the Trade Contractor(s) shall be authorized at its discretion to remove its people from the site and return when the normal progress of the work may continue.

21.2.3 Regardless of the cause of a delay, the Trade Contractor(s) shall expend all reasonable effort to mitigate the impact of any delay.

21.2.4 Requests for additional time due to delays in transportation or due to failures of suppliers shall not be considered for approval.

21.3 Requests for extensions of time and/or relief from liquidated damages, except for weather related claims, shall be made in writing not later than ten (10) Calendar Days after the beginning of the delay. Requests for extension of time or relief from liquidated damages shall be stated in numbers of whole Calendar Days.

21.4 Except as otherwise provided in the Contract Documents, extensions of the contractually required completion dates may be granted for unusually bad weather on the Project. Unusually bad weather as used herein means daily temperature or precipitation that exceeds the normal weather recorded and expected for the locality and/or the season or seasons of the year. For the purposes of this contract, it is mutually agreed that the following chart accurately defines the number of days in each month on which bad weather can reasonably be anticipated to impact weather dependent construction operations, and the Trade Contractor(s) shall anticipate this normal seasonal weather in the development of the Project baseline schedule.

Mean Number of Days When	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Max Temp 32° or Below	9	6	1	0	0	0	0	0	0	0	1	5
Precip. Is 0.10 Inch or Greater	7	6	9	7	8	8	8	6	5	5	7	7

For the purpose of this Contract, "unusually bad weather" shall be interpreted as either 1) those days in a given month on which rainfall was 0.10 inch or more that exceed the number of days shown in the row for "Precip" or 2) those days in a given month on which maximum temperature was 32 degrees F or below that exceed the number of days shown in the row for "Max Temp", whichever is greater.

21.4.1 Requests for extension of time due to unusually bad weather that could not reasonably have been anticipated at the time of execution of the Contract shall be made in writing not later than the tenth calendar day of the month following the month in which the delay occurred.

21.4.2 Requests for an extension of time due to unusually bad weather shall be considered for approval only if it is shown that a) the unusual weather event delayed work on a specific weather dependent activity or activities that had been planned to be underway on the date(s) on which the weather event occurred, as shown in the most recent update to the Project schedule that had been submitted to the Owner prior to the date of the event, and b) only if the delay to that activity or activities is shown to be the proximate cause of a corresponding delay to the contractually required completion dates for the Project shown in the most recent update to the Project schedule. The actual dates on which the delay(s) occurred must be stated and the specific activities that were directly impacted must be identified. In the event of concurrent delays, only those activities actually impacting contractually required completion dates will be considered in evaluating the merit of a delay request. Time extensions will not be considered if such adjustments do not exceed the total or remaining "float" associated with the impacted activities at the time of delay as shown in the most recent update to the Project schedule, nor for concurrent delays not caused by the Owner.

21.4.3 In anticipation of the possibility of delay due to unusually bad weather, the Trade Contractor(s) shall identify those activities in the baseline schedules, and those activities subsequently added to updated schedules, that might reasonably be expected to be delayed by such weather.

21.4.4 Delays caused by unusually bad weather shall be incorporated in the Project schedule when the schedule is next updated by showing actual dates and/or percent complete for those activities that were impacted by the unusually bad weather as well as the effects of any effort to mitigate such delays. When claims are submitted for time extensions resulting from more than one occurrence of unusually bad weather during a month, the Project schedule shall be updated to reflect such separate events sequentially so that the impact of each subsequent occurrence is shown on an adjusted Project schedule that includes all prior claims for additional time.

21.5 In addition to the requirements of Article 21.7 and Article 21.8 below, any request for an extension of time for strikes or lockouts shall be supported by a written statement of facts concerning the strike including, but not limited to, the dates, the craft(s) affected, the reason for the strike, efforts to resolve the dispute, and efforts to minimize the impact of the strike on the Project.

21.6 Approval of time extensions for changes in the Work will depend upon the extent, if any, to which the changes cause delay in the completion of the various elements of construction. The Change Order granting the time extension may provide that the Contract Time will be extended only for those specific elements so

delayed and that other Work will not be altered.

21.7 The Contract Time will only be adjusted for causes specified above. Extensions of time will only be approved if the Trade Contractor(s) provides justification supported by the Project schedule or other acceptable data that 1) such changes are, in fact, on the critical path and extend the contractually required completion dates, and 2) the Trade Contractor(s) has expended all reasonable effort to minimize the impact of such changes on the construction schedule. No additional extension of time will be granted subsequently for claims having the basis in previously approved extensions of time.

21.8 In support of requests for an extension of time not caused by unusual inclement weather, and concurrently with the submittal of any such request, the Trade Contractor(s) shall submit to the Consultant and the Owner via the Construction Manager a written impact analysis showing the influence of each such event on contractually required completion dates as shown in the updated Project schedule most recently submitted to the Owner prior to the event. The analysis shall include a partial network diagram showing a sequence of new or revised activities and/or durations that are proposed to be added to the existing schedule including related logic (a "fragnet"). This impact analysis and the fragnet shall include the new activities and/or activity revisions proposed to be added to the existing schedule and shall demonstrate the claimed impact on the critical path and the contractually required completion dates. The Trade Contractor(s) will not be granted an extension of time and/or relief from liquidated damages when the delay to completion of the work is attributable to, within the control of, or due to the fault, negligence, acts, or omissions of the Construction Manager and/or the Construction Manager's contractors, subcontractors, suppliers, or their respective employees and agents. Time extensions will not be considered in the event such adjustments do not exceed the total or remaining "float" associated with the impacted activities at the time of delay, nor for concurrent delays not caused by the Owner. In the event of concurrent delays, only that event actually impacting contractually required completion dates will be considered in adjusting the schedule and evaluating the merit of a delay claim. Requests for an extension of time which are not supported by this information shall not be considered for approval.

21.9 Approved extensions of time not caused by unusual inclement weather shall be incorporated in a revised schedule at the time of approval. No subsequent requests for time extension will be considered unless all previous approved time extensions have been incorporated in the Project schedule on which the requests are based.

21.10 Except as provided for in Article 21.10.1 through 21.10.3 below, no payment or compensation shall be made to the Trade Contractor(s) and extensions of the time fixed for completion of the Contract shall be the Trade Contractor(s)'s sole remedy for any and all delays, hindrances, obstructions or impacts in the orderly progress of the Work.

21.10.1 In addition to the provisions of Articles 18.3 and 18.3.1 above, and subject to the requirements of Article 21.8 and 21.8.1 above, if the Owner orders changes to the scope of Work for the Project that extend the then current contractually required completion dates of the Project, the Trade Contractor(s) shall be entitled to reimbursement for job site, general conditions and staffing costs associated with such delay.

21.10.2 If delays, hindrances, impacts or obstructions of the Trade Contractor(s)'s performance of the Contract are in whole or in part within the control of the Owner and, subject to the requirements of Article 21.8 and 21.8.1, extend contractually required completion dates of the Project, the Trade Contractor(s) shall be entitled to reimbursement for job site, general conditions and staffing costs for that portion of the costs caused by acts or omissions of the Owner.

21.10.3 Such reimbursements shall not include consequential or similar damages, exemplary damages, damages based on unjust enrichment theory, formula based delay claims, or any element of home office overhead.

ARTICLE 22 - CORRECTION OF WORK BEFORE FINAL PAYMENT

22.1 The Trade Contractor(s) shall promptly remove from the site and replace any material and/or correct

any Work found by the Consultant to be defective or that fails to conform to the requirements of the Contract, whether incorporated in the Work or not, and whether observed before or after Substantial or Final Completion. The Trade Contractor(s) shall bear all costs of removing, replacing or correcting such Work or material including the cost of additional professional services necessary, and the cost of repairing or replacing all Work of separate contractors damaged by such removal or replacement.

22.2 The Consultant will notify the Trade Contractor(s) via the Construction Manager and the Owner immediately upon its knowledge that additional services will be necessary. The Owner may consent to accept such nonconforming Work and materials with an appropriate adjustment in the Contract Amount. Otherwise, the Trade Contractor(s) shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the Owner and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement. If the Trade Contractor(s) fails to commence and continue to correct non-conforming Work within a reasonable time as determined by the Consultant, the Owner may without limitation of other rights available to the Owner and without prejudice to other remedies, take any necessary action to make the necessary corrections. If the Owner makes required corrections for non conforming Work or materials, a Change Order will be issued reflecting an equitable deduction from the Contract Amount. This amount will be deducted from payments due to the Trade Contractor(s) or, if no additional payments are due, Trade Contractor(s) or the Trade Contractor(s)'s surety shall be responsible for payment of this amount.

ARTICLE 23 - CORRECTION OF WORK AFTER FINAL PAYMENT

23.1 Neither the final certificate of payment nor any provisions in the Contract Documents shall relieve the Trade Contractor(s) of responsibility for materials and equipment incorporated into the Work that fails to meet specification requirements, or for the use of faulty materials or poor quality workmanship. If within one year after the date of Substantial Completion of the Work or designated portion thereof, any of the Work is found to be defective or not in accordance with the requirements of the Contract Documents, the Trade Contractor(s) shall correct it promptly after receipt of written notice from the Owner to do so. The Trade Contractor(s) shall correct any defects due to these conditions and pay for any damage to other Work resulting from their use. Nothing contained in this clause shall be construed to establish a period of limitation with respect to any obligation of the Trade Contractor(s) under the Contract including, but not limited to, warranties. The obligation of the Trade Contractor(s) under this section shall be in addition to and not in limitation of any obligations imposed by special guarantees or warranties required by the Contract, given by the Trade Contractor(s), or otherwise recognized or prescribed by law.

23.2 In addition to being responsible for correcting the Work and removing any non-conforming Work or materials from the job site, the Trade Contractor(s) shall bear all other costs of bringing the affected Work into compliance with the Contract requirements. This includes costs of any required additional testing and inspection services, Consultant's services, and any resulting damages to other property or to work of other contractors or of the Owner.

23.3 If the Trade Contractor(s) fails to correct nonconforming Work within a reasonable time as determined by the Consultant, the Owner may take necessary actions to make the necessary corrections. If the Owner makes required corrections for nonconforming Work or materials after Final Payment to the Trade Contractor(s), the Owner shall be entitled to recover all amounts for such corrections, including costs and attorney's fees, from Trade Contractor(s) via the Construction Manager or surety.

ARTICLE 24 - TERMINATION OF CONTRACT FOR CONVENIENCE OF OWNER

24.1 The Owner, by written notice to the Trade Contractor(s) via the Construction Manager, may terminate this Contract in whole or in part when it is in the interest of the Owner, at the sole discretion of the Owner. In such case, the Trade Contractor(s) shall be paid for all Work in place and a reasonable allowance for profit and overhead on Work done, provided that such payments shall not exceed the total Contract price as reduced by the value of the Work as yet not completed. The Trade Contractor(s) shall not be entitled to profit and overhead on Work not performed.

ARTICLE 25- OWNER'S RIGHT TO STOP WORK

25.1 If the Trade Contractor(s) fails to correct defective Work as required, or persistently fails to carry out the Work in accordance with the Contract Documents, the Owner by written notice may order the Trade Contractor(s) via the Construction Manager to stop the Work or any portion of the Work until the cause for the order has been eliminated to the satisfaction of the Owner. The Consultant may stop Work without written notice for 24 hours whenever in its professional opinion such action is necessary or advisable to insure conformity with the Contract Documents. The Trade Contractor(s) shall not be entitled to an adjustment in the Contract Time or Amount under this clause in the event such stoppages are determined to be the fault of the Trade Contractor(s) or its Sub-contractor(s). The right of the Owner or Consultant to stop Work shall not give rise to a duty on the part of the Owner or Consultant to exercise this right for the benefit of the Trade Contractor(s) or others.

ARTICLE 26 -TERMINATION OF CONTRACT FOR DEFAULT ACTION OF TRADE CONTRACTOR(S)

26.1 In addition to its rights under Articles 24 and 25, the Owner may terminate the contract upon the occurrence of any one or more of the following events:

26.1.1 If the Trade Contractor(s) refuses or fails to prosecute the Work (or any separable part thereof) with such diligence as will insure its completion within the agreed upon time; or if the Trade Contractor(s) fails to complete the Work within such time;

26.1.2 If the Trade Contractor(s) is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or if the Trade Contractor(s) or a third party files a petition to take advantage of any debtor's act or to reorganize under the bankruptcy or similar laws concerning the Trade Contractor(s), or if a trustee or receiver is appointed for the Trade Contractor(s) or for any of the Trade Contractor(s)'s property on account of the Trade Contractor(s)'s insolvency, and the Trade Contractor(s) or its successor in interest does not provide adequate assurance of future performance in accordance with the Contract within ten (10) days of receipt of a request for assurance from the Owner;

26.1.3 If the Trade Contractor(s) repeatedly fails to supply sufficient qualified supervision of the work, or repeatedly fails to ensure that Sub-contractors supply adequate supervision, suitable materials or equipment, or adequate numbers of skilled workmen and supervision to the Work;

26.1.4 If the Trade Contractor(s) repeatedly fails to make prompt payments to Sub-contractors or suppliers at any tier, or for labor, materials or equipment;

26.1.5 If the Trade Contractor(s) disregards laws, ordinances, rules, codes, regulations, orders or similar requirements of any public entity having jurisdiction;

26.1.6 If the Trade Contractor(s) disregards the authority of the Consultant or the Owner;

26.1.7 If the Trade Contractor(s) performs Work which deviates from the Contract Documents, and neglects or refuses to correct rejected Work; or

26.1.8 If the Trade Contractor(s) otherwise violates in any material way any provisions or requirements of the Contract Documents.

26.2 Once the Owner determines that sufficient cause exists to justify the action, the Owner may terminate the Contract without prejudice to any other right or remedy the Owner may have, after giving the Trade Contractor(s) and its Surety three (3) Calendar Days notice by issuing a written Declaration of Default (via Construction Manager). The Owner shall have the sole discretion to permit the Trade Contractor(s) to remedy the cause for the contemplated termination without waiving the Owner's right to terminate the Contract.

26.3 In the event that the Contract is terminated, the Owner may demand that the Trade Contractor(s)'s

Surety take over and complete the Work on the Contract. The Owner may require that in so doing, the Trade Contractor(s)'s Surety not utilize the Trade Contractor(s) in performing the Work. Upon the failure or refusal of the Trade Contractor(s)'s Surety to take over and begin completion of the Work within twenty (20) Calendar Days after the demand, the Owner may take over the Work and prosecute it to completion as provided below.

26.3.1 In the event that the Contract is terminated and the Trade Contractor(s)'s Surety fails or refuses to complete the Work, the Owner may take over the Work and prosecute it to completion in accordance with the laws of the Commonwealth, by contract or otherwise, and may exclude the Trade Contractor(s) from the site. The Owner may take possession of the Work and of all of the Trade Contractor(s)'s tools, appliances, construction equipment, machinery, materials, and plant which may be on the site of the Work, and use the same to the full extent they could be used by the Trade Contractor(s), without liability to the Trade Contractor(s). At the Owner's sole discretion, the Owner has the right to take assignment of any or all portions of the contract work in order to prosecute the completion of the Work. In exercising the Owner's right to prosecute the completion of the Work, the Owner may also take possession of all materials and equipment stored at the site or for which the Owner has paid the Trade Contractor(s) but which are stored elsewhere, and finish the Work as the Owner deems expedient. In such case, the Trade Contractor(s) shall not be entitled to receive any further payment until the Work is finished.

26.3.2 If the unpaid balance of the Contract Price exceeds the direct and indirect costs and expenses of completing the Work including compensation for additional professional and Consultant services, such excess shall be used to pay the Trade Contractor(s) for the cost of the Work it performed and a reasonable allowance for overhead and profit. If such costs exceed the unpaid balance, the Trade Contractor(s) or the Trade Contractor(s)'s Surety shall pay the difference to the Owner. In exercising the Owner's right to prosecute the completion of the Work, the Owner shall have the right to exercise its sole discretion as to the manner, methods, and reasonableness of the costs of completing the Work and the Owner shall not be required to obtain the lowest figure for Work performed in completing the Contract. In the event that the Owner takes bids for remedial Work or completion of the Project, the Trade Contractor(s) shall not be eligible for the award of such Contract.

26.3.3 The Trade Contractor(s) shall be liable for any damage to the Owner resulting from the termination or the Trade Contractor(s)'s refusal or failure to complete the Work, and for all costs necessary for repair and completion of the Project above the amount of the Contract. The Trade Contractor(s) shall be liable for all attorney's fees, costs and expenses incurred by the Owner to enforce the provisions of the Contract.

26.3.4 If liquidated damages are provided in the Contract and the Owner terminates the Contract, the Trade Contractor(s) shall be liable for such liquidated damages, as provided for in Article 29.2 and 29.3 below, until Substantial Completion and Final Completion of the Work are achieved.

26.3.5 In the event the Contract is terminated, the termination shall not affect any rights of the Owner against the Trade Contractor(s). The rights and remedies of the Owner under this Article are in addition to any other rights and remedies provided by law or under this Contract. Any retention or payment of monies to the Trade Contractor(s) via the Construction Manager by the Owner will not release the Trade Contractor(s) from liability.

26.3.6 In the event the Contract is terminated under this Article, and it is determined for any reason that the Trade Contractor(s) was not in default under the provisions of this Article, the termination shall be deemed a Termination for Convenience of the Owner pursuant to Article 24 and the rights and obligations of the parties shall be determined in accordance with Article 24.

ARTICLE 27 - SUSPENSION OF WORK

27.1 The Owner or the Consultant may, at any time and without cause, order the Trade Contractor(s) in writing (via the Construction Manager) or cause the Trade Contractor(s) to suspend, delay or interrupt all or any part of the Work for such period of time as the Owner may determine to be appropriate for its convenience. Adjustment may be made for any increase in the Contract time necessarily caused by such suspension or delay, in accordance with Article 21.

ARTICLE 28 - TIME OF COMPLETION

28.1 The Trade Contractor(s) shall begin the Work on the date of commencement as specified in the Work Order. All time limits stated in the Contract Documents are of the essence of the Contract. The actual end of the Contract Time shall be the date specified on the approved certificate of Substantial Completion. The time for completion set forth in the Contract is a binding part of the Contract upon which the Owner may rely in planning the use of the facilities to be constructed and for all other purposes.

28.2 Substantial Completion is defined in Article 1.1.17 of these General Conditions. Only incidental corrective Work under punch lists and final cleaning (if required) for Owner's full use shall remain for Final Completion. The ability to occupy or utilize shall include regulatory authority approval unless regulatory approval is delayed due to actions of the Owner or the Consultant. When the Owner accepts and occupies a portion of the Project, the operation, maintenance, utilities, and insurance of that portion of the Project becomes the responsibility of the Owner.

28.3 The date of Substantial Completion shall be that date certified by the Owner, in accordance with the following procedures, that the Work is sufficiently complete to occupy or utilize as defined above.

28.3.1 When the Trade Contractor(s) considers the entire Work is substantially complete as defined in Article 1.1.17 of these General Conditions, and is ready for its intended use, the Trade Contractor(s) shall notify the Consultant (via the Construction Manager) in writing and request an inspection. The declaration and request shall be accompanied by a list prepared by the Construction Manager of those items of Work still to be completed or corrected. The failure of the Construction Manager or Consultant to include any item or items which are not completed or which need correction on such list shall not alter the responsibility of the Construction Manager to complete all Work in accordance with the Contract Documents.

28.3.2 The Consultant shall, within a reasonable time after receipt of notification from the Construction Manager of a declaration of Substantial Completion and request for inspection, make such inspection. Prior to the Substantial Completion Inspection and within sufficient time to allow the Consultant's review, the Trade Contractor(s) shall submit all As-Built drawings, Notice of Termination, catalog data, complete operating and maintenance instructions, manufacturer specifications, certificates, warranties, written guarantees and related documents required by the contract. The Consultant shall review said documents for accuracy and compliance with the Contract Documents and incorporate them into complete operating instructions and deliver them to the Owner.

28.3.3 If the Consultant considers the Work substantially complete, the Consultant shall recommend that the Owner prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion and the responsibilities between the Owner and Construction Manager for security, maintenance, heat, utilities and insurance, if not otherwise provided for in the Contract Documents, and a tentative list of items to be completed or corrected, and shall fix the time within which the Trade Contractor(s) shall complete the items listed therein. This time shall not exceed thirty (30) Calendar Days unless otherwise provided for in the Work Order. The Certificate of Substantial Completion shall be submitted to the Consultant and Construction Manager for their written acceptance of the responsibilities assigned to them in the certificate. The Project shall not be deemed substantially complete until the certificate is issued. If, after making the inspection, the Consultant does not consider the Work substantially complete, the Consultant will notify the Owner and the Construction Manager in writing

28.4 Operation and Maintenance Manual Deliverables. In anticipation and preparation of completion of the Work and the closing out of the Project, and to facilitate training of the Owner’s personnel in the maintenance and operation of the new installations, the Trade Contractor(s) shall comply with the requirements of Article 8.7 of the Special Conditions. (For the purposes of this article, air test and balance reports may be submitted at a later date with the request for certification of substantial completion.) These manuals shall be submitted to the Consultant for approval, and subsequently forwarded to the Owner's Project Manager by or before the time construction is 75% complete, as reflected by the Contractor’s most recently submitted Application for Payment.

28.4.1 The provisions of Article 30.11 notwithstanding, if the Trade Contractor(s) meets the requirements of Article 28.4 above with respect to timely submittal of approvable Operation and Maintenance manuals and provided the project construction is 1) at least 75% complete and 2) is equal to or ahead of the approved progress schedule and 3) the Work completed is in compliance with the requirements of the contract documents, the Owner, at the sole discretion of the Director, Capital Projects Management Division may reduce the retainage to not less than three percent (5%) of the current Contract Amount. In the event the Trade Contractor(s) fails to submit acceptable O&M manuals prior to reaching 75% completion, it is agreed that the Owner at its sole discretion may deduct from the current and subsequent Applications for Payment an amount deemed by the Owner to be sufficient to encourage prompt compliance with this contractual requirement, until such time as acceptable O&M manuals are received.

28.5 Project Close Out. When the Trade Contractor(s) considers that all Work required by the Contract is 100% complete, including correction of any remaining punch list work or deficiencies, the Trade Contractor(s) shall notify the Consultant via the Construction Manager in writing and request a final inspection. The Consultant, upon receipt of written notice from the Construction Manager that the Work is complete and is ready for final inspection and acceptance, will promptly make such inspection and if the Consultant finds the Work completed and acceptable under the Contract Documents and the Contract fully performed, the Consultant will notify the Construction Manager in writing to submit, and will certify to the Owner a final Certificate for Payment in accordance with Articles 30.9 and 30.9.1 of these General Conditions. If the Construction Manager does not complete the punch items within the time designated, the Owner retains the right to have these items corrected at the expense of the Construction Manager including all architectural, engineering and inspection costs and expenses incurred by the Consultant and the Owner, and to deduct such costs and expenses from the funds being held in retainage. The Owner shall not be required to release the retainage until such items have been completed.

ARTICLE 29 - LIQUIDATED DAMAGES

29.1 The Owner, Construction Manager, and the Trade Contractor(s) recognize and agree that time is of the essence of this Contract and that the Owner will suffer financial loss if the Work is not completed within the time specified in the Contract plus any extensions that may be allowed. The parties further recognize the delays, expense and difficulties involved in proving the actual loss suffered by the Owner should the Work not be completed on time. The Owner and the Construction Manager agree on the amounts stated as liquidated damages in the Agreement. The Owner and Construction Manager agree that the amount stated as liquidated damages are not intended to be penalties.

29.2 Should the Trade Contractor(s) fail to satisfactorily complete the Work under Contract on or before the date stipulated for Substantial Completion, as adjusted by approved Change Orders, if any, the Trade Contractor(s) will be required to pay liquidated damages to the Owner foreach consecutive Calendar Day that the Owner is deprived of full use of the area beyond the date specified unless otherwise stipulated elsewhere by Owner. After the date for Substantial Completion has been certified by the Owner, the Trade Contractor(s) shall cease to owe liquidated damages until the date established for Final Completion.

29.3 If Final Completion is not achieved by the date established for Final Completion, as adjusted by approved Change Orders, if any, liquidated damages in the amount stipulated in the Agreement will become due and collectable. The Contract will be considered complete and Final Completion shall be deemed to have occurred when all Work has been completed in compliance with the Contract Documents and the Certificate of Final Completion has been issued by the Owner. No deduction or payment of liquidated damages will, in any degree, release the Trade Contractor(s) from further obligations and liabilities to complete the entire Contract. Permitting the Trade Contractor(s) to continue and finish the Work, or any part of it, after expiration of the Contract Time, shall in no way constitute a waiver on the part of the Owner of any liquidated damages due under the Contract.

ARTICLE 30 - PAYMENT TO THE CONSTRUCTION MANAGER

30.1 Payments on account of this Contract shall be made monthly as Work progresses. The Construction

Manager shall submit to the Consultant, in the manner and form prescribed, an application for each payment, and, if required, receipts or other vouchers showing payments made for materials and labor, including payments to Sub-contractors. All payments shall be subject to any withholding or retainage provisions of this contract. All pay request documents, except the final payment, shall be submitted in whole dollar amounts. All payment applications from the Construction Manager shall include line items for overhead, profit and general condition costs.

30.2 The Consultant shall, within ten (10) Business Days after receipt of each application for payment, certify approval of payment in writing to the Owner and present the application to the Owner, or return the application to the Construction Manager indicating in writing its reasons for refusing to approve payment. The Owner, provided no exception is taken to the application for payment submitted by the Consultant, will issue payment on or within thirty (30) Business Days from the date received from the Consultant. A reasonable delay on the part of the Owner in making payment to the Construction Manager for any given payment shall not be grounds for breach of Contract. The Consultant may refuse to approve the whole or any part of any payment if it would be incorrect to make such presentation to the Owner.

30.3 If payment is requested on the basis of materials and equipment not incorporated in the Work, but delivered and suitably stored at an off jobsite location agreed to in writing by the Owner that meets the manufacturer's requirements for the stored material and not-comingled with other material, the Trade Contractor(s) via the Construction Manager must furnish the following:

30.3.1 A list of the materials consigned to the Project (which shall be clearly identified), giving the place of storage, together with copies of invoices.

30.3.2 Certification that all items have been tagged for delivery to the Project and that they will not be used for any other purpose.

30.3.3 A letter from the Surety indicating that the Surety agrees to the arrangements and that payment to the Trade Contractor(s) shall not relieve either the Construction Manager or its Surety of their responsibility to complete the Work.

30.3.4 Evidence of adequate insurance listing the Owner as an additional insured covering the material in storage.

30.3.5 Evidence that representatives of the Construction Manager has visited the Trade Contractor(s) place of storage and checked all items listed on the Trade Contractor(s) certificate. They shall certify, insofar as possible, that the items are in agreement with the Specifications and approve their incorporation into the Project.

30.4 The Owner will pay 80% of the invoiced value less retainage for materials stored off site providing the above conditions are met.

30.5 The Trade Contractor(s)'s signature on each subsequent application for payment shall certify that all previous progress payments received on account of the Work have been applied to discharge in full all of the Trade Contractor(s)'s obligations reflected in prior applications for payment.

30.6 Each payment made to the Trade Contractor(s) shall be on account of the total amount payable to the Trade Contractor(s) and the Trade Contractor(s) warrants and guarantees that the title to all materials, equipment and Work covered by the paid partial payment shall become the sole property of Owner free and clear of all encumbrances. Nothing in this Article shall be construed as relieving Trade Contractor(s) from the sole responsibility for care and protection of materials, equipment and Work upon which payments have been made or restoration of any damaged Work or as a waiver of the right of Owner to require fulfillment of all terms of the Contract Documents.

30.7 Within thirty (30) Calendar Days of the award of any Trade Contracts, and prior to submitting the next application for payment, the Trade Contractor(s) shall submit to the Consultant and the Owner via the

Construction Manager for approval a detailed breakdown of the Contract Amount including all trade contracts that have been awarded as of the date of that application for payment pursuant to CSI specification divisions, divided so as to facilitate payment and correlated to the schedule required by General Conditions Article 32 of the Contract Documents. The total value of all activities shall add up to the Contract Amount. When approved by the Consultant and the Owner, this schedule shall be used as a basis for Trade Contractor(s)'s applications for payment and may be used by the Owner to determine costs or credits resulting from changes in the Work. Failure to obtain the approval of the Schedules of Values shall be a basis for withholding payment to the Trade Contractor(s)

30.8 Retainage – The Owner will retain ten percent (10%) of the Construction Manager and Trade Contractor(s)'s progress payments, including amounts claimed for construction management fee until fifty one percent (51%) of the construction project has been completed. Thereafter, if the Work is fully in compliance with the requirements of the Contract and except as provided for in Article 28.4.1 above, the Owner shall retain five percent (5%) of the total contract amount until Substantial Completion and acceptance of all Work covered by this Contract, as collateral security to insure successful completion of the Work. For the purposes of this Article, the term "in full compliance" shall mean 1) that the progress of the Work is equal to or ahead of that predicted by the Project Baseline schedule and 2) the Work completed is in compliance with the requirements of the contract documents. Subsequent to the issuance of the Substantial Completion Certificate and depending upon the cost involved for the completion and/or correction of punch list items, the Consultant may recommend to the Owner an adjustment to the amount being held as retainage and, if approved by Owner, the amount of retainage may then be reduced and a sufficient sum retained by Owner to assure completion of the remaining unfinished Work. Retainage reduction as provided for in this Article 30.8 is contingent upon the Trade Contractor(s) and/or Sub-contractors being on or ahead of the approved progress schedule and on verification by the Consultant that the Work completed is in compliance with the requirements of the contract documents.

30.8.1 In addition to the retainage set forth above, the Owner may withhold from any monthly progress payments or nullify any progress payments in whole or in part as necessary to protect the Owner from loss on account of:

30.8.1.1 Defective Work which has not been remedied or completed Work which has been damaged requiring correction or replacement, or

30.8.1.2 Action required by the Owner to correct Defective Work or complete Work which the Trade Contractor(s) has failed or refused to correct or complete, or

30.8.1.3 Failure of the Trade Contractor(s) to perform any of its obligations under the Contract, or

30.8.1.4 Failure of the Trade Contractor(s) to make payment properly to Sub-contractors; suppliers of material, services or labor; or to reimburse the University for utilities or other services as provided for in the Contract;

30.8.1.5 Amounts to be withheld as liquidated damages for failure to complete the Project in the allotted Contract time.

30.8.2 When the Owner is satisfied that the Trade Contractor(s) has remedied any such deficiency, payments shall be made of the amount being withheld on the next scheduled application for payment.

30.9 Final Payment – When all Work is completed and acceptable and the Contract is fully performed, the Construction Manager will be directed to submit a final payment application for certification and the entire balance shall be due and payable upon a certification of completion by the Consultant that the Work is in accordance with the Contract Documents. Final change order reconciliation as per Article 18.12 must be provided prior to final payment.

30.9.1 Upon issuance of the Certificate of Final Completion by the Owner and submittal by the Construction Manager and Trade Contractor(s) of all required documents and releases, all retained amounts shall be paid to the Construction Manager as part of the Final Payment. By accepting such payment, the Construction Manager certifies that all amounts due or that may become due to any Trade Contractor(s), Sub-contractor, any Consultant of the Construction Manager, or any vendors or material suppliers, have been paid or will be paid

from the proceeds of the final payment; and that, further, there are not liens, claims or disputes involving the Owner or the Consultant that are outstanding or unresolved.

30.10 The Trade Contractor(s) shall promptly pay each Sub-contractor and material supplier upon receipt of payment from the Construction Manager (via the Owner) the amount to which said Sub-contractor and supplier is entitled, reflecting the percentage actually retained from payments to the Trade Contractor(s) on account of such Sub-contractor's work. The Trade Contractor(s) shall, by an appropriate Agreement with each Sub-contractor and material supplier, require each Sub-contractor and supplier to make payments to their sub-contractors, vendors and suppliers in similar manner.

The Consultant may, on request, furnish to any Sub-contractor or material supplier information regarding the percentages of completion applied for by the Trade Contractor(s) and the action thereon by the Consultant.

30.10.2 Neither the Owner nor the Consultant shall have any obligation to make payment to any Sub-contractor or material supplier except as may otherwise be required by law.

ARTICLE 31 - AUDITS

31.1 The Construction Manager's Trade Contractors', sub-contractors' and/or vendor's "records" shall upon reasonable notice be open to inspection and subject to audit and/or reproduction during normal business working hours as may be deemed necessary by the Owner at its sole discretion.
Such audits may be performed by an Owner's representative or an outside representative engaged by the Owner. The Owner or its designee may conduct such audits or inspections throughout the term of this contract and for a period of three years after final payment, or longer if required by law. Owner's representative may (without limitation) conduct verifications such as counting employees at the Construction Site, witnessing the distribution of payroll, verifying information and amounts through interviews and written confirmations with Construction Manager's employees, field and agency labor, Trade Contractors and vendors.

31.2 "Records" as referred to in this Contract shall include any and all information, materials and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, superintendents' reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in the Owner's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract Document. Such records shall include hard copy, as well as computer readable data if it can be made available, written policies and procedures; time sheets; payroll registers; cancelled payroll checks; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, etc.); original estimates; estimating work sheets; correspondence; change order files (including documentation covering negotiated settlements); back charge logs and supporting documentation; invoices and related payment documentation; general ledger; records detailing cash and trade discounts earned; insurance rebates and dividends; and any other Construction Manager or contractor records which may have a bearing on matters of interest to the Owner in connection with the Construction Manager's dealings with the Owner (all foregoing hereinafter referred to as the "records") to the extent necessary to adequately permit evaluation and verification of any or all of the following:

Compliance with Contract requirements for deliverables;
Compliance with approved plans and specifications;
Compliance with Owner's business ethics expectations;
Compliance with Contract provisions regarding the pricing of change orders;
Accuracy of Trade Contractor(s) representations regarding pricing of invoices; and
Accuracy of Trade Contractor(s) representations related to claims submitted by the Construction Manager or its payees.

31.3 The Construction Manager shall require all payees (examples of payees include Trade Contractors, Sub-contractors, vendors, and/or material suppliers) to comply with the provisions of this Article by including the requirements hereof in a written contract agreement between the Construction Manager and payees. Such requirements to include flow-down right of audit provisions in contracts with payees will also apply to Subcontractors and Sub-subcontractors, material suppliers, etc. The Construction Manager will cooperate fully

and will cause all related parties and all of the Construction Manager's Trade Contractors and/or subcontractors (including those entering into lump sum subcontracts) to cooperate fully in furnishing or in making available to Owner from time to time whenever requested, in an expeditious manner, any and all such information, materials and data.

31.4 Owner's authorized representative or designee shall have reasonable access to the Construction Manager's facilities, shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this contract and shall provide adequate and appropriate work space in order to conduct audits in compliance with this Article. The Construction Manager and its payees agree bear their costs and expenses relating to any inspections and audits.

31.5 If an audit inspection or examination in accordance with this Article discovers any fraud or misrepresentation, or discloses overpricing or overcharges (of any nature) by the Trade Contractor(s) to the Construction Manager and/or Owner, in addition to making adjustments for the overcharges, the reasonable actual cost of the Owner's audit shall be reimbursed to the Owner by the Construction Manager. Any adjustments and/or payments that must be made as a result of any such audit or inspection of the Construction Manager's invoices and/or records shall be made within Ninety (90) Calendar Days from presentation of the Owner's findings to the Construction Manager.

31.6 The provisions of Articles 31.1, 31.2 and 31.5 notwithstanding, the Owner shall have the right to conduct inspections and audits of any matter relating to the Contract Documents or the Work, which shall be for the Owner's sole benefit and shall not relieve the Trade Contractor(s), its sureties, contractors, subcontractors suppliers and their respective employees and agents of any obligations under the Contract Documents.

31.7 Any audits or inspections under Article 31 shall not constitute a waiver of any right the Owner has to accounting or discovery of records in the possession, custody or control of the Trade Contractor(s), its sureties, contractors, subcontractors, vendors and their respective employees and agents

ARTICLE 32 - PROGRESS & SCHEDULING

32.1 If requested by the Owner during the Design Phase of the Project, and working in cooperation with the Owner and the Consultant(s), the Construction Manager shall prepare a Critical Path Method (CPM) type Design Phase schedule incorporating design phase and review activities through completion of the design and bidding of the Trade Contracts, shall include in this Design Phase schedule the broad categories of Work to be accomplished in the subsequent implementation of the design and construction of the Project, and shall modify and update this Design Phase schedule as necessary to reflect the actual status and then current plan for the Project.

32.2 The schedules submitted for this Project shall be prepared using Primavera P6 scheduling software. If approved by the University, and at the sole discretion of the University, schedules submitted using earlier versions of Primavera scheduling software (Primavera SureTrak or Primavera P3) may be converted to Primavera P6 format by the University for review purposes. However, the University will not be responsible for any inaccuracies that may result from such conversions.

32.2.1 Prior to bidding Trade Contracts, the Construction Manager shall prepare and submit to the Owner and the Consultant a preliminary CPM construction schedule for the Work that will be included in the Project bidding documents.

3.2.2.2 The schedules submitted for this Project shall coordinate Work in accordance with all schedules included in the Owner's approved Program. Construction work shall be scheduled and executed such that operations of the University are given first priority. This applies particularly to outages and restriction of access.

32.2.3 The schedules submitted for this Project shall not exceed time limits established for the Project. Schedules which reflect a duration less than the Contract Time are for the convenience of the Construction

Manager and shall not be the basis of any claim for delay or extension of time.

32.2.4 Schedules shall be revised at appropriate intervals as required by the condition of the Work and the Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

32.2.5 The Construction Manager shall also submit a payment schedule indicating the percentage of the Contract Amount and the amount of the anticipated monthly payments that will be requested as the Project proceeds.

32.2.6 The Owner may withhold approval of all or a portion of progress payments until the progress payment schedule and construction schedule have been submitted by the Construction Manager.

32.3 The Construction Manager shall prepare and keep current, for the Consultant's approval, a separate schedule of submittals coordinated with the Construction Manager's CPM construction schedule that provides reasonable time for the Consultant to review the submittals.

32.4 The Trade Contractor(s) shall cause the work to be performed pursuant to the most recent schedules.

ARTICLE 33 - USE OF COMPLETED PORTIONS

33.1 Upon mutual Agreement between the Owner, Construction Manager, and Consultant, the Owner may use a completed portion of the Project after an inspection is made. Such possession and use shall not be deemed as acceptance of any Work not completed in accordance with the Contract Documents, nor shall such possession and use be considered to alter warranty obligations or cause any warranty period to commence prior to Substantial Completion.

ARTICLE 34 - INDEMNIFICATION

34.1 To the fullest extent permitted by law, the Trade Contractor(s) shall indemnify and hold harmless the Owner, Construction Manager, its consultants, and their respective employees and agents from and against all claims, damages, losses and expenses, including attorney's fees, provided that any such claim, loss, damage or expense: (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (b) is caused in whole or in part by any negligent act or omission of the Trade Contractor(s), any Sub-contractor or material supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable This basic obligation to indemnify shall not be construed to nullify or reduce other indemnification rights which the Owner, its consultants, and their respective employees and agents would otherwise have.

34.2 The Trade Contractor(s) shall also indemnify and hold harmless the Owner, Construction Manager, its consultants, and their respective employees and agents from any claims relating to the Project brought against the Owner, its consultants, and their respective employees and agents by any Sub-contractor unless such claims are due to the gross negligence or misconduct of the Owner or Consultant.

34.3 In any and all claims against the Owner its consultants, and their respective employees and agents, by any employee of the Trade Contractor(s), any Sub-contractor, any one directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Trade Contractor(s) or any Sub-contractor under Worker's Compensation acts, disability benefit acts or other employee benefit acts.

34.4 The obligations of the Trade Contractor(s) under this Article shall not extend to the liability of the Consultant, his agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the

giving of or the failure to give directions or instructions by the Consultant, his agents or employees, provided such giving or failure to give is the primary cause of injury or damage.

ARTICLE 35 - INSURANCE

35.1 The Trade Contractor(s) shall furnish the Owner (via the Construction Manager) the Certificates of Insurance or other acceptable evidence that insurance is effective, and guarantee the maintenance of such coverage during the term of the Contract. Each policy of insurance, except Workers Compensation, shall name the University of Kentucky and the directors, officers, trustees and employees of the University as additional insured on a primary and non-contributory basis as their interest appears. Waiver of subrogation in favor of the University of Kentucky shall apply to all policies. Any endorsements required to validate such waiver of subrogation shall be obtained by the Trade Contractor(s) at the Trade Contractor(s)'s expense. Reference the Turner CCIP manual for additional details

35.2 The Trade Contractor(s) shall not commence, nor allow any Sub-contractor to commence Work under this Contract, until the Owner has reviewed the certificates and approved coverages and limits as satisfying the requirements of the bidding process.

35.3 Workers' Compensation and Employers' Liability Insurance. The Trade Contractor(s) shall acquire and maintain Workers' Compensation insurance with Kentucky's statutory limits and Employers' Liability insurance as defined in the Special Conditions for all employees who will be working at the Project site. In the event any Work is sublet, the Trade Contractor(s) shall require any Sub-contractor to provide proof of this insurance for the Sub-contractors' employees, unless such employees are covered by insurance provided by the Trade Contractor(s).

35.4. The Trade Contractor(s) shall either require each Sub-contractor to procure and maintain insurance of the type and limits stated during the terms of the Contract, or insure the activities of such Sub-contractors under a blanket form as described below:

35.4.1 Commercial General Liability Insurance. The Trade Contractor(s) shall acquire and maintain a Broad Form Comprehensive General Liability (CGL) Insurance Policy including premises
- operations, products/completed operations, blanket contractual, broad form property damage, real property fire legal liability and personal injury liability coverage. The Insurance Policy must be on an "occurrence" form only, unless approved by the Owner. Contractual liability must be endorsed to include defense costs. Products and completed operations insurance must be carried for two years following completion of the Work. Policies which contain Absolute Pollution Exclusion endorsements are not acceptable. Coverage must include pollution from "hostile fires". Where required by the risks involved, Explosion, Collapse and Underground (XCU) coverages shall be added by endorsement. If the work involved requires the use of helicopters, a separate aviation liability policy as defined in the Special Conditions will be required. If cranes and rigging are involved, a separate inland marine policy with liability limits as defined in the Special Conditions will be required.

35.4.1.1 The limits of liability shall not be less than defined in the Special Conditions.

35.4.2 Comprehensive Automobile Liability Insurance. The Trade Contractor(s) shall show proof and guarantee the maintenance of insurance to cover all owned, hired, leased or non-owned vehicles used on the Project. Coverage shall be for all vehicles including off the road tractors, cranes and rigging equipment and include pollution liability from vehicle upset or overturn. Policy limits shall not be less than defined in the Special Conditions.

35.4.3 Excess or Umbrella Liability Insurance. The Trade Contractor(s) shall acquire and maintain a policy of excess liability insurance in an umbrella form for excess coverages over the required primary policies of broad form commercial general liability insurance, business automobile liability insurance and employers' liability insurance. This policy shall have a minimum as defined in the Special Conditions for each occurrence in excess of the applicable limits in the primary policies. The excess liability policy shall not contain an absolute pollution exclusion and shall include coverages for pollution that may occur due to hostile fires and vehicle upset and overturn. The limits shall be increased as appropriate to cover any anticipated special exposures.

35.5 Builders Risk Insurance. The Construction Manager shall purchase and maintain an "all risk" Builder's Risk Insurance policy upon the Work at the site to the full insurable value thereof. Such insurance shall include interests of the Owner, Construction Manager, and all Sub-contractors and of their subcontractors. It shall insure against perils of fire, extended coverage, vandalism and malicious mischief. Trade Contractor(s)'s work performed, and materials to be incorporated into the project and stored on the jobsite, will be covered. Any such event occurring upon the Work Site covered under this policy and for which a claim is filed, **the causing trade contractor shall held responsible to incur the deductible cost of this policy in its entirety for said occurrence per below costs.** Builder's Risk does not include temporary buildings, or Trade Contractor(s) or Trade Contractor(s)'s tools, equipment, or trailers and contents.

Deductibles applied per OCCURANCE:
$ 10,000: Base Rate
$ 50,000: Water Damage, Gross Negligence
$100,000: Flood, Earthquake, Windstorm, Costal Windstorm

35.6 Insurance Agent and Company Insurance as required in the bidding process of the Project shall be written according to applicable state law in Kentucky. The policies shall be written by an insurer duly authorized to do business in Kentucky in compliance with KRS: 304.1-.100 and -110.

ARTICLE 36 - PERFORMANCE AND PAYMENT BONDS

36.1 The Construction Manager shall furnish a Performance Bond in the form provided in the Contract Documents in the full amount of the Contract Amount as security for the faithful performance of the Contract. The Construction Manager shall also furnish a Payment Bond in the form provided in the Contract Documents in the full amount of the Contract Amount for the protection of all persons performing labor or furnishing materials, equipment or supplies for the Construction Manager or its Sub-contractors for the performance of the Work provided for in the Contract, including security for payment of all unemployment contributions which become due and payable under Kentucky Unemployment Insurance Law.

36.2 Each bond furnished by the Construction Manager shall incorporate by reference the terms of the Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract Amount is adjusted by Change Order, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amounts.

36.3 The performance and payment bonds shall be executed by a surety company authorized to do business in the Commonwealth of Kentucky, and the contract instrument of bonds must be countersigned by a duly appointed and licensed resident agent.

ARTICLE 37 - DAMAGED FACILITIES

37.1 The Trade Contractor(s) shall repair or replace, at no expense to the Owner, any damaged section of existing buildings, paving, landscaping, streets, drives, utilities, watersheds, etc. caused by Work performed under the Contract or incidental thereto, whether by the Trade Contractor(s)'s own forces, Sub-contractors or by material suppliers. Such repair or replacement shall be performed by craftsmen skilled and experienced in the trade or craft for the original Work.

37.2 Water damage to the interior of any building caused by Work performed under the Contract or incidental thereto, whether by the Trade Contractor(s)'s own forces, Sub-contractors, or by material suppliers, and whether occurring in a new or existing building, shall be repaired by the Trade Contractor(s) at the Trade Contractor(s)'s expense, and any materials damaged inside the building, including personal property, shall be repaired or replaced at the full replacement cost by the Trade Contractor(s) at the Trade Contractor(s)'s expense.

37.3 For existing buildings, the Trade Contractor(s), along with the Owner's Representative and Consultant, will tour the Project site to evaluate existing conditions and determine any existing damage before

any Work on this Contract is done.

37.4 Should the Trade Contractor(s) fail to proceed with appropriate repairs in an expedient manner, the Owner reserves the right to have the Work/repairs completed and deduct the cost of such Work/repairs from amounts due or to become due to the Trade Contractor(s). If the Owner deems it not expedient to repair the damaged Work, or if repairs are not done in accordance with the Contract, an equitable deduction from the Contract price shall be made.

ARTICLE 38 - CLAIMS & DISPUTE RESOLUTION

38.1 All Trade Contractor(s) claims and disputes shall be referred to the Consultant via the Contruction Manager for review and recommendation. All claims shall be made in writing to the Consultant and to the Owner's Project Manager not more than ten (10) days from the occurrence of the event which gives rise to the claim or dispute, or not more than ten (10) days from the date that the Trade Contractor(s) knew or should have known of the claim or dispute. Unless the claim is made in accordance with these requirements, it shall be waived. Any claim not submitted before Final Payment shall be waived. The Consultant shall render a written decision within fifteen (15) days following receipt of a written demand for the resolution of a claim or dispute.

38.1.1 The provisions of Article 43.2 notwithstanding, claims and disputes between the Construction Manager and any Sub-contractor or supplier shall not be referred to the Consultant except to request interpretation and/or clarification of the intent of the plans or specifications. Such claims and disputes between the Construction Manager and any Sub-contractor shall be resolved between those parties as required by Article 43.4 of these General Conditions.

38.2 The Consultant's decision shall be final and binding on the Trade Contractor(s) unless the Construction Trade Contractor(s) submits to the Consultant via the Construction Manager and the Owner's Project Manager a written notice of appeal within fifteen (15) Calendar Days of the Consultant's decision. The Trade Contractor(s) must present within fifteen (15) Calendar Days of such notice to appeal a narrative claim in writing with complete supporting documentation. After receiving the written claim, the Project Manager will review the materials relating to the claim and may meet with the Consultant and/or the Trade Contractor(s) to discuss the merits of the claim. The Project Manager will render a decision within thirty (30) Calendar Days after receiving the written claim and supporting documentation. The decision of the Project Manager shall be final and binding pending further appeal as provided for in Article 39. If the Consultant or the Project Manager do not issue a written decision within thirty (30) calendar days after receiving the claim and supporting documentation, or within a longer period as may be established by the parties to the Contract in writing, then the Trade Contractor(s) may proceed as if an adverse decision had been received.

38.3 If the Project Manager does not agree with the Consultant's decision on a claim by the Trade Contractor(s), the Project Manager shall notify the Trade Contractor(s) via the Construction Manager and the Consultant and direct the Trade Contractor(s) to perform the Work about which the claim was made and the Trade Contractor(s) shall proceed with such Work in accordance with the Project Manager's instruction. If the Trade Contractor(s) disagrees with a decision of the Project Manager concerning a Trade Contractor(s)'s claim, the Trade Contractor(s)'s shall proceed with the Work as indicated by the Project Manager's decision.

38.4 The Trade Contractor(s) shall continue to diligently pursue Work under the Contract pending resolution of any dispute, and the Owner shall continue to pay for undisputed work in place.

ARTICLE 39 - CLAIMS FOR DAMAGE

39.1 Should either party to the Contract suffer damage because of wrongful act or neglect of the other party, or of anyone employed by them, or others for whose act they are legally liable, or if other controversy should arise under the Contract, such claim or controversy shall be made in writing to the other party within thirty (30) days after the first occurrence of the event. Prior to the institution of any action in court, the claim or controversy (together with supporting data) shall be presented in writing to the Director of the Capital Project Management Division at the University of Kentucky ("Director") or his designee. The Director, or designee, is authorized, subject to any limitations or conditions imposed by regulations, to settle, comprise, pay, or otherwise adjust the claim or controversy with the Trade Contractor(s). The Director, or designee, shall

promptly issue a decision in writing. A copy of the decision shall be mailed or otherwise furnished to the Trade Contractor(s). The decision rendered shall be final and conclusive unless the Trade Contractor(s) files suit pursuant to KRS 45A.245. If the Director, or designee, does not issue a written decision within one hundred and twenty (120) days after written request for a final decision, or within a longer period as may be established by the parties to the Contract in writing, then the Trade Contractor(s) may proceed as if an adverse decision had been received.

39.2 Any legal action on the Contract shall be brought in the Franklin Circuit Court and shall be tried by the Court sitting without a jury. All defenses in law or equity, except the defense of government immunity, shall be preserved to the Owner. The Owner shall recover from the Trade Contractor(s) all attorney's fees, costs and expenses incurred to the extent the Owner prevails in defending or prosecuting each claim in litigation of disputes under the Contract. The Owner is the prevailing party under this provision and is entitled to recover attorneys' fees, costs and expenses on a claim-by-claim basis to the extent the Owner successfully defeats or prosecutes each claim. A recovery of a net judgment by the Trade Contractor(s) shall not be determinative of the Owner's right to recover attorneys' fees, expenses and costs. Rather, such a determination shall be made based on the extent that the Owner successfully defends or prosecutes each distinct claim in litigation under the Contract, even if the Owner does not prevail on every claim. The Trade Contractor(s) shall be liable to the Owner for all attorney's fees, costs and expenses incurred by the Owner to enforce the provisions of the Contract.

ARTICLE 40 - LIENS

40.1 The filing and perfection of liens for labor, materials, supplies, and rental equipment supplied on the Work are governed by KRS 376.195 et seq.

40.2 Statements of lien shall be filed with the Fayette County Clerk and any action to enforce the same must be instituted in the Fayette Circuit Court, pursuant to KRS 376.250 (5).

40.3 The lien shall attach only to any unpaid balance due the Trade Contractor(s) for the improvement from the time a copy of statement of lien, attested by the Fayette County Clerk, is delivered to the Owner, pursuant to the provisions of KRS 376.240.

ARTICLE 41 - ASSIGNMENT

41.1 Neither party to the Contract shall assign the Contract, or any portion thereof without the prior written consent of the other, which consent may be granted or withheld in the granting party's sole and absolute discretion. The Trade Contractor(s) shall not assign any amount or part of the Contract or any of the funds to be received under the Contract unless the Construction Manager has the prior written approval of the Owner (which approval may be granted or withheld in the Owner's sole and absolute discretion) and the Surety on the Construction Manager's bond has given written consent to any such assignment.

ARTICLE 42 - SEPARATE CONTRACTS

42.1 The Owner reserves the right to enter into other Contracts in connection with the Project or to perform any work with the Owner's forces in the normal sequence of the work as depicted in the then current construction schedule. Except for work performed by University personnel, such contracts shall be assignable to the Construction Manager and shall contain the same terms and conditions as the contracts between the Construction Manager and the Sub-contractors. The Construction Manager will be entitled to a maximum of three percent (3%) overhead and profit on the value of such assigned contracts. The Construction Manager shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate its Work with theirs in such manner as the Consultant may direct.

42.2 Should the Trade Contractor(s) cause damage to any separate contractor on the Work, and the separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Trade Contractor(s) shall be responsible for all costs, attorney's fees and expenses incurred by the Owner for defending such proceedings unless the Owner prevails on behalf of the Trade Contractor(s)'s in which case

fees and expenses will be the responsibility of the separate contractor and if any judgment against the Owner arises therefrom, the Trade Contractor(s) shall pay or satisfy it and shall pay all costs, attorney's fees and expenses incurred by the Owner.

42.3 If any part of the Trade Contractor(s)'s Work depends upon the work of any other separate contractor, the Trade Contractor(s) shall promptly report to the Consultant via the Construction Manager any observed defects in such work that render it unsuitable for proper execution connection. The failure to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of the work, except as to defects which may develop in the other contractor's work after the execution ofthe work.

42.4 Whenever work being done by the Owner's forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various parties involved shall be established by the Owner to secure the completion of the various portions of the Work in general harmony.

ARTICLE 43 - CONSTRUCTION MANAGER/SUB-CONTRACTOR RELATIONSHIP

43.1 The Construction Manager is fully responsible to the Owner for the acts and omissions of the Sub-contractors and of persons either directly or indirectly employed by them. The Construction Manager is responsible for the acts and omissions of persons employed directly by the Construction Manager and for the coordination of the Work, including placement and fittings of the various component parts. No claims for extra costs as a result of the failure to coordinate the Work, or by acts or omissions of the various Sub-contractors, will be paid by the Owner.

43.2 Except as otherwise provided in these Contract Documents, the Construction Manager agrees to bind every Sub-contractor by the terms and conditions of the Contract Documents as far as applicable to their portion of the Work. Upon request, the Construction Manager shall provide copies of any subcontracts and purchase orders to the Owner or Consultant.

43.3 The Construction Manager shall make no substitution or change in any Sub-contractor listed and accepted by the Consultant or Owner except as approved in writing by the Owner. The Construction Manager shall not employ any Sub-contractor or supplier against whom the Owner or the Consultant has made reasonable and timely objection. The Construction Manager (CM) will not be allowed to self-perform work or bid on any of the proposed work categories unless a subcontractor fails to perform and upon prior approval by the Universities authorized representatives."

43.4 Nothing contained in the Contract Documents shall create any contractual relationship between the Owner and any Sub-contractor, Trade Contractor or Supplier, nor shall the Construction Manager include any language in their contracts with any Sub-contractor, Trade Contractor and/or Supplier that might Imply such a relationship. The Construction Manager is hereby notified that it is the Construction Manager's contractual obligation to settle disputes between Sub-contractors, Trade Contractors, and/or Suppliers. Neither the Owner nor the Consultant will settle disputes between the Construction Manager and any Sub-contractor, Trade Contractor, and/or Supplier or between Sub- contractors, Trade Contractors, and/or Suppliers.

43.4.1 The Owner does not waive sovereign immunity under KRS 45A.245(1) for any claim or claims made by parties not having a written contract with the University ofKentucky.

43.4.2 Third party and/or flow-through type claims, from Sub-contractors and/or suppliers or any other entity not having a written contract directly with the University, are specifically prohibited by this Contract and no provision of the Construction Manager's contracts with such entities shall indicate otherwise.

43.4.3 The Construction Manager shall indemnify and hold harmless the Owner and its agents and employees from any claims relating to the Project brought against the Owner by any of the Construction Manager's Sub-contractors or suppliers, or between their sub-contractors orsuppliers.

ARTICLE 44 - CASH ALLOWANCE

44.1 The Construction Manager is to provide or require the Sub-contractor(s) to include in the Contract

Amount all costs necessary to complete the Work. Costs based on “allowances” shall be permitted only for objectively quantifiable material items and only with the prior written approval of the Owner.

ARTICLE 45 - PROJECT SITE LIMITS

45.1 The Construction Manager shall confine the apparatus, the storage of materials, and the operations of Workmen to Project site limits indicated in the Contract Documents and as permitted by law, ordinances, and permits, and shall not unreasonably encumber the site with materials and equipment.

ARTICLE 46 - CLEAN UP

46.1 The Trade Contractor(s) shall at all times keep the premises free from accumulation of waste material or rubbish caused by the operations in connection with the Work. All corridors and exit doors must be kept clear at all times. All exit ways, walks, and drives must be kept free of debris, materials, tools and vehicles.

46.2 At the completion of the Work, and prior to final inspection and acceptance, the Trade Contractor(s) shall remove all remaining waste materials, rubbish, Trade Contractor(s)'s construction equipment, tools, machinery, and surplus materials and shall leave the Work in a clean and usable condition, satisfactory to the Consultant and the Owner. If the Trade Contractor(s) fails to clean up as provided in the Contract Documents, the Owner and the Construction Manager may perform the cleaning tasks and charge the cost to the Trade Contractor(s).

ARTICLE 47 - POINTS OF REFERENCE

47.1 The Trade Contractor(s) shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, the Trade Contractor(s) shall be charged with the resulting expense of replacement and shall be responsible for any mistake that may be caused by their loss or disturbance.

ARTICLE 48 - SUBSTITUTION - MATERIALS AND EQUIPMENT

48.1 Reference to or the listing of items to be incorporated in the construction without referring to any specific article, device, equipment, product, material, fixture, patented process, form, method or type of construction, or by name, make, trade name, or catalog number shall be interpreted as establishing the general intent of the Contract and the general standard of quality for that item.

48.2 Specific references in the Contract Documents to any article, device, equipment, product, material, fixture, patented process, form, method or type of construction, or by name, make, trade name, or catalog number, with the words "or equal", shall be interpreted as establishing a minimum standard of quality, and shall not be construed as limiting competition.

48.2.1 Substitution of other equipment and materials as “or equal” to items named in the specifications will be allowed provided the proposed substitution is approved by the Consultant and will perform the functions called for by the general design, be similar and of equal quality to that specified and be suited to the same use and capable of performing the same function of that specified. The Trade Contractor(s) has the burden to prove equality of any substitution requested.

48.3 Specific references in the Contract Documents to any article, device, equipment, product, material, fixture, patented process, form, method or type of construction, or by name, make, trade name, or catalog number, without the words “or equal”, shall be interpreted as defining an item or source that has after careful consideration been determined by the University as necessary to be compliant with, and/or to function properly within, the University operational system. No substitutions will be allowed.

48.3.1 In the event the Contract Documents contain specific reference to two or more items as described in Article 48.3, any of those listed will be acceptable.

48.4 Substitution of equipment and materials previously submitted by the Trade Contractor(s) and

approved by the Consultant will be considered only for the following reasons:

48.4.1 Unavailability of the materials or equipment due to conditions beyond the control of the supplier.

48.4.2 Inability of the supplier to meet Contract Schedule.

48.4.3 Technical noncompliance to specifications.

48.5 In substituting materials or equipment, the Trade Contractor(s) assumes responsibility for any changes in systems or modifications required in adjacent or related work to accommodate such substitutions, despite consultant approval, and all costs associated with the substitution shall be the responsibility of the Trade Contractor(s). The Consultant shall be reimbursed by the Trade Contractor(s) for any architectural or engineering revisions required as the result of such substitutions.

48.6 Inclusion of a certain make or type of materials or equipment in the Trade Contractor(s)'s bid proposal shall not obligate the Owner to accept such materials or equipment if they do not meet the requirements of the Contract Documents and any such substitutions in the preparation of the bid without written approval shall be at the sole risk of the Trade Contractor(s).

ARTICLE 49 - TEST AND INSPECTION

49.1 Regulatory agencies of the government having jurisdiction may require any Work to be inspected, tested or approved. The Trade Contractor(s) shall assume full responsibility therefore, pay all costs in connection therewith, unless otherwise noted, and furnish the Consultant the required certificates of inspection, testing or approval.

49.2 The Trade Contractor(s) shall give the Consultant (via the Construction Manager) timely notice of readiness of the Work for all inspections, tests or approvals.

49.3 The technical specifications may indicate specific testing requirements to be performed by the Trade Contractor(s). Unless otherwise provided in the Contract Documents, the cost of all such testing shall be the responsibility of the Trade Contractor(s). Testing shall be completed using a testing facility or laboratory approved by the Owner.

49.4 The costs of all inspection fees as may be required to construct and occupy the Work shall be the responsibility of the Trade Contractor(s).

ARTICLE 50 - WARRANTY

50.1 The Trade Contractor(s) warrants to the Owner and the Consultant that all materials and equipment furnished under this Contract shall be new and in accordance with the requirements of the Contract Documents, and that all Work shall be of good quality, free from faults and defects and in conformance with the Contract Documents. If required by the Consultant or the Owner, the Trade Contractor(s) shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If the Trade Contractor(s) requests approval of a substitution of material or equipment, the Trade Contractor(s) warrants that such installation, construction, material, or equipment will equally perform the function for which the original material or equipment was specified. The Trade Contractor(s) explicitly warrants the merchantability, the fitness for a particular purpose, and quality of all substituted items in addition to any warranty given by the manufacturer and/or supplier. Approval of any such substitution is understood to rely on such warrant of performance. Prior to the Substantial Completion inspection, the Trade Contractor(s) shall deliver to the Consultant all warranties and operating instructions required under the Contract or to which the Trade Contractor(s) is entitled from manufacturers, suppliers, and Sub-contractors. All warranties for products and materials incorporated into the Work shall begin on the date of Substantial Completion. The warranty provided in this Article 50 shall be in addition to and not a limitation of any other warranty or remedy required by law or by the Contract Documents, and such warranty shall be interpreted to require the Trade Contractor(s) to replace defective material and equipment and re-

execute defective Work which is disclosed to the Trade Contractor(s) by or on behalf of the Owner within a period of one (1) year after Substantial Completion of the entire Work in addition to other warranty obligations beyond one year from Substantial Completion as provided for by law or by the Contract Documents.

50.2 Neither the final payment, any provision in the Contract Documents nor partial or entire use or occupancy of the premises by the Owner shall constitute an acceptance of Work not done in accordance with Contract Documents or relieve the Trade Contractor(s) or its Sureties of liability with respect to any warranties or responsibilities for faulty materials and workmanship. The Trade Contractor(s) or its sureties shall remedy any defects in Work and any resulting damage to Work at the Trade Contractor(s)'s own expense. The Trade Contractor(s) shall be liable for correction of all damage resulting from defective Work. If the Trade Contractor(s) fails to remedy any defects or damage, the Owner may correct Work or repair damages and the cost and expense incurred in such event shall be paid by or be recoverable from the Trade Contractor(s) or the surety. The Owner will give notice of observed defects with reasonable promptness.

50.3 The Trade Contractor(s) shall guarantee that labor, material, and equipment will be free of defects for a period of one (1) year from the date shown on the Certificate of Substantial Completion unless special conditions or additional warranty periods are required by the contract pursuant to Article 23 in addition to warranty obligations which extend beyond one year from Substantial Completion. The Owner will give notice of observed defects with reasonable promptness. Expendable items and wear from ordinary use are excluded from this warranty.

50.4 Should the Trade Contractor(s) be required to perform tests that must be delayed due to climate conditions, it is understood that such tests will be accomplished by the Trade Contractor(s) at the earliest possible date with provisions of the general warranty beginning upon satisfactory completion of said test. The responsibility of the Trade Contractor(s) under this Article will not be abrogated if the Owner should elect to initiate final payment. If the Owner initiates final payment, consent of Trade Contractor(s)'s surety acknowledging that Work not yet tested is required. The Trade Contractor(s) shall warrant that the entire Project will conform to the Contract Documents.

50.5 In addition to the foregoing, the Trade Contractor(s) shall warrant for a period of one (1) year that all buildings and other improvements constructed as a part of the Work shall be watertight and leak proof at every point and in every area. The Trade Contractor(s) shall, immediately upon notification by or on behalf of the Owner of water penetration, determine the source of water penetration and, at the Trade Contractor(s)'s expense, (a) do any work necessary to make such buildings or improvements watertight and (b) repair and replace any other damaged material, finishes and furnishings damaged as a result of such water penetration and return the buildings or other improvements to their original condition.

50.6 The Trade Contractor(s) shall address and resolve to the Owner's satisfaction any warranty claims made by or on behalf of the Owner during the above described warranty period and all repairs and replacements made by the Trade Contractor(s) pursuant to this Article 50 shall be warranted by the Trade Contractor(s), on the terms set forth in this Article 50, for a period of time commencing upon the completion of such repairs and replacements and ending on the later of (a) the expiration of the one (1) year warranty period provided for above or (b) six (6) months after the date such repair or replacement is completed.

50.7 All costs, attorney's fees and expenses incurred by the Owner as a result of the Trade Contractor(s)'s failure to honor any warranty for the Work shall be paid by or recoverable from the Trade Contractor(s).

ARTICLE 51 - PREVAILING WAGE LAW REQUIREMENTS (NO LONGER USED AS OF 1/9/17)

ARTICLE 52 - APPRENTICES

52.1 Apprentices (for all classifications of work) shall be permitted to work only under an apprenticeship agreement approved by the Kentucky Supervisor of Apprenticeship and by the Kentucky Apprenticeship and Training, United States Department of Labor.

ARTICLE 53 - GOVERNING LAW

53.1 This Contract and all issues and disputes arising out of this Contract shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Kentucky without consideration of its conflicts of laws principles.

ARTICLE 54 - NONDISCRIMINATION IN EMPLOYMENT

54.1 During the performance of the Contract, the Trade Contractor(s) agrees as follows:

54.1.1 The Trade Contractor(s) will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, or disability in employment. The Construction Manager will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, age, national origin, or disability in employment. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Trade Contractor(s) agrees to post in conspicuous places available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

54.1.2 The Trade Contractor(s) will, in all solicitations or advertisements for employees placed by or on behalf of the Trade Contractor(s); state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, national origin or disability in employment.

54.1.3 The Trade Contractor(s) will send to each labor union or representatives of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representatives of the Trade Contractor(s)'s commitments under this Article, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

54.2 Failure to comply with the above nondiscrimination clause constitutes a material breach of Contract.

ARTICLE 55 - AFFIRMATIVE ACTION; REPORTING REQUIREMENTS

55.1 The Construction Manager and any Sub-contractor is exempt from any affirmative action or reporting requirements, under the Kentucky Equal Employment Opportunity Act of 1978, KRS 45.550 to KRS 45.640 “The Act", if any of the following conditions are applicable:

55.1.1 The Trade Contract awarded is in the amount of two hundred and fifty thousand dollars ($250,000.00) or less, and the amount of the Trade Contract is not a subterfuge to avoid compliance with the provisions of the Act;

55.1.2 The Construction Manager or Sub-contractor utilizes the services of fewer than eight (8) employees during the course of the Contract;

55.1.3 The Construction Manager or Sub-contractor employs only family members or relatives;

55.1.4 The Construction Manager or Sub-contractor employs only persons having a direct ownership interest in the business and such interest is not a subterfuge to avoid compliance with the provisions of The Act.

55.2 The Construction Manager and any Sub-contractor, not otherwise exempted, shall:

55.2.1 For the length of the Contract, hire DBE’s from within the drawing area to satisfy the agreed upon goals and timetables. Should the union with which the Trade Contractor(s) or Sub-contractor have collective bargaining agreements be unwilling to provide sufficient DBE’s to satisfy the agreed upon goals and timetables, the Trade Contractor(s) and Sub-contractors shall hire DBE’s from other sources within the drawing area;

55.2.2 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. MBE, WBE, Veterans, Disabled Veterans and Disabled make up Diverse Business Enterprises (DBE)

55.2.3 The equal employment provisions of The Act may be met in part by the Trade Contractor(s) contracting to a DBE contractor or Sub-contractor. A DBE contractor, or Sub-contractor shall mean a business established under the definition of a DBE in Article 55.2.1

55.2.4 The Trade Contractor(s) shall, for the length of the Contract, furnish such information as required by The Act and by such rules, regulations and orders issued pursuant thereto and will permit access by the contracting agency and the department to all books and records pertaining to its employment practices and Work sites for purposes of investigation to ascertain compliance with The Act and such rules, regulations and orders issued pursuant thereto.

55.3 If the Trade Contractor(s) is found to have committed an unlawful practice against a provision of The Act during the course of performing under this Contract, a Trade Contract or a subcontract covered under The Act, the Owner may cancel or terminate the Contract, conditioned upon a program for future compliance approved by the Owner. The Owner may also declare such Trade Contractor(s) ineligible to submit proposals on further contracts until such time as the Trade Contractor(s) complies in full with the requirements of The Act.

55.4 Any provisions of The Act notwithstanding, the Trade Contractor(s) shall not be required to terminate an existing employee, upon proof that employee was employed prior to the date of the Contract, nor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

END OF DOCUMENT

UNIVERSITY OF KENTUCKY
SPECIAL CONDITIONS OF THE CONTRACT
FOR CONSTRUCTION BY TRADE CONTRACTORS
VIA CONSTRUCTION MANAGER AT RISK CONTRACT

TABLE OF CONTENTS

ARTICLE 01 GENERAL INFORMATION

1.1 These Special Conditions are intended to modify, supplement, or delete from, applicable Articles of the General Conditions.

1.2 Where any Article of the General Conditions is supplemented by these Special Conditions, the Article shall remain in effect and the supplement shall be added thereto.

1.3 Where Special Conditions conflict with General Conditions, provisions of the Special Conditions take precedence.

ARTICLE 02 PERMITS AND FEES

The Lexington Fayette Urban County Government (LFUCG) Sewer Tap Fee shall be secured and paid for by the Trade Contractor(s). The sewer tap fee is for all projects, regardless of type, is presently calculated by the LFUCG and is based on $1.56 per square foot. The total fee is anticipated to be $795,444 based on 509,900 Total Square Feet.

ARTICLE 03 (NOT USED)

ARTICLE 04 CONSULTANT

4.1 Wherever in these Contract Documents reference is made to the Consultant, it shall be understood to mean JRA Architects or their duly authorized representatives. (See Article 2 of the General Conditions.)

ARTICLE 05 GEOTECHNICAL REPORT

5.1 No subsurface or geotechnical survey information is available at this time.

ARTICLE 06 TIME FOR COMPLETION

6.1 The time for Substantial Completion as further defined in Article 1 of the General Conditions shall be 946 consecutive calendar days from the date of commencement as specified in the Work Order letter, and Final Completion shall be 30 days thereafter.

ARTICLE 07 LIQUIDATED DAMAGES

7.1 Should the Trade Contractor(s) fail to achieve Substantial Completion of the Work under this Contract on or before the date stipulated for Substantial Completion (or such later date as may result from extensions in the Contract Time granted by the Owner), he agrees that the Owner is entitled to, and shall pay the Owner as liquidated damages the sum of Two Thousand Eight Hundred Seventeen Dollars ($2,817.00) for each consecutive calendar day that Substantial Completion has not been met. See Article 3 of the Agreement.

7.2 Should the Trade Contractor(s) fail to achieve Final Completion of the Work under this Contract on or before the date stipulated for Final Completion (or such later date as may result from extensions in the Contract Time granted by the Owner), he agrees that the Owner is entitled to, and shall pay the Owner as liquidated damages the sum of One Thousand Seven Hundred Forty Eight Dollars ($1,748.00) for each consecutive calendar day until Final Completion is reached. See Article 3 of the Agreement.

ARTICLE 08 SUBMITTALS AND SHOP DRAWINGS

8.1 SUBMITTALS - GENERAL

8.1.1 The Trade Contractor(s) shall submit each set of Shop Drawings, product data, samples, and test and/or certification reports and samples as a separate item in UK E-Communication®. Projects not utilizing UK E-Communication® must submit all items electronically to the Consultant and the UK Project Manager and Administrative Coordinator.

8.1.2 All sample selections for color shall be submitted for approval at the same time. Color selections shall not be submitted individually.

8.1.3 Any deviation from the Contract Documents shall be noted on the transmittal form comment section.

8.1.4 All submittals are to be reviewed by the Construction Manager for compliance with the Contract Documents before submission for approval. All submittals are to be initiated by the Trade Contractor(s). Submittals made directly to the Consultant by sub-contractors, manufacturers or suppliers will not be accepted or reviewed.

8.1.5 Re-submittals shall conspicuously note all changes from earlier submissions. Special notation by the Trade Contractor(s) shall be made to any changes other than those made in response to the Consultant's review.

8.1.6 Manufacturers shall, when requested by the Consultant, submit test reports prepared by reputable firms or laboratories certifying as to performance, operation, construction, wearability, etc., to support claims made by the manufacturer of the equipment or materials proposed for inclusion in the Work. Trade Contractor(s) shall also submit a list of three (3) installations where said equipment or materials have been in service for a minimum of five (5) years.

8.2 SUBMISSIONS - REVIEW

8.2.1 Review of submittals is only for compliance with the design concept and the contract documents. THE CONSULTANT SHALL NOT BE RESPONSIBLE FOR CHECKING DEVIATIONS FROM CONTRACT DOCUMENT REQUIREMENTS OR CHANGES FROM EARLIER SUBMISSIONS NOT SPECIFICALLY NOTED.

8.2.2 The following shall be verified prior to making submittals:

Field Measurements, Field Construction Criteria, Catalog numbers and similar data, Quantities and Capacities, and Compliance with requirements, including verification of all dimensions,

8.2.3 Review Stamp designations shall be as follows:

8.2.3.1 “NET = No Exceptions Taken”: Proceed with the Work, no corrections needed.

8.2.3.2
"FC= Furnish as Corrected”: Proceed with the Work, noting the corrections/conditions of the approval.

8.2.3.3 "RR = Revise and Resubmit": Do not proceed with the Work, as the submittal does not comply with the Contract Documents. Revisions to the submittal are required for approval. On projects utilizing UK E-Communication, “Send Back a Step” is used in lieu of “Revise and Resubmit"

8.2.3.4 "R = rejected": Do not proceed with the Work, the submittal is rejected.

8.3 SUBMISSIONS - SPECIAL PROVISIONS

8.3.1 In making a submittal, the Trade Contractor(s) shall be deemed to be making the following representations:

8.3.1.1 The Trade Contractor(s) understands and agrees that he shall bear full responsibility for the products furnished. The Trade Contractor(s) expressly warrants that products described in the attached submittal will be usable and that they conform to the Contract requirements unless specifically noted otherwise.

8.3.1.2 The Trade Contractor(s) understands and agrees that, without assuming design responsibility, he expressly warrants that products described in the attached submittal are capable of being used in accordance with the intent of the design documents and that they conform to the Contract requirements unless specifically noted otherwise.

8.3.1.3 The Trade Contractor(s) acknowledges that the Owner will rely on the skill, judgment, and integrity of the Trade Contractor(s) as to conformance requirements and subsequent usability.

8.4 SHOP DRAWING AND PROCUREMENT SUBMITTAL LOG

8.4.1 The Construction Manager, within ten (10) days after the Pre-Construction meeting, shall begin uploading submittals using UK E-Communication®, to generate a log fixing the dates for submission of Shop Drawings, special order material items, certifications, guarantees, and any other items required to be submitted to the Consultant for review, approval or acceptance. Projects not utilizing UK E-Communication® will

submit a Shop Drawing Log provided by the Owner during the Pre-Construction Meeting.

8.4.2 The log shall track all submittals to date. The updated log shall then be reviewed and discussed at each progress meeting to determine items that may impact the construction schedule.

8.5 Shop Drawings

8.5.1 The Trade Contractor(s) shall review, approve, and submit Shop Drawings to the Construction Manager (and therefore the Consultant), in accordance with the Consultant's Shop Drawing & Procurement Submittal Log or UK E-Communication®, as herein detailed. By approving and submitting Shop Drawings, the Trade Contractor(s) represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

8.5.2 The Trade Contractor(s) shall submit Shop Drawings required for the Work and the Consultant will review and take appropriate action. The review and approval shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The approval of a separate item will not indicate approval of the assembly in which the item functions.

8.5.3 The Trade Contractor(s) shall make any corrections required by the Consultant for compliance to the Contract and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until approved. The Trade Contractor(s) shall direct specific attention, in writing, or on resubmitted Shop Drawings, to revisions other than the corrections called for by the Consultant on previous submissions. The Trade Contractor(s) stamp of approval on any shop drawing or sample shall constitute a representation to Owner and Design Consultant that the Trade Contractor(s) has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar date, or he assumes full responsibility for doing so, and that he has reviewed or coordinated each shop drawing or sample with the requirements of the Work and the Contract Documents.

8.5.4 Where a shop drawing or sample submission is required by the specifications, no related Work shall be commenced until the submission has been approved by the Design Consultant. A copy of each approved shop drawing and each approved sample shall be kept in good order by the Construction Manager at the site and shall be available to the Consultant.

8.5.5 The Consultant's approval of Shop Drawings or samples shall not relieve the Trade Contractor(s) from his responsibility for any deviations from the requirements of the Contract Documents unless the Trade Contractor(s) has in writing called the Consultant's attention to such deviation at the time of submission and the Consultant has given written approval to the specific deviation. Any approval by the Consultant shall not relieve the Trade Contractor(s) from responsibility for errors or omissions in the Shop

Drawings.

8.5.6 All submittals are to be submitted electronically by the contractor. Shop Drawings submitted through UK E-Communication® shall be scanned and submitted in color. Mark-ups must be made using visible color when printed. Workflow in UK E-Communication® will be established during the workflow meeting. Each individual Shop Drawing shall have its respective specification number and description highlighted.

8.5.7 Where Shop Drawings include fire alarm, communication systems schematics, sprinkler systems, etc., a sepia of each drawing shall be submitted to the Consultant as part of the "Record" set of drawings.

8.6 SUBMISSIONS - SAMPLES

8.6.1 Office samples shall be of sufficient size and quantity to clearly illustrate functional characteristics of the product with integrally related parts and attachment devices, and full range of color, texture, and pattern.

8.6.2 Products shall not be used until the sample has been submitted to and approved by the Consultant.

8.6.3 A minimum of two (2) samples are required to be submitted to the Consultant for review and approval and will be distributed as follows:

a) One to be retained by the University;
b) One to be returned to the Design Consultant;
c) An additional sample or samples may be submitted, at the Trade Contractor(s) option, for distribution to a third party.

8.6.4 Field samples (block, brick, etc.) of materials to be constructed at the site shall be submitted for review as required by the individual section of the Contract Documents.

8.7 SUBMISSIONS - OPERATION AND MAINTENANCE MANUALS

8.7.1 The University requires a minimum of one (1) bound copies and one (1) digital copy of the final installation, training, operation, maintenance, and repair manuals to be turned over to the Owner's Project Manager and approved for content by the Consultant by or before the time construction is 75% complete. Projects utilizing e-Communication will create digital copy from the Document Library (Closeouts) in e-Communication. The Closeout Log must contain individual line items for each physical copy submitted with corresponding PDF attachments. Operation and maintenance manuals and materials, where specified, for mechanical and electrical equipment and for operating items other than mechanical and electrical equipment must be submitted in PDF format with a separate PDF file for each item. In the event the Trade Contractor(s) fails to provide these required electronic submittals prior to reaching seventy-five (75%) completion, it is agreed that the Owner at its sole discretion may deduct from the current and subsequent Applications for Payment an amount deemed by the Owner to be

sufficient to encourage prompt compliance with this contractual requirement, until such time as acceptable O&M manuals are received.

8.7.2 Manuals provided must be of sufficient detail to enable the Owner or others to install, calibrate, train, operate, maintain, service and repair every system, subsystem, and/or piece of equipment installed on or as part of this Contract. Manuals submitted through UK E-Communication® shall be scanned and submitted in color. Mark-ups must be made using visible color when printed. Each manual must contain:

8.7.2.1 Project Title, Project number, Location, dates of submittals, names, addresses and phone number for the Consultant, Construction Manager, and Construction Manager's Sub-contractors;

8.7.2.2 An Equipment Index that includes vendors' names, addresses, and telephone numbers for all equipment purchased on the Project;

8.7.2.3 Emergency instructions with phone numbers and names of contact persons on warranty items shall be uploaded to UK E-Communication®;

8.7.2.4 Copies of each system's air balancing record and each system's hydronic balancing record (1) physical copy and (1) digital copy in e-Communication;

8.7.2.5 Copy of valve tag list;

8.7.2.6 Copy of As-Built temperature control system drawings and components and sequence of operation;

8.7.2.7 Original copies of the following provided by the manufacturer:

Installation manuals	Instruction Manuals
Training manuals	Calibration manuals
Service Manual	Operation manuals
Parts list	Repair manuals
Reviewed Shop Drawings	Wire list
	Keying Bit List

8.7.2.8 Any Computer, Micro controller, and/or Microprocessor equipped equipment installed shall be provided with source code copies of all software and firmware (prom, e-prom, rom, other) supplied on this Contract; and

8.7.2.9 Copies of all inspection and guarantee certificates, manufacturers' warranties with the University of Kentucky listed as the Owner for all equipment provided and/or installed.

8.7.2.10 All manuals shall be as follows: Bound in hard cover three(3) ring (D-type) binder, 1", 1.5" or 2" maximum, indexed and in CSI format, tabbed (4,5,8 or 16th cut), no more than 80% binder fill, white vinyl, presentation type with clear vinyl view cover on front, back and spine and with pockets on front and back. Maximum drawing size in binder shall be folded 11"x17" and shall be hole punched and reinforcements added. Do not put drawings in pockets. Top of all drawings shall be at top or spine side of the manual. Complete drawings must be viewed without opening rings. Provide binders as manufactured by Universal Office Products, Des Plaines, IL. 1"(S# B2-20742), 1.5"(B2-20744), or 2"(B2-20746) or equal.

8.7.2.11 If the binder includes manuals from any one vendor covering several different model numbers, the model used on the Project must be highlighted.

8.7.2.12 Included in the front of the "Operation and Maintenance Manual" shall be a copy of the Interior and Exterior Finish plan and Schedule listing all finish materials, the manufacturer, the finish color, and the manufacturer's paint number.

8.7.2.13 Photograph album containing photos and negatives or digital images (.pdf format) showing buried utilities and concealed items shall be included.

8.8 SUBMISSIONS – AS - BUILT SET OF DRAWINGS

8.8.1 The Trade Contractor(s) shall submit one (1) electronic copy of As - Built set of drawings in PDF format indicating all deviations of construction as originallyspecified in the Contract Documents. These As-Built Drawings will compile information from the Construction Manager as well as all Sub-contractors. The Trade Contractor(s) shall provide a qualified representative to update the As - Built set of drawings as construction progresses. As-Builts submitted through UK E- Communication® shall be scanned and submitted in color. Mark-ups must be made using visible color when printed.

8.8.2 The Trade Contractor(s) shall provide and utilize a camera to photograph the installation of buried utilities and concealed items. The Trade Contractor(s) shall provide standard 3 1/2" x 5" photographs with negatives, or digital images (.jpeg format), which shall be submitted as part of the Operation and Maintenance Manuals submission. These photos should be mounted in a bound album with labeling as to subject of photo, date, and Project. Such album is to be kept at job site with the As - Built Set of Drawings until submittal of same.

8.8.3 Approval of the Final Payment request will be contingent upon compliance with these provisions. The Construction Manager's As – Built set of drawings shall be delivered to the Consultant at their completion so that the Consultant may make any changes on the original contract drawings.

8.9 SUBMISSIONS - SAP EQUIPMENT LIST

8.9.1 Trade Contractor(s) shall complete equipment list for use with SAP software in electronic spreadsheet format. Data is to be provided in Uniformat format with the information being provided for individual locations as noted in Attachment A – Uniformat Component List. Information is to be provided as follows (MCPPD or CPPD will provide blank Excel spreadsheets in electronic form for use in compiling the information, if desired)

8.9.2 All materials that require preventative maintenance (PM) are listed as in Attachment A. The equipment list is to be provided in Excel spreadsheet format and is to include the information listed in Attachment B

8.9.3 Required maintenance procedure listing each work task in Excel spreadsheet format as shown in Attachment C.

8.9.4 Required frequency of maintenance for the work tasks outlined in 8.9.3 above and included in the Attachment C spreadsheet

8.9.5 Listing of maintenance parts and items: i.e. filters, lubricants, etc. for each work task listed in 8.9.3 above.

8.10 SUBMISSIONS – MAINTENANCE MATERIALS

8.10.1 If specified, Maintenance/Replacement Materials, Spare Parts, and special maintenance tools for proper maintenance shall be provided by the CM at Risk.

ARTICLE 8.9 Attachment A – Uniformat Component List

SAP Object Type No.	Component Name
D5030.0232	Access Control Panel
D3050.0110	Air Conditioning Comp Rm Unit
D3030.0610	Air Conditioning Compressor
D3030.0620	Air Conditioning Condensing Unit
D3050.0120	Air Conditioning Pkg Rooftop Unit
D3050.0130	Air Conditioning Pkg Terminal Unt
D3030.0630	Air Conditioning Split System
D3050.0140	Air Conditioning Unit Package
D3050.0150	Air Conditioning Unit Window
D3050.0710	Air Curtain / Heater
D2090.0120	Air Dryer
D3010.0443	Air Eliminator
D3040.0110	Air Handling Unit
D5090.0220	Auto Transfer Switch - Electrical
	Automatic Door Operator
D2020.0330	Backflow Preventers
D3020.0110	Boiler, Steam System
D5030.0241	Camera
D5030.0231	Card Access System
D3030.0300	Chiller, Reciprocate
E1090.0250	Chutes & Collectors
D5010.0510	Circuit Breaker Panel
F1020.0230	Clean Rooms
F1020.0240	Cold Storage Rooms
D2090.0110	Compressor, Air
D3060.0250	Controls, Building System
E1090.0317	Cooler, Commercial
D3030.0510	Cooling Tower, Packaged
D2010.1300	Copper Silver Ion Equipment
D4090.0510	Dampers Fire
D4090.0500	Dampers Fire/Smoke
D4090.0520	Dampers Smoke
D3050.0400	Dehumidifiers
D2090.0200	Deionized Water System
E1090.0391	Dishwasher, Commercial
B2030.0160	Door, Auto Entrance
B2030.0100	Door, Exterior Entrance

C1020.0330	Door, Fire Separate
C1020.0320	Door, Smoke Partition
D2010.0800	Drinking Fountain
D5010.0350	Electric Switchboard
E1030.0310	Elevator, Dock Leveler
D1090.0120	Elevator, Dumbwait Electric
D1090.0130	Elevator, Dumbwait Hydraulic
D1010.0140	Elevator, Hydraulic Freight
D1010.0120	Elevator, Hydraulic Passenger
D1010.0230	Elevator, Platform Lift
D1010.0240	Elevator, Sidewalk Lift
D1010.0130	Elevator, Traction Freight
D1010.0110	Elevator, Traction Passenger
D1010.0220	Elevator, Wheelchair Lift
D2010.1100	Emergency Eyewash
D2010.1000	Emergency Eyewash/Shower
D5090.0810	Emergency Generator
D2010.1200	Emergency Shower
D3050.0600	Energy Recovery Unit
F1020.0260	Environmental Unit
D3040.0120	Fan
D3050.0520	Fan Coil Unit
D3040.0122	Fan, Axial
D3040.0121	Fan, Centrifugal
D3040.0410	Fan, Exhaust
D5030.0141	Fire Alarm Annunciator
D5030.0134	Fire Alarm AV Devices
D5030.0139	Fire Alarm Door Holder
D5030.0144	Fire Alarm Duct Detector
D5030.0133	Fire Alarm Heat Detectors
D5030.0136	Fire Alarm Horns
D5030.0131	Fire Alarm Panel
D5030.0135	Fire Alarm Pull Station
D5030.0137	Fire Alarm Signal Speaker
D5030.0132	Fire Alarm Smoke Detectors
D5030.0130	Fire Alarm System
D5030.0138	Fire Alarm Visual Signal Dev
D4030.0200	Fire Blanket & Cabinet
D4030.0100	Fire Extinguisher Cabinet
D4030.0300	Fire Extinguisher Wheeled
D4090.0300	Fire Extinguishing System, Clean

D4090.0200	Fire Extinguishing System, CO2
D4090.0400	Fire Extinguishing System, Dry Chemical
D4090.0100	Fire Extinguishing System, Foam
D4090.0000	Fire Extinguishing System, Other
G3010.0310	Fire Hydrant
E1090.0330	Food Cooking Equipment
E1090.0310	Food Stor/Prep Equipment
D2090.0400	Fuel Oil System
D3040.0460	Fume Hood System
D3020.0310	Furnaces
D2030.0260	Grease Trap
D3050.0580	Heat Exchanger
D2020.0260	Heater Domestic Water
D3050.0521	Heater, Cabinet Unit
D3050.0581	Heater, Cast Iron Radiator
D3050.0530	Heater, Fin Tube Radation
D3050.0540	Heater, Induction Unit
D3050.0560	Heater, Unit
D3050.0570	Heater, Unit Vent
F1040.0700	Heliport System
E1090.0340	Hood/Vent Equip
D3050.0300	Humidifier
E1090.0380	Ice Machines
D5020.0330	Light, Emergency Exterior
D5020.0230	Light, Emergency Interior
D5020.0231	Light, Exit
E1020.0831	Medical Air Compressor
E1020.0900	Medical Gas Alarm
E1020.1000	Medical Gas Area Alarm
E1020.0840	Medical Gas Auto Pressure Switch
E1020.0834	Medical Gas Manifold
E1020.0835	Medical Gas N2O
E1020.0839	Medical Gas Outlet
E1020.0837	Medical Gas Shut-off Valve
E1020.0830	Medical Gas System
E1020.0838	Medical Nitrogen
E1020.0810	Medical Sterilizer Equipment
E1020.0832	Medical Vacuum Pump
D5010.0711	Motor Control Center
D5010.0720	Motor, Electric
D5030.0431	Nurse Call System

E1090.0210	Packaged Incinerator
D3010.0550	Packaged Solar Equipment
D5030.0420	Paging Systems
C1010.0180	Partition Fire Rated
C1010.0190	Partition, Smoke
D1090.0141	Pneumatic Tube Blower
D1090.0142	Pneumatic Tube Station
D1090.0140	Pneumatic Tube System
D1090.0143	Pneumatic Tube Transfer Unit
D3010.0430	Pump
D3030.0710	Pump, Air Source Heat
D3010.0432	Pump, Chilled Water
D2020.0222	Pump, Domestic Hot Water Recirculation
D2020.0221	Pump, Domestic Water Booster
D4010.0111	Pump, Fire
D3010.0431	Pump, Heating Water
D4010.0112	Pump, Jockey Fire
D3030.0720	Pump, Rooftop Heat
D3010.0433	Pump, Steam
D2040.0270	Pump, Sump
D2030.0330	Pump, Waste
D2020.0220	Pump, Water Booster
D3030.0730	Pump, Water Heat
E1090.0315	Refrigerator/Freezer, Commercial
D3040.0123	Return Air Fan
D2090.1200	Reverse Osmosis System
D3030.0420	Scroll Chiller
D4010.0300	Sprinkler, Combo System
D4010.0400	Sprinkler, Deluge System
D4010.0200	Sprinkler, Dry-Pipe
D4020.0100	Sprinkler, Standpipe
D4010.0100	Sprinkler, Wet-Pipe
D3050.0310	Steam Generator
D5010.0840	Switchgear, Medium Voltage
D3010.0441	Tank, Expansion Compressor
D2020.0310	Tank, Expansion Domestic
D2020.0320	Tank, Expansion Reheat
D2090.0410	Tank, Fuel Oil
D3010.0444	Tank, Steam Flash
D5010.0210	Transformer, Low-Volt 2nd
D5010.0410	Transformer, Low-Volt Inter

D5010.0110	Transformer, Main
D3020.0150	Trap, Steam
D5090.0110	UPS - Computer
D5090.0120	UPS - Other
D2090.1310	Vacuum Pump
D3010.0435	VFD - Pump
D3040.0190	VFD HVAC
D5010.0850	VFD/VSD
E1090.0316	Walk-in-Refrigerator
D2090.0210	Water Softener Equipment
D3010.0490	Water Treatment Equipment

ARTICLE 8.7.3 Attachment B – Equipment List Spreadsheet Data Categories

Uniformat	
Component ID	
Component Name	
Description	
Name	
Equipment No.	MCPPD or CPPD will enter this data
Model No.	
Room Location	
Functional Location	MCPPD or CPPD will enter this data
Manufacturer	
Supplier	
Installing Contractor	
Serial No.	
Main Work Center	MCPPD or CPPD will enter this data
Comments(30 char's)	MCPPD or CPPD will enter this data
Critical	MCPPD or CPPD will enter this data
JCAH Code	MCPPD or CPPD will enter this data
Patient Room?	MCPPD or CPPD will enter this data
Vendor ID	MCPPD or CPPD will enter this data
Vendor Type	MCPPD or CPPD will enter this data
Vendor - Other Info	MCPPD or CPPD will enter this data
Equipment Life	MCPPD or CPPD will enter this data
Area Serviced	
Contains Lead?	
Contains Asbestos?	
Contains PCBs?	
Motor Frame	
Motor Style	
Motor HP	
Motor Phase	
Motor Volts	
Motor RPM	
Fan CFM	

Fan RPM	
Fan Static	
Fan Type	
Fan RPM 2	
Pump Head	
Pump Inlet	
Pump GPM	
Pump Outlet	
Motor Oper Amps	
Condition	MCPPD or CPPD will enter this data
Disconnect Location	
Motor FLA	
Belts	
Filters	

ARTICLE 8.7.3 Attachment C - Example Preventative Maintenance Procedures

Description	Name	Equipment No.	Frequency	Maintenance Procedure	Maintenance Parts & Items
Air Handling Unit	AHU-1	M-12345	Monthly	Check Belts	
Air Handling Unit	AHU-1	M-12345	Quarterly	Grease bearings	Grease type xyz
Air Handling Unit	AHU-1	M-12345	Annually	Replace Belts	Belt model abc-123
Air Handling Unit	AHU-2	M-98765	Monthly	Check Belts	

The blue highlighted column will be filled in by MCPPD or CPPD.

ARTICLE 09 PLANS, DRAWINGS, AND SPECIFICATIONS

9.1 The successful Construction Manager can purchase any number of sets of plans and specifications from Lynn Imaging, Lexington, Kentucky (http://www.ukplanroom.com/ or Phone Lynn Imaging @1.800.888.0693 or 859.255.1021). The Trade Contractor(s) will be required to pay Lynn Imaging for the cost of duplication for all sets required.

9.2 The University will provide two sets of the 'Official Contract Documents' book to the successful Construction Manager. One set is to be for his office and the other set is for the jobsite.

9.3 All drawings, specifications and copies, thereof, prepared by the Consultant, are the property of the University of Kentucky. They are not to be used on other Work.

ARTICLE 10 PROGRESS MEETINGS

10.1 In addition to specific coordination and pre-installation meetings for each element of Work, and other regular Project meetings held for other purposes, progress meetings will be held as outlined at the Preconstruction Meeting. Each entity then involved in planning, coordination or performance of Work shall be properly represented at each progress meeting. The following areas will be covered at each progress meeting: current status of work in place, CM's review of upcoming work (1 month look ahead), schedule status, upcoming outages, new outage requests, shop drawings due from contractors, shop drawings being reviewed, outstanding RFI's, outstanding proposed change orders, change orders, new business, As-Built updated, close-out documents status, defective work in place issues, review "pencil copy" of payment application, safety issues and new business or other issues not covered above.. With regard to schedule status, discuss whether each element of current work is ahead of schedule, on time, or behind schedule in relation with updated progress schedule; determine how behind-schedule Work will be expedited, and secure commitments from entities involved in doing so; discuss whether schedule revisions are required to ensure that current Work and subsequent Work will be completed within Contract Time; and review everything of significance which could affect the progress of the Work.

10.2 Construction Manager shall prepare and submit at each progress meeting an updated schedule indicating Work completed to date and any needed revisions.

10.3 With the express purpose of expediting construction and providing the opportunity for cooperation of affected parties, progress meetings will be held and attended by representatives of:

(1) The Owner's Project Manager
(2) The Consultant.
(3) Construction Manager.
(4) Subcontractors as requested.
(5) Others requested to attend (as deemed necessary by CPMD).
(6) Physical Plant Division Representative.

10.4 A location near the site will be designated where such progress meetings will be held. Participants will be notified of the dates and times of the meetings by the Consultant.

ARTICLE 11 CRITICAL PATH METHOD (CPM) SCHEDULE

11.1 Construction Manager shall prepare Critical Path Method (CPM) type schedules in accordance with General Conditions Article 32 with separate divisions for each major portion of the Work or operation. The schedules submitted for this Project shall be prepared using Primavera P6 scheduling software. If approved by the University, and at the sole discretion of the University, schedules submitted using earlier versions of Primavera scheduling software (Primavera SureTrak or Primavera P3) may be converted to Primavera P6 format by the University for review purposes. However, the University

will not be responsible for any inaccuracies that may result from such conversions. All schedule submittals shall include a copy in portable document (.pdf) format as well as a complete copy of the schedule in Primavera P6 electronic file (.xer) format.

11.1.1 CPM schedules shall be based on generally accepted good practices for the development of construction schedules including limited use of long activity durations, long total float values or relationships based on leads or lags. Schedules shall include all activities necessary for performance of the work showing logic (sequences, dependencies, etc.) and duration of each activity. The schedules shall provide information for all elements of the Work in sufficient detail to accurately demonstrate the relative importance of each activity to the successful completion of the Project including but not necessarily limited to the following.

a) Activities to be performed by the University or the Design Team.
b) Activities describing time sensitive submittals and submittal processing.
c) Activities describing fabrication and delivery of key materials or equipment.
d) Activities to identify equipment start-up and testing, system commissioning, and Owner training.
e) Activities to identify Owner Furnished /Contractor Installed and Owner Furnished / Owner Installed material or equipment.
f) Activities to denote all required inspections by the Owner or Design Team, and inspections by state or local agencies including receipt of necessary Certificate(s) of Occupancy.
g) Activities to identify all dates and durations for major utility outages requiring coordination with the Owner and the Owner's operations.
h) Activities to identify all contractually mandated constraints. Non-contractual constraints shall not be included in the Initial or Final Baseline schedules without explanation. Non-contractual constraints are for the convenience of the Trade Contractor(s), shall not be a basis for delay claims, and may be temporarily removed by the University when schedules and updates are reviewed.
i) Software coding of each activity to identify the applicable Phase; area and/or sub area where the work occurs; the trade subcontractor or party responsible for completion of the activity; whether the activity is a design activity, a bidding or procurement activity, a submittal activity, or a construction activity; and whether the activity is potentially weather dependent.
j) The University may, at its sole discretion, also require that each activity be coded to indicate the section of the Technical Specifications that applies to the work.

11.1.2 Schedules shall include divisions for Work to be accomplished remote from the central construction site, (for example, modular or prefabricated units to be constructed off-site, or utilities to the site from outside the construction site such as chilled water, steam, electrical, communications, and fire service). Such Work shall be scheduled so that disruption resulting from construction will be minimized. Start dates and completion dates for utility construction must be maintained and completed in the shortest reasonable time.

11.2 An Initial Baseline Schedules shall be submitted to the Consultant and to the Owner within thirty (30) calendar days after award of the first bid Package or trade

contract, and shall include detailed information regarding Work to be performed during the first ninety (90) days of the Project as well as milestone dates based on hammock or Level of Effort type activities that identify all major elements of the remainder of the Work. Any necessary revisions to the Initial Baseline Schedule shall be completed prior to submittal of the Final Baseline Schedule.

11.3 The Final Critical Path Baseline Schedule shall be submitted to the Consultant and to the Owner within seventy five (75) calendar days after award of the first bid Package or trade contract, shall be consistent with the information contained in the Initial Baseline Schedule prepared in accordance with Article 11.2 above, shall be a complete and comprehensive description of the Construction Manager's plan to complete the Work in accordance with the Contract, shall include all activities necessary to complete the Work, and shall show the complete sequence of construction by activity, with dates for beginning and completion of each element of construction as well as an indication of whether the activity might reasonably be delayed or impacted by bad weather. Sub-schedules shall be provided as may be necessary to define critical portions of the entire schedule.

11.3.1 If the Project is to be constructed in multiple phases or using multiple Bid Packages, the date for the start of work on each phase of the Project shall be the date on which the University approves the award of the first Trade Contract for work in that phase or Bid Package.

11.3.2 A separate schedule including decision dates for selection of finishes and delivery dates for Owner furnished items, if any, shall be provided showing submittal dates for Shop Drawings, product data, and material samples, as appropriate.

11.3.3 A separate schedule shall be provided identifying dates and durations for major utility outages requiring coordination with the Owner and the Owner's operations.

11.3.4 Activities, including Outages, which require action by or which are the responsibility of, the Owner or the Consultant under the terms of the Contract shall be properly indicated, and the responsible party shall be identified in the CPM schedule.

11.4 The Consultant will review schedules only for compliance with the intent of the Contract Documents. Such review shall not relieve the Trade Contractor(s) of any responsibility for compliance with the provisions of the Contract nor shall such review or any review comments constitute an amendment or modification of the Contract requirements. The Trade Contractor(s) shall be solely responsible for the means and methods to be employed to assure constructions proceeds in accordance with the submitted schedule and for identifying all necessary activities, establishing activity sequencing and assigning activity durations and relationships to assure that the CPM schedule is an accurate and comprehensive description of the plan for the Work.

11.5 Up-dated progress schedules shall be submitted to the Consultant and to the Owner concurrently with each Application for Payment to indicate progress on each remaining activity as of the last working day prior to the date of the submittal and the

projected completion date of each activity. Updated CPM schedules shall show the accumulated percentage of completion of each activity, and total percentage of Work completed, as of the data date of the update. Each submittal of an update to the schedule shall include a narrative report that identifies and explains activities modified since the previous submittal, major changes in scope and other identifiable changes, problem areas, anticipated delays and impact on the schedule, and shall describe corrective action taken or proposed, and its effect. Schedules will be uploaded in UK E-Communication®'s Schedules Item Log.

11.6. Submittals shall include a copy in portable document (.pdf) format as well as a complete copy of the schedule in Primavera P6 electronic file (.xer) format along with a transmittal letter and related narrative report.

11.7 Copies of updated CPM schedules are to be provided to the job site file and, as appropriate, to subcontractors, suppliers, and other concerned entities, including separate contractors. Recipients are to be instructed to promptly report, in writing, any problems anticipated in meeting the projected dates shown in the schedules.

11.8 The processing of all progress payments is contingent upon the submission of an updated CPM schedule. Only payment for bonds and limited Construction Manager mobilization costs will be approved for processing prior to receipt of the Initial and Final Baseline schedules

11.9 The processing of all change orders requesting a time extension to the contract is subject to the terms of Article 21 of the General Conditions to this Contract and is contingent upon the submission of a CPM schedule showing that the change order does indeed impact the contractually required completion dates for the Work. Time extensions for Change Orders that do not impact the contractually required completion dates for the Work will not be considered.

11.10 All time extensions shall be negotiated and made full, equitable and final, and incorporated in a revised CPM schedule at the time of Change Order issuance. No reservation of rights shall be allowed.

11.11 Float available in the schedule at any time shall not be considered for the exclusive use of either party to the contract, but will be a resource available to both the Owner and the Construction Manager. No time extensions will be granted for a delay unless the delay impacts the Project critical path as shown in the updated Project schedule most recently submitted to the Owner prior to the event, consumes all available float or contingency time, and extends the Work beyond the then current Contract completion date(s).

ARTICLE 12 WALK-THROUGH

12.1 After the "Work Order" is issued but before Work by the Construction Manager is started, a walk-through of the area is required to document the condition of the space, surfaces, or equipment. It is the responsibility of the Trade Contractor(s) to schedule the

walk-through with the Owner's Project Manager, the Consultant, and other interested parties.

12.2 During the walk-through, Trade Contractor(s) shall identify all damaged surfaces or other defective items that exist prior to construction.

12.3 The walk-through shall be attended by Owner's Project Manager, a Representative of the user of the facility, the Trade Contractor(s) and the Consultant

12.4 Written documentation of the walk-through is to be provided by the Consultant with copies distributed to all parties. Polaroid type color photographs are to be provided and labeled by Trade Contractor(s) and one (1) copy of such photographs are to be given to Consultant. (Digital photos in a .jpg format are acceptable if submitted on digital media storage) All parties attending the walk-through agree on the list of damages.

ARTICLE 13 OWNER'S CONSTRUCTION REPRESENTATIVE

13.1 The Owner may have full time personnel or representatives on this job. If so, the Construction Manager is to provide, at no additional cost to the Owner, an office for the duration of the Project specifically for the use of Owner personnel. The office should be furnished with all required utilities, including HVAC, and the following:

- **3** Desks
- **3** Desk chairs
- **3** Side chairs
- **3** 4-drawer filing cabinets
- **3** telephones
- **3** DSL / cable modem connections
- **1** Facsimile machine
- **1** Layout table
- **1** hanging plan rack

ARTICLE 14 FIELD OFFICE

14.1 Construction Manager shall make his own provision for field office for his own personnel and for incidental use by their Subcontractors. Quantity and location are subject to approval of the Consultant and the Owner's Project Manager.

14.2 Construction Manager is not required to provide a field office for use by the Owner or Consultant.

ARTICLE 15 TELEPHONE SERVICE

15.1 Trade Contractor(s) shall arrange through UKIT Communications and Network Systems for installation of on-site phone, internet and other communications services. Telephone service during the length of construction shall be paid for by the Trade Contractor(s) (Cell phone/Nextel service in lieu of UKIT Communications and Network Systems phone service may be utilized at Trade Contractor(s)'s option.)

ARTICLE 16 CONSTRUCTION FENCE

16.1 Construction fencing will be designed and erected around job sites where there is a possibility of injury to employees, students or the public. Special precautions must be taken to protect the visually impaired, disabled, children and others using the University facilities. During active excavation/trenching operations, fencing shall be erected to prevent unauthorized entry into the site. All fencing shall comply with the current requirements of the International Building Code except where the following requirements are more stringent.

16.1.1 All job site perimeter fencing within 5 feet of a walkway, street, plot line, or public right-of-way shall be 8 feet in height. Perimeter fencing that blocks sidewalks must include signs directing pedestrians to a safe walkway or crosswalk.
Signage may be attached to the fence, but may also be required to inform pedestrians of sidewalk closures and detours prior to arriving at the closed area. Construction Manager shall provide electrical pedestrian and general lighting along the top rail of the perimeter of the construction site fence to provide a minimum illumination level of 1.5 foot candles. Pedestrian and perimeter fence lighting shall be installed in conduit, raceway, and/or pathway system properly supported to the perimeter fence. Open or flexible cabling will not be acceptable.

16.1.2 All job site perimeter fencing more than 5 feet from a walkway, street, plot line, or public right-of-way shall be a minimum of 6 feet in height unless International Building Code requirements are more restrictive due to the height of the structure and setback.

16.1.3 All fencing shall be of a woven material such as chain link or a solid type fence. Fencing shall include gates required for construction operations. Gates shall be lockable with both the Construction Manager's lock, and a lock provided by the Owner. Lock by Owner shall be keyed for the University Best GA key core. All locks to be “daisy-chained” to provide access to the Owner.

16.1.4 It shall be the Trade Contractor(s)’s responsibility to determine the proper quality of materials and methods of installation of the fencing, with the understanding that it must be maintained in good condition, good appearance, rigid, plumb, and safe throughout the construction period. The fence does not have to be new material. The fence is to be erected on fence posts securely anchored in the ground. Provide a top bar or, with prior approval of the Owner, a wire shall be run through the top of the fence and attached to the end posts. A tension control device shall be installed as necessary. Use of sandbags, concrete weights, stakes, etc. to hold fence posts in place are not allowed. Penetrations in pavement or landscape walking surfaces may not be made without the approval of the Owner. Any damage caused by the fence installation shall be repaired in a manner satisfactory to the Owner. When fencing is to remain in place for 6 months or more a green fabric mesh must be provided for the full height and length of the fence. Fabric should be omitted for one section of fencing where blind corners occur or at pedestrian/vehicle intersections.

16.1.5 The Trade Contractor(s) shall be responsible for removing and replacing any fence sections and/or posts necessary for access to the site on a daily basis. The Trade Contractor(s) shall police such conditions to assure the fence and posts are reset in a timely manner and are specifically in place at the close of the working day.

16.1.6 If the Trade Contractor(s) fails to comply with the requirements of this Article 16, the Owner may proceed to have the work done and the Trade Contractor(s) shall be charged for the cost of the Work done by unilateral deductive change order.

16.1.7 Plastic construction fencing is not acceptable as a perimeter protection fence.

ARTICLE 17 PROJECT SIGN

17.1 The Trade Contractor(s) shall furnish, install and maintain a Project sign during this Project. This sign shall be 4' x 8' x 3/4" exterior grade plywood mounted on 4" x 4" posts. Design shall be as provided by the Owner at a later date and shall include the name of the Owner, Project, Consultant, and Construction Manager

17.2 No signs, except those attached to vehicles or equipment, may be displayed without permission from the Consultant and the Owner's Project Manager. No political signs will be permitted.

ARTICLE 18 PARKING

18.1 The University of Kentucky will make available for purchase by the Construction Manager of up to four (4) parking permits. The category of parking permit and location of parking is determined by the Director, Parking and Transportation Services, or a designee. Parking permits may be purchased by the Construction Manager to be used by the Construction Manager and/or the Construction Manager’s subcontractors and employees during the construction period. The cost of each permit is based on the pro-rata annual cost and may be purchased from Parking Services, 721 Press Avenue, after the Contract is executed. Necessary documents required to purchase the passes will be available at the Pre-Construction Conference.

18.2 The Director, Parking and Transportation Services, or a designee will determine if parking is available for employees of the Construction Manager and subcontractors in the K lots at Commonwealth Stadium or elsewhere on Campus. The Construction Manager will be given thirty (30) days’ notice should conditions change that will affect parking at the designated parking area and it is necessary to relocate parking or terminate parking privileges. If parking is available, permits may be purchased from Parking Services, 721 Press Avenue at the appropriate monthly cost.

ARTICLE 19 SANITARY FACILITIES

19.1 At the beginning of the Project, before any Work is started, the Trade Contractor(s) shall furnish, install and maintain ample sanitary facilities for the

workforce. Permanent toilets in the existing building shall not be used during construction of the Project. Drinking water shall be provided from an approved safe source, piped or transported as to be kept clean and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing governing health regulations.

ARTICLE 20 RULES OF MEASUREMENT

20.1 Rules of Measurement shall be established by the Consultant in the field. Actual measurement shall be taken in the field. These amounts shall become binding upon the Trade Contractor(s) and be adjusted as before mentioned.

20.2 The Trade Contractor(s) shall pay for and coordinate through the Consultant and/or the Owner's Project Manager all associated Work by utility companies including relocation of utility poles, installation of new street lights, relocation of overhead or underground lines, and any other Work called for on the Plans and in the Specifications.

ARTICLE 21 ALLOWANCES

21.1 As stated in the General Conditions to the Contract, the Trade Contractor(s) shall have included in the Contract Amount all costs necessary to complete the Work. Costs based on "allowances" shall be permitted only for objectively quantifiable items and only with the prior written approval of the Owner. No allowances shall have been included in the calculation of the Construction Manager's fixed fee quotation in par. 8.0 of the RFP.

21.2 Costs based on allowances may be included in Subcontract bid packages only with the prior written approval of the Owner, and only for objectively quantifiable material items.

21.3 Any allowance amounts included in a Subcontract bid package, but not expended for the approved task during the course of the work of that Subcontract, shall be deducted from the Trade Contractor(s) via the Construction Manager's contract by Change Order. Any additional amounts necessary to pay for additional cost of an allowance in a Subcontract bid package shall be funded from the Construction Contingency Fund.

21.4 The University of Kentucky has entered into a price contract agreement with SimplexGrinnell for procurement of fire alarm and security systems. SimplexGrinnell will provide an allowance for this project which may include Fire Alarm Equipment and Security Equipment, including all required cable/wire, labor to install cable and wire and terminations of SimplexGrinnell supplied devices and panels. SimplexGrinnell will be a sub-contractor under a trade contract.

21.4.1 The Construction Manager shall include an allowance of Zero ($0.00) for the work by SimplexGrinnell in the appropriate trade contractor's scope of work.

21.4.2 The electrical contractor is to provide and install conduits and back boxes/junction boxes. All conduits will include a pull string. SimplexGrinnell will furnish and install all fire alarm and security equipment and wiring. An allowance amount will be provided by JCI, in coordination with the MEP sub-consultant based on the unit price contract between the University and JCI.

ARTICLE 22 CONSTRUCTION CONTINGENCY FUNDS

22.1 The Owner shall include an amount in the Project construction budget not to exceed one percent (1%) of the total cost of the construction, including the Construction Manager's fixed fee, as a Construction Contingency Fund. The following are general / typical categories of changes to the Work that may, with the Owner's prior written specific approval, be funded from this source:

22.1.1 Reasonable errors & omissions in the Construction Manager's bidding and scoping processes;

22.1.2 Reasonable costs associated with schedule recovery that is not a direct result of the construction managers or a trade contractor's failure to perform;

22.1.3.Any costs or expenses incurred by the Construction Manager, for provision of management services necessary to complete the Project in an expeditious and economical manner consistent with the Contract for Construction and the best interests of Owner, that were not included in the Construction Manager's General Conditions Cost as submitted in the original fee proposal

22.1.4 Amounts necessary to fund cost overruns in approved allowance items within Subcontract bid packages, as described in Article 21.3, above.

ARTICLE 23 SEQUENCE OF CONSTRUCTION

23.1 (Not Used)

23.2 All materials and equipment are to be brought into the project site from the approved staging location and are not to be brought through the existing buildings or loading docks. Any and **all** exceptions shall be approved by, and closely coordinated with, the Owner's Project Manager in advance of scheduling or performing the work.

23.2.1 The Trade Contractor(s) shall coordinate any road and sidewalk closings, utility disruptions, etc. which will affect the use of the existing building(s) with the Construction Manager and Owner's Project Manager prior to commencing that Work.

23.3 The adjacent buildings and public areas will remain in use and the Owner shall have access to the existing building(s) throughout the duration of the Project. The Construction Manager shall coordinate construction activity to assure the safety of those who must cross the Project site and shall provide and maintain the necessary barriers and accommodations for a completely safe route of accessibility. The Trade Contractor(s) is to insure that all exits provide for free and unobstructed egress. If exits must be blocked,

then prior arrangements must be made with the Construction Manager and Owner's Project Manager.

23.4 The Trade Contractor(s) shall cooperate with the Owner in minimizing inconvenience to, or interference with normal use of existing buildings and grounds by staff, students, other Contractors, or the public. Trade Contractor(s) shall conduct operations to prevent damage to adjacent building structures and other facilities and in such a manner to protect the safety of building's occupants.

23.5 Special effort shall be made by the Trade Contractor(s) to prevent any employee from entering existing buildings for reasons except construction business. In particular, use of toilets, drinking fountains, vending machines, etc. is strictly prohibited.

ARTICLE 24 CRANE & MATERIAL HOIST OPERATIONS

24.1 Trade Contractor(s) shall provide appropriate barriers around crane and material hoist to protect pedestrian and vehicular traffic around operating area. When crane is operating or moving, flag men provided by Trade Contractor(s) shall be utilized to prevent pedestrian and vehicular traffic from crossing pathway of crane lift. Trade Contractor(s)'s flag men shall coordinate these activities with the appropriate security personnel.

24.2 Crane and material hoist shall be safely secured and inaccessible during non-operating hours. Trade Contractor(s) shall coordinate operation or erection of a crane or material hoist in the vicinity of the Medical Center with Medical Center Aeromedical Operations (Med-evac helicopter).

24.3 Any damage to trees, shrubs or plant material at the placement of crane or material hoist shall be repaired by tree surgery or replaced as directed by Consultant.

ARTICLE 25 UTILITIES

25.1 When the various building systems are energized and connected to Owner's utility systems, but prior to turnover to and occupancy by the Owner, the Trade Contractor(s) is responsible to reimburse the Owner for Owner furnished utilities. These utilities include but not limited to steam, chilled water, domestic water, and electricity, provided by the Owner up to the date of Substantial Completion. Reimbursement will be payable monthly via a deductive change order to the contract. Unit costs for campus are as follows:

25.1.1 Steam is $15.00/million BTU (1000 lb.) condensate measured through the building condensate meter (all condensate is to be returned).

25.1.2 Chilled Water is $11.00/million BTU (1000 lb.) measured through the building BTU meter.

25.1.3 Electricity is $0.08/KWH measured through the building electric meter.

25.1.4 Water is supplied by Kentucky American Water Company (KAWC). Trade Contractor(s) shall pay KAWC directly until the Owner's beneficial occupancy date. The Trade Contractor(s) shall pay KAWC directly for fire service.

25.1.5 Trade Contractor(s) shall furnish gas meter and Columbia Gas Company directly for service until the until the Owner's beneficial occupancy date.

25.1.6 Trade Contractor(s) shall obtain from and pay UKIT Communications and Network Systems for the use of telephone services.

25.2 UTILITY OUTAGES

25.2.1 Interruption of Utilities and Services: No utilities or services may be interrupted without full consent and prior scheduling of the Owner. Owner approval is required in writing for each disruption.

25.2.1.1 ENTIRE BUILDING OUTAGE. The Owner's Project Manager is the Trade Contractor(s) contact with the University via the Construction Manager for requesting Utility Outages. The Owner's Project Manager will contact the proper departments and divisions within the University and receive approval from those units prior to allowing a planned outage to occur. The established standard within the University Departments and Divisions of an entire building or group of buildings shall be three weeks written notice. The written notice shall include the type of utility to be interrupted, reason for outage, length of outage, what will be affected by the outage, and a statement of whether or not the materials are on hand to complete the Work. If a specific time is desired for the outage it should be included. The Owner's Project Manager will insure that all parties affected are contacted and that a time which is least disruptive to all parties is selected. At the appointed outage time, Work shall begin and proceed continuously with all required manpower until Work is complete at no added cost to the University. The Owner's Project Manager will then notify all affected departments or divisions.

25.2.1.2 SECTION OF A BUILDING OUTAGE. The Owner's Project Manager is the Construction Manager’s contact with the University for requesting Utility Outages. The Owner's Project Manager will contact the proper departments and divisions within the University and receive approval from those units prior to allowing a planned outage to occur. The established standard within the University Departments and Divisions of a section of a building shall be a written request one week prior to outage. The written request shall include the type of utility to be interrupted, when the outage is desired, reason for outage, length of outage, and what will be affected by the outage. The Owner's Project Manager will insure that all parties affected are contacted and that a time which is least disruptive to all parties is selected. At the appointed outage time Work shall begin and proceed continuously with all required manpower until Work is complete at no added cost to the University. The Owner's Project Manager will then notify all affected departments or divisions.

ARTICLE 26 CLEANING AND TRASH REMOVAL

26.1 The Trade Contractor(s) shall keep clean the entire area of new construction and shall keep streets used as access to and from the site free of mud and debris.

26.2 All exit ways, walks, drives, grass areas, and landscaping must be kept free from debris, materials, tools and vehicles at all times. Trim weeds and grass within the site area.

26.3 Upon completion of the Work, Trade Contractor(s) shall thoroughly clean and re-sod grass areas damaged to match existing areas.

26.4 All utility markings are to be made with water based marking paint with low Volatile Organic Compounds (VOC's) and high solids.

26.5 Upon Completion of the project, buried utility paint markings sprayed on walks and hardscapes are to be removed by non-destructive means such as pressure washing. Do not use chemicals. If a washed area is noticeable, the entire surface must be washed and or blended to match surrounding areas.

26.6 The Trade Contractor(s) shall be responsible for removal from the site of all liquid waste or other waste (i.e., hazardous, toxic, etc.) that requires special handling on a daily basis.

26.7 Dumpsters will be provided and maintained by the Trade Contractor(s).

26.8 During Work at the Project site, the Trade Contractor(s) shall clean and protect Work in progress and adjoining Work on a continuing basis. Trade Contractor(s) shall apply suitable protective covering on newly installed Work where needed to prevent damage or deterioration until the time of Substantial Completion. Trade Contractor(s) shall clean and perform maintenance on newly installed Work as frequently as necessary through remainder of construction period.

26.9 The Trade Contractor(s) shall be responsible for daily cleaning of spillage's and debris resulting from his and his Subcontractor's operations, (includes removal of dust and debris from wall cavities), and for providing closed, tight fitting (dustproof if required), waste receptacles to transport construction debris from the work area to the dumpster. Broom clean all floors no less than once a week. The Trade Contractor(s) shall empty such receptacles into the trash container when full or when directed to be emptied by the Consultant and/or Owner's Project Manager, but not less than weekly. The use of the Owner's waste and trash receptacles is strictly prohibited, except as otherwise provided by the Project specifications.

26.10 Failure to comply with the above requirements shall be cause for stopping work until the condition is corrected.

ARTICLE 27 BLASTING

27.1 There shall be no blasting under any conditions on University of Kentucky property unless specified in these Special Conditions.

ARTICLE 28 CUTTING AND PATCHING - NEW AND EXISTING WORK

28.1 New Work - Cutting and patching shall be done by craftsmen skilled and experienced in the trade or craft that installed or furnished the original Work. Repairs shall be equal in quality and appearance to similar adjacent Work and shall not be obviously apparent as a patch or repair. Work that cannot be satisfactorily repaired shall be removed and replaced.

28.2 Existing Construction - Refer to Architectural, Mechanical, and Electrical drawings for cutting and patching. All new Work shall be connected to the existing construction in a neat and workmanlike manner, presenting a minimum of contrast between old and new Work. Do all patching of the existing construction as may be required for the new construction to be completed. Necessary patching, closing of existing openings, repairing and touching up shall be included as required for a proper, neat and workmanlike finished appearance. Any existing item that is to remain and is damaged during construction shall be replaced at the Trade Contractor(s)'s expense.

ARTICLE 29 UNRELATED PROJECTS

29.1 Unrelated construction projects may be under way in the vicinity of this Project or the site utility work during the course of the Work related to this Project. The Trade Contractor(s) for this Project must coordinate with any other contractors regarding overlapping areas. See Article 42 - Separate Contracts of the General Conditions.

ARTICLE 30 OWNER SUPPLIED MATERIALS

30.1 Owner, in an effort to expedite this Project, has pre-ordered certain long lead time items. This list will be developed as approved by the UK Project Manager and Design Team at the completion of the Construction Documents / Phase 3 of design. The following is the list of material that has been pre-ordered:

1. **NONE**

30.2 All Pre-Ordered Material was specified to be shipped to the **Health Education Building**. It will be the Trade Contractor(s)'s responsibility to receive and off load the Pre-Ordered Material. If there is damage to the Pre-Ordered Material, then the Trade Contractor(s) is to notify the Owner's Project Manager via the Construction Manager immediately so that the Owner can seek replacement material.

ARTICLE 31 REMOVED ITEMS

31.1 The following is a list of items to be turned over to the Owner by the Trade Contractor(s) after removal by the Trade Contractor(s). If there are additional items listed in the drawings to be turned over to the Owner, but not listed here, it shall be construed as being listed here.

1. **NONE**

31.2 All items which are identified to be turned over to the Owner must be treated with the utmost of care and protected from damage during removal and transport.

31.3 Materials to be turned over to the Owner by the Trade Contractor(s) shall be delivered to a warehouse within a five (5) mile radius of the Project site.

ARTICLE 32 INTERIOR ENCLOSURE AND DUST ENCAPSULATION

32.1 Areas under construction or renovation shall be separated from occupied areas by suitable temporary enclosures furnished, erected and maintained by the Trade Contractor(s). Temporary enclosures shall be dust and smoke tight and constructed of non- combustible materials to prohibit dirt and air borne dust from entering occupied spaces. Trade Contractor(s) to review with Consultant via the Contruction Manager ways to provide ventilation for dust generated by demolition and fumes/vapors produced during installation of new materials.

32.2 Trade Contractor(s) is responsible for coordinating with the Owner's Project Manager via the Construction Manager any equipment to be turned off prior to erecting temporary enclosures.

32.3 Trade Contractor(s) shall protect all exhaust diffusers, equipment and electrical devices from the collection of dust. All areas shall be checked and cleaned prior to final acceptance of Work.

32.4 Dust and debris from Work operations shall be held to a minimum.

32.5 Trade Contractor(s) shall construct temporary dust partitions at locations and as detailed on drawings. Closures used for dust barricades shall be constructed of non-combustible materials, (metal studs and gypsum board or fire retardant plywood).

32.6 Trade Contractor(s) shall provide additional devices and materials as required to contain dust within Work area and protect personnel during course of Work.

32.7 Areas of minor renovation, consisting of the removal of doors and frames, blocking of openings, and other limited Work shall be separated by a dust partition of fire retarded polyethylene on studs.

32.8 Existing corridor doors may serve as dust barriers, except if removed for refinishing. In such cases, temporary wood doors must be substituted until original doors are replaced.

32.9 The Trade Contractor(s) may assume existing walls which extend full height of floor shall be deemed appropriate to contain air borne dust. Cover any voids or penetrations.

32.10 Doors or windows in the perimeter walls surrounding the project work area shall be sealed off with protective materials in a manner to prohibit dust from escaping the work area. These shall be left in place until all work creating dust is completed. Protective materials shall consist of fire retardant wood, metal studs, gypsum board or flame resistant plastic.

32.11 Entry passage to Work area shall be sealed off with zippered plastic opening, or other acceptable means which allows periodic entry and closure of barricade closure.

32.12 Install and maintain a “sticky mat” on the floor in locations where construction crews leave the construction area and prior to entering ANY existing space in the building.

32.13 Install and maintain a temporary floor covering in any and all elevators being utilized for this project.

ARTICLE 33 UKIT COMMUNICATIONS AND NETWORK SYSTEMS

33.1 The communications wiring is to be provided, installed and terminated by the Trade Contractor(s) using a certified and approved communications contractor. All work shall be done in compliance with the latest UKIT-Communications and Network Systems’ Standards, and closely coordinated with UKIT-Communications and Network Systems.

ARTICLE 34 EMERGENCY VEHICLE ACCESS

34.1 Emergency Vehicle Access must be maintained during construction. The Trade Contractor(s) shall coordinate with the local Fire and Emergency Medical Services department(s) that would respond to an emergency during the initial start up of construction to ensure a complete understanding of their requirements.

ARTICLE 35 SMOKE DETECTORS / FIRE ALARM SYSTEMS- EXISTING AND/OR NEW FACILITIES

35.1 Trade Contractor(s) shall protect all smoke detectors in Work areas to prevent false alarms. The Trade Contractor(s) will be responsible for any false alarm caused by dust created in their Work areas or dust traveling to areas beyond the Work, past inadequate protection barriers.

If there is a need for an existing or newly installed fire alarm system or parts of that system to be serviced, turned off, or disconnected, prior approval must be obtained from the Owner's Project Manager and notification given to the Campus Dispatch Office. The Trade Contractor(s) must follow the procedure outlined for Utility Outages and any documented costs charged by the responding fire department due to a false alarm shall be paid by the Trade Contractor(s). As soon as all Work is completed notification must be given to the Owner's Project Manager and to the Campus Dispatch Office prior to reactivation of the system. Prior to Final Payment to the Trade Contractor(s), all protected smoke detectors will be uncovered and tested.

35.2.1 When any fire alarm, detection or suppression system is impaired, a temporary system shall be provided. Trade Contractor(s) shall provide daily reports indicating the Superintendent has walked through the project at the end of each work period, to satisfy himself there are no present conditions that may result in an accidental fire. Portable fire extinguishers shall be on site during this time. The Trade Contractor(s) is responsible for inspecting and testing any temporary systems on a monthly basis.

ARTICLE 36 SURVEYS, RECORDS, and REPORTS

36.1 General: Working from lines and levels established by property survey, and as shown in relation to the Work, the Trade Contractor(s) will establish and maintain bench marks and other dependable markers to set lines and levels for Work at each area of construction and elsewhere on site as needed to properly locate each element of the entire Project. The Trade Contractor(s) shall calculate and measure from the bench marks and dependable markers required dimensions as shown (within recognized tolerances if not otherwise indicated), and shall not scale drawings to determine dimensions. Trade Contractor(s) shall advise Sub-contractors performing Work of marked lines and levels provided for their use in layout of Work.

36.2 Survey Procedures: The Trade Contractor(s) shall verify layout information shown on drawings, as required for his own Work. As Work proceeds, surveyor shall check every major element for line, level, and plumb (as applicable), and maintain an accurate Surveyor's log or Record Book of such checks available for Trade Contractor(s) or Design Consultant's reference at reasonable times. Surveyor shall record deviations from required lines and levels, and advise Design Consultant or Trade Contractor(s) promptly upon detection of deviations exceeding indicated or recognized tolerances. The Trade Contractor(s) shall record deviations which are accepted (not corrected) on Record Drawings.

ARTICLE 37 SMOKING IS PROHIBITED

37.1 For areas located within Fayette County, Kentucky, the use of all tobacco products is prohibited on all property that is owned, operated, leased, occupied, or controlled by the University. “Property” for purposes of this paragraph includes buildings and structures, grounds, parking structures, enclosed bridges and walkways, sidewalks, parking lots, and vehicles, as well as personal vehicles in these areas. To view the Lexington campus boundaries: http://www.uky.edu/TobaccoFree/files/map.pdf.

37.2 For areas not located within Fayette County, Kentucky, smoking is prohibited in all owned, operated, leased, or controlled University buildings and structures, parking structures, enclosed bridges and walkways, and vehicles. Smoking is also prohibited outside buildings and structures within 20 feet of entrances, exits, air intakes, and windows, unless further restricted by division policy.

37.3 Trade Contractor(s)'s employees violating this prohibition will be subject to dismissal from the Project.

37.4 For the full Administrative Regulation see University AR 6:5. http://www.uky.edu/Regs/files/ar/ar6-5.pdf

ARTICLE 38 ALTERNATES

38.1 Alternate(s) will be accepted in the sequence of the Alternates listed on the Bid Form, and the lowest Bid Sum will be computed on the basis of the sum of the base Bid and any alternates accepted, within the budgeted amount.

38.2 Schedule of Alternates:

This list will be developed as approved by the UK Project Manager and Design Team at the completion of the Construction Documents / Phase 3 of design.

ARTICLE 39 FIELD CONSTRUCTED MOCK UPS

39.1 Exterior Finishes

39.1.1 After sample selection but prior to ordering exterior finish materials, Trade Contractor(s) shall accumulate enough material samples to erect sample wall panels to further verify selection made for color and textural characteristics, and to represent completed Work for qualities of appearance, materials and construction including sample masonry units (face and back-up wythes, plus accessories), window units, roofing finish, etc. to provide a complete representation of the exterior facade for approval by the Consultant; build mock-ups to comply with the following requirements:

39.1.2 Build mock-ups well in advance of the time the finish materials will be needed for inclusion in the Work.

39.1.3 Locate mock-ups at location as reviewed and approved by the Architect and University’s Project Manager, generally within 10 feet of existing building, parallel to existing face of building, and exposed to sunlight during daylight hours. Mock-Up to be reviewed twice, one in direct sunlight and one in shade to confirm color characteristics of samples.

39.1.4 Mock-ups Size(s) for the following types shall be approximately 6' long by 4' high

by full thickness.

Each type of exposed Work.

39.1.5 Protect mock-ups from the elements with weather resistant membrane.

39.1.6 Retain mock-ups during construction as a standard for judging completed Work. When directed by the University's Project Manager or by the Consultant, demolish mock-ups and remove from the site.

39.2 Interior Finishes

39.2.1 After sample selection but prior to ordering interior finish materials, Trade Contractor(s) shall accumulate enough material samples to erect sample to further verify selection made for color and textural characteristics, and to represent completed Work for qualities of appearance, materials and construction; include samples of interior finishes, including paint, wood stain, vinyl wallcovering, flooring and ceiling materials to provide a complete representation for approval by the Consultant; build mock-ups to comply with the following requirements:

39.2.2 Build mock-ups well in advance of the time the finish materials will be needed for inclusion in the Work. Mock-ups may be on newly installed wall surfaces.

39.2.3 Locate mock-ups with adequate illumination for observation under intended light levels.

39.2.4 Retain mock-ups during construction as a standard for judging completed Work. When directed by the University's Project Manager or by the Consultant, remove mock-ups from site or incorporate into the completed work.

ARTICLE 40 PROJECT COORDINATION VIA COMPUTER

40.1 The Construction Manager and Subcontractors are required to have an active email account to facilitate coordination of the project during construction and warranty.

40.2 To facilitate project construction coordination between the Consultant, the Construction Manager, Subcontractors, and the University of Kentucky as the Owner, UK Capital Project Management Division (CPMD) is hosting an Internet/ Web-based Project Management System (WPMS) to help improve project communication and collaboration. The Consultant shall participate in the use of the WPMS (UK E-Communication® or other system at the Owner's discretion) providing collaboration between Owner, the Consultant and selected contractors.

40.2.1 Owner shall provide the Construction Manager and Subcontractors with user accounts and appropriate training for the web-based project management tool.

40.2.2 Utilization of, and training in the use of, the WPMS will be arranged for and

supervised by Owner.

40.2.3 Participation of Subcontractors and/or Trade Contractors is mandatory.

40.2.4 All participants are required to have access to the internet and the Microsoft Internet Explorer browser (version 5.0 or higher). A broadband connection to the internet (e.g. Cable modem, ISDN, DSL) is recommended, but not required.

40.2.5 The WPMS shall be utilized for the following functions, as a minimum: Posting Project Files, AE Amendments, Architect's Supplemental Information (ASI's), Closeouts, Consultant Invoices, Contracts, Defective Work in Place, Meeting Minutes, Payment Applications, Proposed Change Orders – Change Orders (PCO to CO's), Punch Lists, Reports (Contractor Daily Reports, Field Reports, Commissioning Reports), RFIs, SAP Equipment List, Schedules, and Submittals. The Document Library (Bid set Plans, Specifications and Addenda will be uploaded by Lynn Imaging.

40.2.6 Site camera monitors may be included at Owner's discretion.

40.2.7 Utilization of the WPMS shall be implemented by the Owner's representative.

40.2.8 Use of the system will provide consistent, real-time information for decision making. Additionally, all project data entered into the system will be archived to facilitate project record keeping. It is anticipated that proper use of the WPMS will improve efficiency of communications and reduce project related paperwork and clerical workload.

40.2.9 The Trade Contractor(s), Construction Manager, and Consultant shall submit complete close-out and submittal logs in E-Communication, or WPMS, including description of all deliverables to be submitted by the construction manager or trade contractors during Phase 3, Construction Documents Phase.

ARTICLE 41 HOT WORK PERMITS

41.1 All work involving open flames or producing heat and or sparks in occupied buildings on the University of Kentucky campus will require the Trade Contractor(s) to obtain approval to perform "Hot Work" on site. This includes, but is not limited to: brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing, and Cad welding. A copy of the Hot Work Permit and the Hot Work Permit Procedure will be passed out at the Preconstruction Conference for the Trade Contractor(s)'s use.

ARTICLE 42 INSURANCE

42.1 Employers' Liability Insurance. Reference project CCIP manual and information

42.2.1 Commercial General Liability Insurance. If the work involved requires the use of helicopters, a separate aviation liability policy with limits of liability of $100,000,000 will be required. If cranes and rigging are involved, a separate inland marine policy with

liability limits of $20,000,000 will be required.

42.2.1.1 The limits of liability shall not be less than $10,000,000each occurrence combined single limits for bodily injury and property damage.

42.2.2 Comprehensive Automobile Liability Insurance. Policy limits shall not be less than $2,000,000 for combined single limits for bodily injury and property damage for each occurrence.

42.2.3 Excess or Umbrella Liability Insurance. This policy shall have a minimum of $10,000,000 combined single limits for bodily injury and property damage for each occurrence in excess of the applicable limits in the primary policies.

42.2.4 Workers' Compensation- Statutory Requirements (Kentucky). Reference project CCIP manual and information

ARTICLE 43 KEY ACCESS

43.1 If Construction Cores are NOT utilized, then one set of keys for access to the renovation project area will be provided to the Construction Manager/Vendor's Project Manager/Superintendent by the University's Project Manager. The Construction Manager/Vendor's holder of the key(s) assumes responsibility for the safekeeping of the key(s) and its use. When leaving the renovation area all doors must be secured.

43.2 All keys must be returned to the University's Project Manager upon completion of project work as one of the requirements for Final Payment. Failure to return the keys may require re-keying of all doors in the work area up to and including the entire building if master keys are issued. The cost of re-keying of the door(s) accessed by the key(s) will be subtracted from the remaining contract dollars including contract retainage.

43.3 All lost or stolen keys must be reported immediately to the University's Project Manager.

ARTICLE 44 CEILING CLEARANCE

44.1 Work above ceiling: All work above an area with lay-in ceiling must be coordinated and installed so there is a minimum of 4" between the top of the ceiling grid runners and bottom of the installation. Installation shall not obstruct equipment access space or equipment removal space. Also, conduit and pipe attached to the wall must be above the 4" minimum level.

44.2 Coordination Between Trades: Request and examine all drawings and specifications pertaining to the construction before installing above ceiling work. Cooperate with all other contractors in locating piping, ductwork, conduit, openings, chases, and equipment in order to avoid conflict with any other contractor's work. Give special attention to points where ducts or piping must cross other ducts and piping, and where ducts, piping and conduit must fur into the walls and columns. Make known to

other trades intended positioning of materials and intended order of work. Determine intended position of work of other trades and intended order of installation.

ARTICLE 45 METAL ANCHORS

45.1 All anchoring devices utilized to secure materials to the building shall be metal. Plastic or plastic expansion components shall not be used. This shall include all fasteners for mechanical/electrical hangers.

ARTICLE 46 LOADING DOCK (NOT USED)

ARTICLE 47 CONSTRUCTION PATH (NOT USED)

ARTICLE 48 HOSPITAL PROJECT PROCEDURE (NOT USED)

ARTICLE 49 WORKING HOURS/ACCESS: FOR MEDICAL CENTER/HOSPITAL (NOT USED)

ARTICLE 50 SECURITY BADGES AND MEDICAL CENTER SECURITY (NOT USED)

ARTICLE 51 HOSPITAL CONSTRUCTION CERTIFICATION (NOT USED)

ARTICLE 52 APPEARANCE (NOT USED)

ARTICLE 53 HIPAA (The Health Insurance Portability and Accountably Act) (NOT USED)

ARTICLE 54 SAFETY & FIRE PROCEDURES (NOT USED)

ARTICLE 55 INTERIM LIFE SAFETY MEASURES (ILSM) (NOT USED)

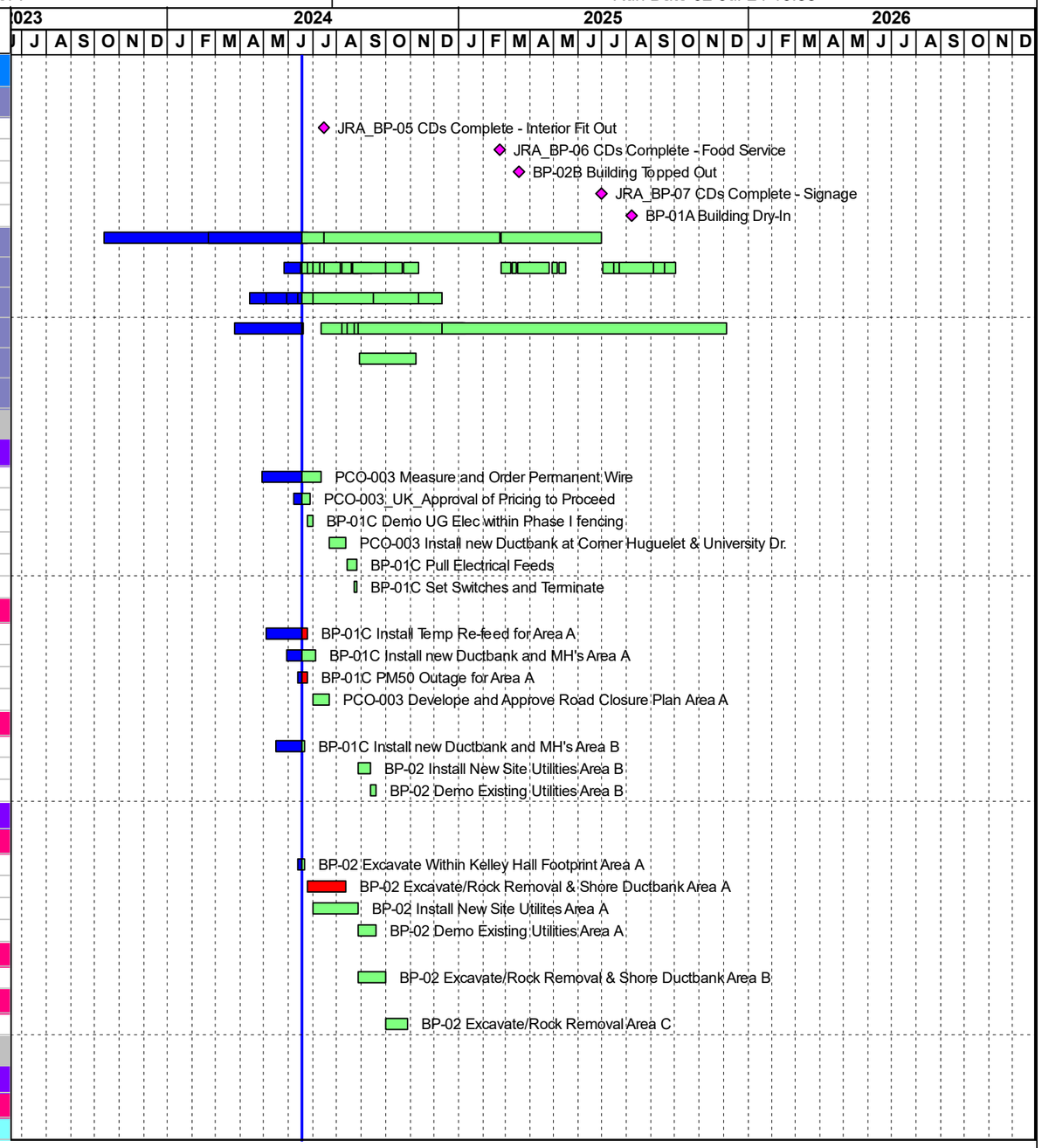
ARTICLE 56 TREE PROTECTION STANDARDS
Trade Contractor(s) will adhere to all provisions outlined in 010000S02 Tree Protection

Standards. **ARTICLE 57 CONTRACTOR/SUPERINTENDENT EXPERIENCE**

(NOT USED) ARTICLE 58 COVID-19 POLICY

Any and all companies/organizations working on the University of Kentucky's campus shall have in place for the period of the contract a COVID-19 policy that is consistent with the University of Kentucky's current COVID-19 policy.

Activity ID	Activity Name	Orig Dur	Rem Dur	% Compl	Start	Finish
Attachment B BP 04 Bid Schedule		774	601		12-Oct-23 A	28-Oct-26
Milestones		271	271		15-Jul-24	07-Aug-25
CTR470	JRA_BP-05 CDs Complete - Interior Fit Out	0	0	0%		15-Jul-24
CTR520	JRA_BP-06 CDs Complete - Food Service	0	0	0%		21-Feb-25
CTR1070	BP-02B Building Topped Out	0	0	0%		18-Mar-25
CTR580	JRA_BP-07 CDs Complete - Signage	0	0	0%		30-Jun-25
01A1260	BP-01A Building Dry-In	0	0	0%		07-Aug-25
Pre-Construction/Design		436	263		12-Oct-23 A	30-Jun-25
Contracting		347	328		27-May-24 A	02-Oct-25
Submittals		168	122		12-Apr-24 A	10-Dec-24
Fabrication & Delivery		432	372		25-Mar-24 A	04-Dec-25
VDC / BIM		50	50		30-Aug-24	08-Nov-24
Construction		627	581		29-Apr-24 A	30-Sep-26
Sitework		140	94		29-Apr-24 A	29-Oct-24
Demo, GT, Survey, Arborist, UG Elec		111	65		29-Apr-24 A	18-Sep-24
CTR1330	PCO-003 Measure and Order Permanent Wire	55	18	67.27%	29-Apr-24 A	12-Jul-24
CTR1350	PCO-003_UK_Approval of Pricing to Proceed	5	9	0%	07-Jun-24 A	28-Jun-24
CTR440	BP-01C Demo UG Elec within Phase I fencing	5	5	0%	25-Jun-24	01-Jul-24
CTR1340	PCO-003 Install new Ductbank at Corner Huguelet & University Dr.	15	15	0%	23-Jul-24	12-Aug-24
CTR460	BP-01C Pull Electrical Feeds	10	10	0%	13-Aug-24	26-Aug-24
CTR740	BP-01C Set Switches and Terminate	3	3	0%	22-Aug-24	26-Aug-24
Area A		55	24		03-May-24 A	22-Jul-24
CTR1100	BP-01C Install Temp Re-feed for Area A	15	5	66.67%	03-May-24 A	24-Jun-24
CTR450	BP-01C Install new Ductbank and MH's Area A	20	13	35%	29-May-24 A	05-Jul-24
CTR2495	BP-01C PM50 Outage for Area A	15	5	66.67%	13-Jun-24 A	24-Jun-24
CTR1450	PCO-003 Develope and Approve Road Closure Plan Area A	15	15	0%	01-Jul-24	22-Jul-24
Area B		87	65		16-May-24 A	18-Sep-24
CTR1480	BP-01C Install new Ductbank and MH's Area B	15	4	73.33%	16-May-24 A	21-Jun-24
CTR430	BP-02 Install New Site Utilities Area B	10	10	0%	28-Aug-24	11-Sep-24
CTR730	BP-02 Demo Existing Utilities Area B	5	5	0%	12-Sep-24	18-Sep-24
Site Ex., UG Utilities Phase II		100	94		13-Jun-24 A	29-Oct-24
Site Area A		71	65		13-Jun-24 A	18-Sep-24
CTR2485	BP-02 Excavate Within Kelley Hall Footprint Area A	6	4	33.33%	13-Jun-24 A	21-Jun-24
CTR510	BP-02 Excavate/Rock Removal & Shore Ductbank Area A	34	34	0%	25-Jun-24	12-Aug-24
CTR380	BP-02 Install New Site Utilites Area A	40	40	0%	02-Jul-24	27-Aug-24
CTR370	BP-02 Demo Existing Utilities Area A	15	15	0%	28-Aug-24	18-Sep-24
Site Area B		25	25		27-Aug-24	01-Oct-24
CTR1090	BP-02 Excavate/Rock Removal & Shore Ductbank Area B	25	25	0%	27-Aug-24	01-Oct-24
Site Area C		20	20		02-Oct-24	29-Oct-24
CTR1370	BP-02 Excavate/Rock Removal Area C	20	20	0%	02-Oct-24	29-Oct-24
Building		556	556		24-Jul-24	30-Sep-26
STRUCTURE		200	200		24-Jul-24	06-May-25
Foundations		120	120		24-Jul-24	14-Jan-25
Foundations Area A		90	90		24-Jul-24	27-Nov-24



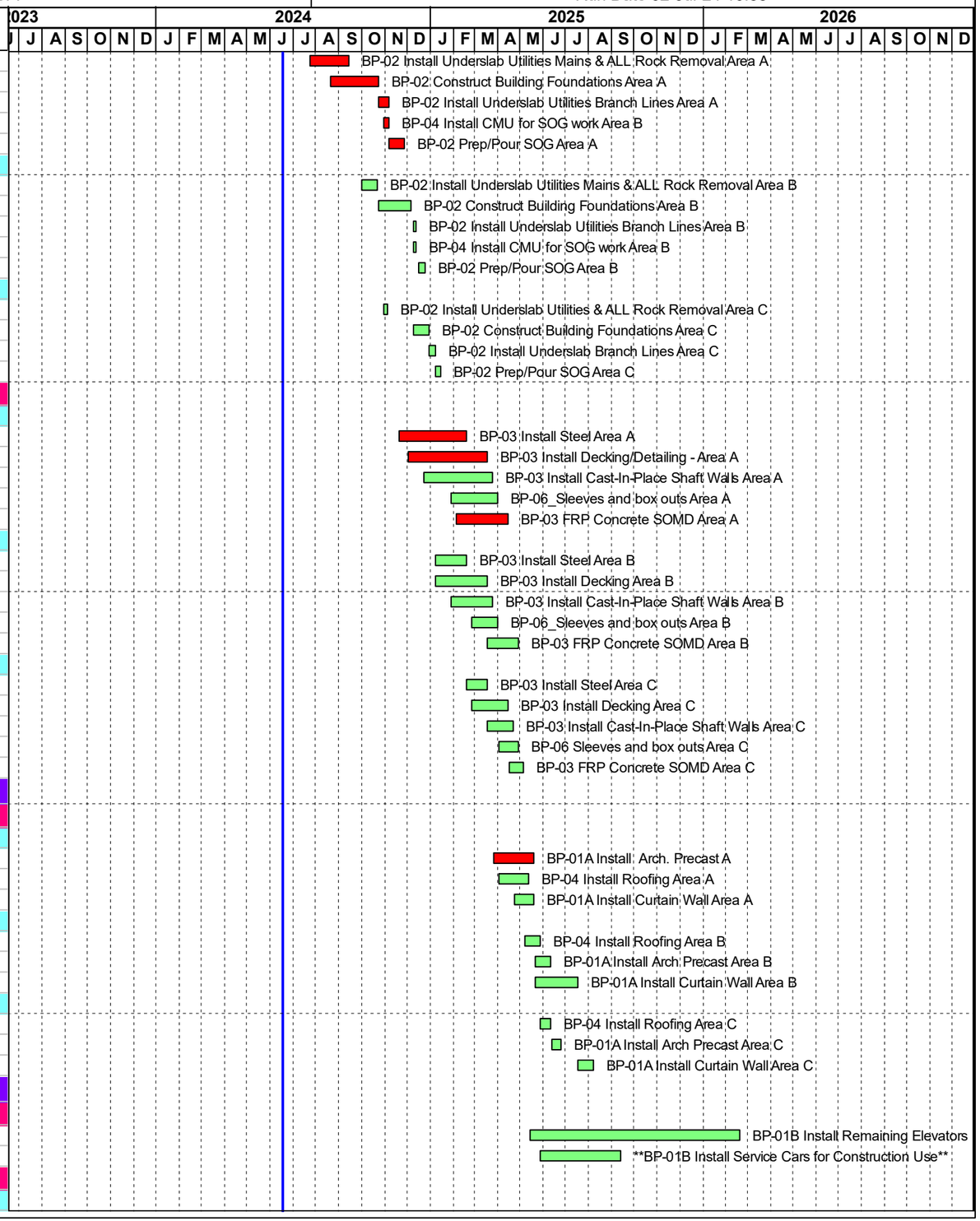
Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Completed Milestone

Attachment B BP 04 Bid Schedule
Data Date 18-Jun-24

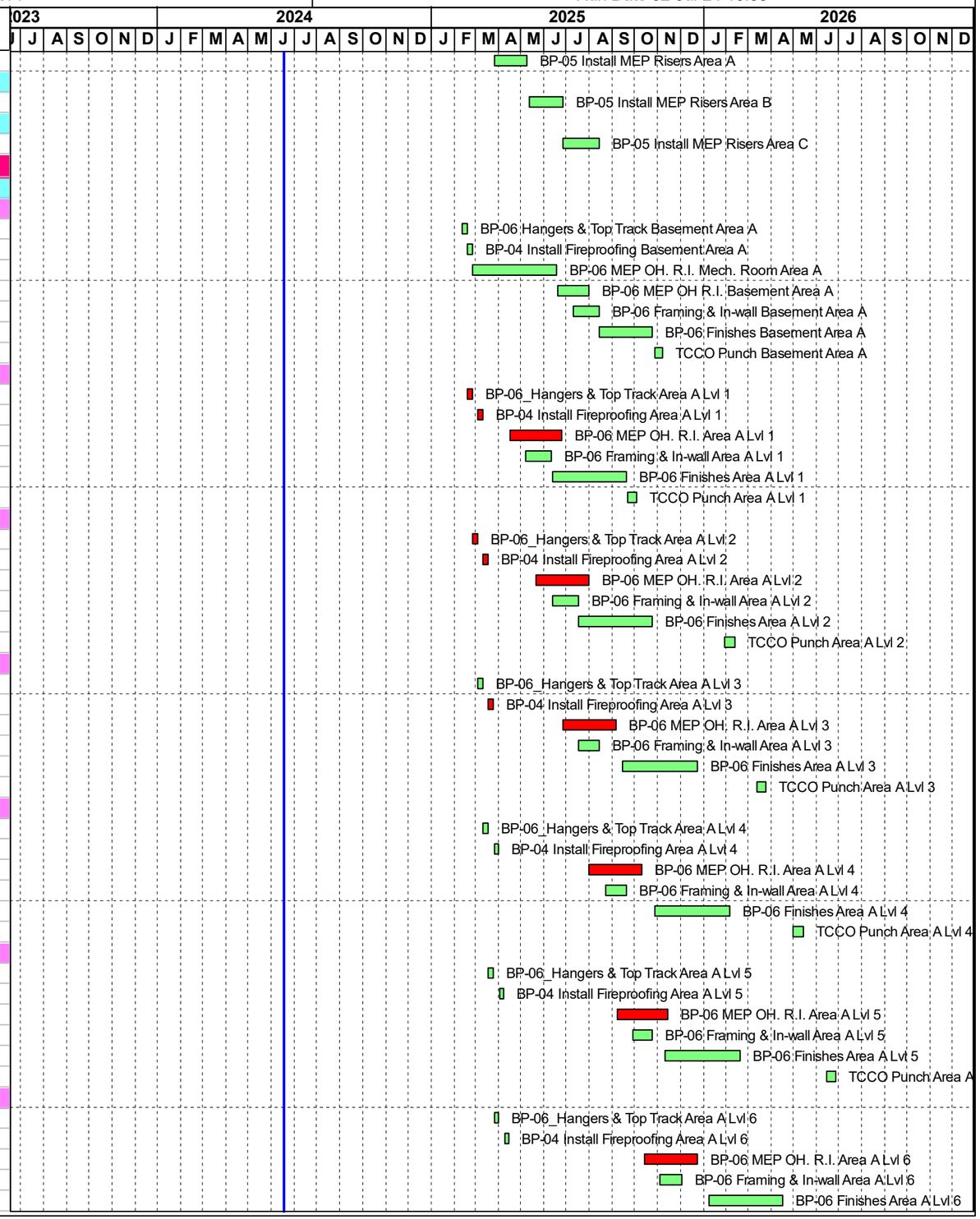
Turner

Start Date 29-Jun-23
Finish Date 28-Oct-26
Data Date 18-Jun-24

Activity ID	Activity Name	Orig Dur	Rem Dur	% Compl	Start	Finish
CTR780	BP-02 Install Underslab Utilities Mains & ALL Rock Removal Area A	37	37	0%	24-Jul-24	13-Sep-24
CTR620	BP-02 Construct Building Foundations Area A	45	45	0%	21-Aug-24	23-Oct-24
CTR790	BP-02 Install Underslab Utilities Branch Lines Area A	10	10	0%	24-Oct-24	06-Nov-24
CTR1640	BP-04 Install CMU for SOG work Area B	5	5	0%	31-Oct-24	06-Nov-24
CTR800	BP-02 Prep/Pour SOG Area A	15	15	0%	07-Nov-24	27-Nov-24
Foundations Area B		58	58		02-Oct-24	24-Dec-24
CTR930	BP-02 Install Underslab Utilities Mains & ALL Rock Removal Area B	15	15	0%	02-Oct-24	22-Oct-24
CTR940	BP-02 Construct Building Foundations Area B	30	30	0%	24-Oct-24	06-Dec-24
CTR950	BP-02 Install Underslab Utilities Branch Lines Area B	5	5	0%	09-Dec-24	13-Dec-24
CTR1680	BP-04 Install CMU for SOG work Area B	5	5	0%	09-Dec-24	13-Dec-24
CTR1020	BP-02 Prep/Pour SOG Area B	7	7	0%	16-Dec-24	24-Dec-24
Foundations Area C		51	51		30-Oct-24	14-Jan-25
CTR1390	BP-02 Install Underslab Utilities & ALL Rock Removal Area C	5	5	0%	30-Oct-24	05-Nov-24
CTR1380	BP-02 Construct Building Foundations Area C	15	15	0%	09-Dec-24	30-Dec-24
CTR1400	BP-02 Install Underslab Branch Lines Area C	5	5	0%	31-Dec-24	07-Jan-25
CTR1410	BP-02 Prep/Pour SOG Area C	5	5	0%	08-Jan-25	14-Jan-25
Structural Steel		115	115		21-Nov-24	06-May-25
Structure Area A		100	100		21-Nov-24	15-Apr-25
CTR650	BP-03 Install Steel Area A	60	60	0%	21-Nov-24	18-Feb-25
CTR660	BP-03 Install Decking/Detailing - Area A	75	75	0%	02-Dec-24	18-Mar-25
CTR770	BP-03 Install Cast-In-Place Shaft Walls Area A	65	65	0%	23-Dec-24	25-Mar-25
CTR1160	BP-06_Sleeves and box outs Area A	45	45	0%	29-Jan-25	01-Apr-25
CTR670	BP-03 FRP Concrete SOMD Area A	50	50	0%	05-Feb-25	15-Apr-25
Structure Area B		80	80		08-Jan-25	29-Apr-25
CTR1110	BP-03 Install Steel Area B	30	30	0%	08-Jan-25	18-Feb-25
CTR1120	BP-03 Install Decking Area B	50	50	0%	08-Jan-25	18-Mar-25
CTR1130	BP-03 Install Cast-In-Place Shaft Walls Area B	40	40	0%	29-Jan-25	25-Mar-25
CTR1170	BP-06_Sleeves and box outs Area B	26	26	0%	25-Feb-25	01-Apr-25
CTR1140	BP-03 FRP Concrete SOMD Area B	30	30	0%	19-Mar-25	29-Apr-25
Structure Area C		55	55		19-Feb-25	06-May-25
CTR1460	BP-03 Install Steel Area C	20	20	0%	19-Feb-25	18-Mar-25
CTR1470	BP-03 Install Decking Area C	35	35	0%	26-Feb-25	15-Apr-25
CTR1420	BP-03 Install Cast-In-Place Shaft Walls Area C	25	25	0%	19-Mar-25	22-Apr-25
CTR1430	BP-06 Sleeves and box outs Area C	20	20	0%	02-Apr-25	29-Apr-25
CTR1440	BP-03 FRP Concrete SOMD Area C	15	15	0%	16-Apr-25	06-May-25
ENVELOPE		95	95		26-Mar-25	07-Aug-25
Curtain Wall/Precast/Roofing		95	95		26-Mar-25	07-Aug-25
Envelope Area A		40	40		26-Mar-25	20-May-25
01A1180	BP-01A Install Arch. Precast A	40	40	0%	26-Mar-25	20-May-25
A180	BP-04 Install Roofing Area A	30	30	0%	02-Apr-25	13-May-25
01A1170	BP-01A Install Curtain Wall Area A	20	20	0%	23-Apr-25	20-May-25
Envelope Area B		50	50		07-May-25	17-Jul-25
A510	BP-04 Install Roofing Area B	15	15	0%	07-May-25	28-May-25
01A1380	BP-01A Install Arch Precast Area B	15	15	0%	21-May-25	11-Jun-25
01A1370	BP-01A Install Curtain Wall Area B	40	40	0%	21-May-25	17-Jul-25
Envelope Area C		50	50		29-May-25	07-Aug-25
A520	BP-04 Install Roofing Area C	10	10	0%	29-May-25	11-Jun-25
01A1410	BP-01A Install Arch Precast Area C	10	10	0%	12-Jun-25	25-Jun-25
01A1420	BP-01A Install Curtain Wall Area C	15	15	0%	18-Jul-25	07-Aug-25
INTERIORS		416	416		12-Feb-25	30-Sep-26
Elevators		195	195		14-May-25	19-Feb-26
CTR810	BP-01B Install Remaining Elevators	195	195	0%	14-May-25	19-Feb-26
CTR920	**BP-01B Install Service Cars for Construction Use**	75	75	0%	29-May-25	12-Sep-25
MEP Equip and MEP Risers/Shafts		99	99		26-Mar-25	13-Aug-25
MEP Risers/Shafts Area A		33	33		26-Mar-25	09-May-25



Activity ID	Activity Name	Orig Dur	Rem Dur	% Compl	Start	Finish
CTR820	BP-05 Install MEP Risers Area A	33	33	0%	26-Mar-25	09-May-25
MEP Risers/Shafts Area B		33	33		12-May-25	26-Jun-25
CTR860	BP-05 Install MEP Risers Area B	33	33	0%	12-May-25	26-Jun-25
MEP Risers/Shafts Area C		33	33		27-Jun-25	13-Aug-25
CTR870	BP-05 Install MEP Risers Area C	33	33	0%	27-Jun-25	13-Aug-25
Arch./MEP/AV/Fire Proofing		416	416		12-Feb-25	30-Sep-26
Interiors Area A		405	405		12-Feb-25	15-Sep-26
Basement		190	190		12-Feb-25	07-Nov-25
CTR830	BP-06 Hangers & Top Track Basement Area A	5	5	0%	12-Feb-25	18-Feb-25
CTR840	BP-04 Install Fireproofing Basement Area A	5	5	0%	19-Feb-25	25-Feb-25
CTR850	BP-06 MEP OH. R.I. Mech. Room Area A	80	80	0%	26-Feb-25	18-Jun-25
CTR910	BP-06 MEP OH R.I. Basement Area A	30	30	0%	19-Jun-25	31-Jul-25
CTR11	BP-06 Framing & In-wall Basement Area A	25	25	0%	11-Jul-25	14-Aug-25
CTR11	BP-06 Finishes Basement Area A	50	50	0%	15-Aug-25	24-Oct-25
CTR24	TCCO Punch Basement Area A	10	10	0%	27-Oct-25	07-Nov-25
Level 1		160	160		19-Feb-25	03-Oct-25
CTR11	BP-06_Hangers & Top Track Area A Lvl 1	5	5	0%	19-Feb-25	25-Feb-25
A190	BP-04 Install Fireproofing Area A Lvl 1	5	5	0%	05-Mar-25	11-Mar-25
CTR890	BP-06 MEP OH. R.I. Area A Lvl 1	50	50	0%	16-Apr-25	25-Jun-25
CTR880	BP-06 Framing & In-wall Area A Lvl 1	25	25	0%	07-May-25	11-Jun-25
CTR900	BP-06 Finishes Area A Lvl 1	70	70	0%	12-Jun-25	19-Sep-25
CTR23	TCCO Punch Area A Lvl 1	10	10	0%	22-Sep-25	03-Oct-25
Level 2		245	245		26-Feb-25	12-Feb-26
CTR15	BP-06_Hangers & Top Track Area A Lvl 2	5	5	0%	26-Feb-25	04-Mar-25
A565	BP-04 Install Fireproofing Area A Lvl 2	5	5	0%	12-Mar-25	18-Mar-25
CTR15	BP-06 MEP OH. R.I. Area A Lvl 2	50	50	0%	21-May-25	31-Jul-25
CTR15	BP-06 Framing & In-wall Area A Lvl 2	25	25	0%	12-Jun-25	17-Jul-25
CTR16	BP-06 Finishes Area A Lvl 2	70	70	0%	18-Jul-25	24-Oct-25
CTR23	TCCO Punch Area A Lvl 2	10	10	0%	30-Jan-26	12-Feb-26
Level 3		270	270		05-Mar-25	26-Mar-26
CTR16	BP-06_Hangers & Top Track Area A Lvl 3	5	5	0%	05-Mar-25	11-Mar-25
A580	BP-04 Install Fireproofing Area A Lvl 3	5	5	0%	19-Mar-25	25-Mar-25
CTR16	BP-06 MEP OH. R.I. Area A Lvl 3	50	50	0%	26-Jun-25	05-Sep-25
CTR16	BP-06 Framing & In-wall Area A Lvl 3	20	20	0%	18-Jul-25	14-Aug-25
CTR16	BP-06 Finishes Area A Lvl 3	70	70	0%	15-Sep-25	23-Dec-25
CTR23	TCCO Punch Area A Lvl 3	10	10	0%	13-Mar-26	26-Mar-26
Level 4		300	300		12-Mar-25	14-May-26
CTR17	BP-06_Hangers & Top Track Area A Lvl 4	5	5	0%	12-Mar-25	18-Mar-25
A595	BP-04 Install Fireproofing Area A Lvl 4	5	5	0%	26-Mar-25	01-Apr-25
CTR17	BP-06 MEP OH. R.I. Area A Lvl 4	50	50	0%	01-Aug-25	10-Oct-25
CTR17	BP-06 Framing & In-wall Area A Lvl 4	20	20	0%	22-Aug-25	19-Sep-25
CTR17	BP-06 Finishes Area A Lvl 4	70	70	0%	27-Oct-25	05-Feb-26
CTR23	TCCO Punch Area A Lvl 4	10	10	0%	01-May-26	14-May-26
Level 5		325	325		19-Mar-25	26-Jun-26
CTR17	BP-06_Hangers & Top Track Area A Lvl 5	5	5	0%	19-Mar-25	25-Mar-25
A610	BP-04 Install Fireproofing Area A Lvl 5	5	5	0%	02-Apr-25	08-Apr-25
CTR18	BP-06 MEP OH. R.I. Area A Lvl 5	50	50	0%	08-Sep-25	14-Nov-25
CTR18	BP-06 Framing & In-wall Area A Lvl 5	20	20	0%	29-Sep-25	24-Oct-25
CTR18	BP-06 Finishes Area A Lvl 5	70	70	0%	10-Nov-25	19-Feb-26
CTR24	TCCO Punch Area A Lvl 5	10	10	0%	15-Jun-26	26-Jun-26
Level 6		350	350		26-Mar-25	10-Aug-26
CTR18	BP-06_Hangers & Top Track Area A Lvl 6	5	5	0%	26-Mar-25	01-Apr-25
A625	BP-04 Install Fireproofing Area A Lvl 6	5	5	0%	09-Apr-25	15-Apr-25
CTR18	BP-06 MEP OH. R.I. Area A Lvl 6	50	50	0%	13-Oct-25	23-Dec-25
CTR18	BP-06 Framing & In-wall Area A Lvl 6	20	20	0%	03-Nov-25	02-Dec-25
CTR18	BP-06 Finishes Area A Lvl 6	70	70	0%	09-Jan-26	16-Apr-26

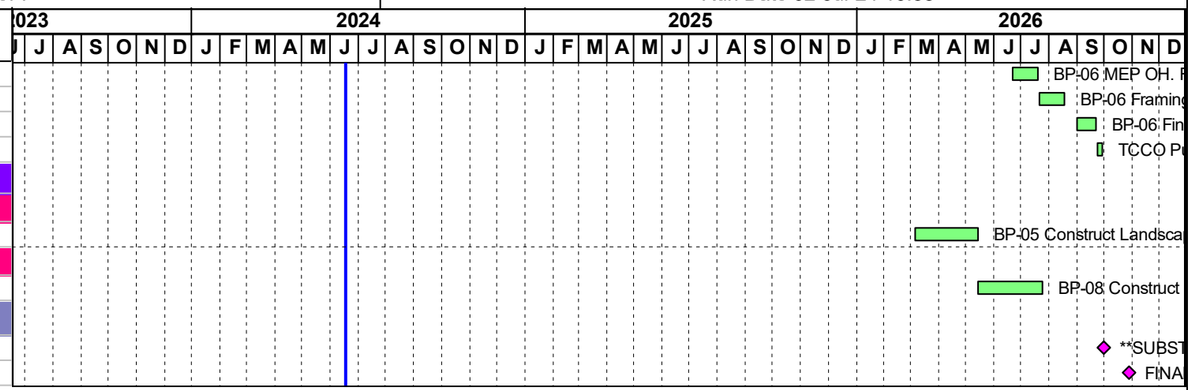


Activity ID	Activity Name	Orig Dur	Rem Dur	% Compl	Start	Finish
CTR24	TCCO Punch Area A Lvl 6	10	10	0%	28-Jul-26	10-Aug-26
Level 7		370	370		02-Apr-25	15-Sep-26
CTR19	BP-06_Hangers & Top Track Area A Lvl 7	5	5	0%	02-Apr-25	08-Apr-25
A640	BP-04 Install Fireproofing Area A Lvl 7	5	5	0%	16-Apr-25	22-Apr-25
CTR19	BP-06 MEP OH. R.I. Area A Lvl 7	50	50	0%	17-Nov-25	29-Jan-26
CTR19	BP-06 Framing & In-wall Area A Lvl 7	20	20	0%	10-Dec-25	08-Jan-26
CTR19	BP-06 Finishes Area A Lvl 7	70	70	0%	06-Mar-26	12-Jun-26
CTR24	TCCO Punch Area A Lvl 7	10	10	0%	01-Sep-26	15-Sep-26
Level 8		305	305		09-Apr-25	19-Jun-26
CTR20	BP-06_Hangers & Top Track Area A Lvl 8	5	5	0%	09-Apr-25	15-Apr-25
A660	BP-04 Install Fireproofing Area A Lvl 8	5	5	0%	23-Apr-25	29-Apr-25
CTR20	BP-06 MEP OH. R.I. Area A Lvl 8	50	50	0%	24-Dec-25	05-Mar-26
CTR20	BP-06 Framing & In-wall Area A Lvl 8	25	25	0%	16-Jan-26	19-Feb-26
CTR20	BP-06 Finishes Area A Lvl 8	70	70	0%	27-Feb-26	05-Jun-26
CTR21	TCCO Punch Area A Lvl 8	10	10	0%	08-Jun-26	19-Jun-26
Level 9		335	335		16-Apr-25	10-Aug-26
CTR21	BP-06_Hangers & Top Track Area A Lvl 9	5	5	0%	16-Apr-25	22-Apr-25
A690	BP-04 Install Fireproofing Area A Lvl 9	5	5	0%	30-Apr-25	06-May-25
CTR21	BP-06 MEP OH. R.I. Area A Lvl 9	50	50	0%	30-Jan-26	09-Apr-26
CTR21	BP-06 Framing & In-wall Area A Lvl 9	20	20	0%	20-Feb-26	19-Mar-26
CTR21	BP-06 Finishes Area A Lvl 9	70	70	0%	17-Apr-26	27-Jul-26
CTR23	TCCO Punch Area A Lvl 9	10	10	0%	28-Jul-26	10-Aug-26
Penthouse		325	325		23-Apr-25	03-Aug-26
CTR22	BP-06_Hangers & Top Track Area A Penthouse	5	5	0%	23-Apr-25	29-Apr-25
A705	BP-04 Install Fireproofing Area A Penthouse	5	5	0%	07-May-25	13-May-25
CTR22	BP-06 MEP OH. R.I. Area A Penthouse	30	30	0%	06-Mar-26	16-Apr-26
CTR22	BP-06 Framing & In-wall Area A Penthouse	20	20	0%	27-Mar-26	23-Apr-26
CTR22	BP-06 Finishes Area A Penthouse	50	50	0%	08-May-26	20-Jul-26
CTR23	TCCO Punch Area A Penthouse	10	10	0%	21-Jul-26	03-Aug-26
Interiors Area B		385	385		26-Mar-25	29-Sep-26
Basement		210	210		26-Mar-25	22-Jan-26
CTR22	BP-06 Hangers & Top Track Basement Area B	5	5	0%	26-Mar-25	01-Apr-25
CTR22	BP-04 Install Fireproofing Basement Area B	5	5	0%	16-Apr-25	22-Apr-25
CTR22	BP-06 MEP OH. R.I. Mech. Room Area B	50	50	0%	23-Apr-25	02-Jul-25
CTR22	BP-06 MEP OH R.I. Basement Area B	30	30	0%	05-Jun-25	17-Jul-25
CTR22	BP-06 Framing & In-wall Basement Area B	25	25	0%	26-Jun-25	31-Jul-25
CTR22	BP-06 Finishes Basement Area B	50	50	0%	27-Oct-25	08-Jan-26
CTR24	TCCO Punch Basement Area B	10	10	0%	09-Jan-26	22-Jan-26
Level 1		170	170		02-Apr-25	02-Dec-25
CTR14	BP-06_Hangers & Top Track Area B Lvl 1	5	5	0%	02-Apr-25	08-Apr-25
A490	BP-04 Install Fireproofing Area B Lvl 1	5	5	0%	09-Apr-25	15-Apr-25
CTR15	BP-06 MEP OH. R.I. Area B Lvl 1	30	30	0%	12-Jun-25	24-Jul-25
CTR15	BP-06 Framing & In-wall Area B Lvl 1	25	25	0%	03-Jul-25	07-Aug-25
CTR15	BP-06 Finishes Area B Lvl 1	40	40	0%	22-Sep-25	14-Nov-25
CTR23	TCCO Punch Area B Lvl 1	10	10	0%	17-Nov-25	02-Dec-25
Level 2		225	225		09-Apr-25	26-Feb-26
CTR15	BP-06_Hangers & Top Track Area B Lvl 2	5	5	0%	09-Apr-25	15-Apr-25
A570	BP-04 Install Fireproofing Area B Lvl 2	5	5	0%	16-Apr-25	22-Apr-25
CTR16	BP-06 MEP OH. R.I. Area B Lvl 2	30	30	0%	08-Aug-25	19-Sep-25
CTR16	BP-06 Framing & In-wall Area B Lvl 2	25	25	0%	29-Aug-25	03-Oct-25
CTR16	BP-06 Finishes Area B Lvl 2	40	40	0%	27-Oct-25	23-Dec-25
CTR23	TCCO Punch Area B Lvl 2	10	10	0%	13-Feb-26	26-Feb-26
Level 3		250	250		16-Apr-25	09-Apr-26
CTR16	BP-06_Hangers & Top Track Area B Lvl 3	5	5	0%	16-Apr-25	22-Apr-25
A585	BP-04 Install Fireproofing Area B Lvl 3	5	5	0%	23-Apr-25	29-Apr-25
CTR16	BP-06 MEP OH. R.I. Area B Lvl 3	30	30	0%	06-Oct-25	14-Nov-25

Activity ID	Activity Name	Orig Dur	Rem Dur	% Compl	Start	Finish
CTR17(	BP-06 Framing & In-wall Area B Lvl 3	20	20	0%	27-Oct-25	21-Nov-25
CTR16!	BP-06 Finishes Area B Lvl 3	40	40	0%	24-Dec-25	19-Feb-26
CTR23	TCCO Punch Area B Lvl 3	10	10	0%	27-Mar-26	09-Apr-26
Level 4		280	280		23-Apr-25	29-May-26
CTR17:	BP-06_Hangers & Top Track Area B Lvl 4	5	5	0%	23-Apr-25	29-Apr-25
A600	BP-04 Install Fireproofing Area B Lvl 4	5	5	0%	30-Apr-25	06-May-25
CTR17:	BP-06 MEP OH. R.I. Area B Lvl 4	30	30	0%	03-Dec-25	15-Jan-26
CTR17!	BP-06 Framing & In-wall Area B Lvl 4	20	20	0%	24-Dec-25	22-Jan-26
CTR17(	BP-06 Finishes Area B Lvl 4	40	40	0%	06-Feb-26	02-Apr-26
CTR24(	TCCO Punch Area B Lvl 4	10	10	0%	15-May-26	29-May-26
Level 5		305	305		30-Apr-25	13-Jul-26
CTR17!	BP-06_Hangers & Top Track Area B Lvl 5	5	5	0%	30-Apr-25	06-May-25
A615	BP-04 Install Fireproofing Area B Lvl 5	5	5	0%	07-May-25	13-May-25
CTR18(	BP-06 MEP OH. R.I. Area B Lvl 5	30	30	0%	03-Dec-25	15-Jan-26
CTR18:	BP-06 Framing & In-wall Area B Lvl 5	20	20	0%	24-Dec-25	22-Jan-26
CTR18:	BP-06 Finishes Area B Lvl 5	40	40	0%	20-Feb-26	16-Apr-26
CTR24	TCCO Punch Area B Lvl 5	10	10	0%	29-Jun-26	13-Jul-26
Level 6		330	330		07-May-25	24-Aug-26
CTR18(	BP-06_Hangers & Top Track Area B Lvl 6	5	5	0%	07-May-25	13-May-25
A630	BP-04 Install Fireproofing Area B Lvl 6	5	5	0%	14-May-25	20-May-25
CTR18'	BP-06 MEP OH. R.I. Area B Lvl 6	30	30	0%	30-Jan-26	12-Mar-26
CTR18!	BP-06 Framing & In-wall Area B Lvl 6	20	20	0%	20-Feb-26	19-Mar-26
CTR19(	BP-06 Finishes Area B Lvl 6	40	40	0%	17-Apr-26	12-Jun-26
CTR24:	TCCO Punch Area B Lvl 6	10	10	0%	11-Aug-26	24-Aug-26
Level 7		350	350		14-May-25	29-Sep-26
CTR19:	BP-06_Hangers & Top Track Area B Lvl 7	5	5	0%	14-May-25	20-May-25
A645	BP-04 Install Fireproofing Area B Lvl 7	5	5	0%	21-May-25	28-May-25
CTR19-	BP-06 MEP OH. R.I. Area B Lvl 7	30	30	0%	27-Mar-26	07-May-26
CTR19(	BP-06 Framing & In-wall Area B Lvl 7	20	20	0%	17-Apr-26	14-May-26
CTR19'	BP-06 Finishes Area B Lvl 7	35	35	0%	15-Jun-26	03-Aug-26
CTR24-	TCCO Punch Area B Lvl 7	10	10	0%	16-Sep-26	29-Sep-26
Level 8		340	340		21-May-25	22-Sep-26
CTR20	BP-06_Hangers & Top Track Area B Lvl 8	5	5	0%	21-May-25	28-May-25
A670	BP-04 Install Fireproofing Area B Lvl 8	5	5	0%	29-May-25	04-Jun-25
CTR20-	BP-06 MEP OH. R.I. Area B Lvl 8	30	30	0%	22-May-26	06-Jul-26
CTR20!	BP-06 Framing & In-wall Area B Lvl 8	25	25	0%	15-Jun-26	20-Jul-26
CTR20!	BP-06 Finishes Area B Lvl 8	40	40	0%	21-Jul-26	15-Sep-26
CTR23:	TCCO Punch Area B Lvl 8	5	5	0%	16-Sep-26	22-Sep-26
Level 9		340	340		29-May-25	29-Sep-26
CTR21-	BP-06_Hangers & Top Track Area B Lvl 9	5	5	0%	29-May-25	04-Jun-25
A700	BP-04 Install Fireproofing Area B Lvl 9	5	5	0%	05-Jun-25	11-Jun-25
CTR21(	BP-06 MEP OH. R.I. Area B Lvl 9	20	20	0%	21-Jul-26	17-Aug-26
CTR21!	BP-06 Framing & In-wall Area B Lvl 9	20	20	0%	11-Aug-26	08-Sep-26
CTR22(	BP-06 Finishes Area B Lvl 9	10	10	0%	09-Sep-26	22-Sep-26
CTR23:	TCCO Punch Area B Lvl 9	5	5	0%	23-Sep-26	29-Sep-26
Penthouse		335	335		05-Jun-25	29-Sep-26
CTR22:	BP-06_Hangers & Top Track Area B Penthouse	5	5	0%	05-Jun-25	11-Jun-25
A710	BP-04 Install Fireproofing Area B Penthouse	5	5	0%	12-Jun-25	18-Jun-25
CTR22:	BP-06 MEP OH. R.I. Area B Penthouse	15	15	0%	11-Aug-26	31-Aug-26
CTR22-	BP-06 Framing & In-wall Area B Penthouse	10	10	0%	01-Sep-26	15-Sep-26
CTR22!	BP-06 Finishes Area B Penthouse	5	5	0%	16-Sep-26	22-Sep-26
CTR23-	TCCO Punch Area B Penthouse	5	5	0%	23-Sep-26	29-Sep-26
Interiors Area C		369	369		18-Apr-25	30-Sep-26
Basement		243	243		18-Apr-25	02-Apr-26
CTR22!	BP-06 Hangers & Top Track Basement Area C	4	4	0%	18-Apr-25	23-Apr-25
CTR23(	BP-04 Install Fireproofing Basement Area C	4	4	0%	24-Apr-25	29-Apr-25

Activity ID	Activity Name	Orig Dur	Rem Dur	% Compl	Start	Finish
CTR23(	BP-06 MEP OH R.I. Basement Area C	30	30	0%	18-Jul-25	28-Aug-25
CTR23	BP-06 Framing & In-wall Basement Area C	25	25	0%	08-Aug-25	12-Sep-25
CTR23	BP-06 Finishes Basement Area C	50	50	0%	09-Jan-26	19-Mar-26
CTR24	TCCO Punch Basement Area C	10	10	0%	20-Mar-26	02-Apr-26
Level 1		195	195		23-Apr-25	29-Jan-26
CTR15	BP-06_Hangers & Top Track Area C Lvl 1	4	4	0%	23-Apr-25	28-Apr-25
A560	BP-04 Install Fireproofing Area C Lvl 1	4	4	0%	29-Apr-25	02-May-25
CTR15	BP-06 MEP OH. R.I. Area C Lvl 1	20	20	0%	11-Jul-25	07-Aug-25
CTR15	BP-06 Framing & In-wall Area C Lvl 1	20	20	0%	08-Aug-25	05-Sep-25
CTR15	BP-06 Finishes Area C Lvl 1	40	40	0%	17-Nov-25	15-Jan-26
CTR23	TCCO Punch Area C Lvl 1	10	10	0%	16-Jan-26	29-Jan-26
Level 2		221	221		29-Apr-25	12-Mar-26
CTR15	BP-06_Hangers & Top Track Area C Lvl 2	4	4	0%	29-Apr-25	02-May-25
A575	BP-04 Install Fireproofing Area C Lvl 2	4	4	0%	05-May-25	08-May-25
CTR16	BP-06 MEP OH. R.I. Area C Lvl 2	20	20	0%	08-Sep-25	03-Oct-25
CTR16	BP-06 Framing & In-wall Area C Lvl 2	20	20	0%	06-Oct-25	31-Oct-25
CTR16	BP-06 Finishes Area C Lvl 2	40	40	0%	24-Dec-25	19-Feb-26
CTR23	TCCO Punch Area C Lvl 2	10	10	0%	27-Feb-26	12-Mar-26
Level 3		252	252		05-May-25	30-Apr-26
CTR16	BP-06_Hangers & Top Track Area C Lvl 3	4	4	0%	05-May-25	08-May-25
A590	BP-04 Install Fireproofing Area C Lvl 3	4	4	0%	09-May-25	14-May-25
CTR16	BP-06 MEP OH. R.I. Area C Lvl 3	20	20	0%	03-Nov-25	02-Dec-25
CTR16	BP-06 Framing & In-wall Area C Lvl 3	20	20	0%	24-Nov-25	23-Dec-25
CTR17	BP-06 Finishes Area C Lvl 3	40	40	0%	20-Feb-26	16-Apr-26
CTR23	TCCO Punch Area C Lvl 3	10	10	0%	17-Apr-26	30-Apr-26
Level 4		278	278		09-May-25	12-Jun-26
CTR17	BP-06_Hangers & Top Track Area C Lvl 4	4	4	0%	09-May-25	14-May-25
A605	BP-04 Install Fireproofing Area C Lvl 4	4	4	0%	15-May-25	20-May-25
CTR17	BP-06 MEP OH. R.I. Area C Lvl 4	20	20	0%	02-Jan-26	29-Jan-26
CTR17	BP-06 Framing & In-wall Area C Lvl 4	20	20	0%	23-Jan-26	19-Feb-26
CTR17	BP-06 Finishes Area C Lvl 4	40	40	0%	03-Apr-26	29-May-26
CTR24	TCCO Punch Area C Lvl 4	10	10	0%	01-Jun-26	12-Jun-26
Level 5		304	304		15-May-25	27-Jul-26
CTR17	BP-06_Hangers & Top Track Area C Lvl 5	4	4	0%	15-May-25	20-May-25
A620	BP-04 Install Fireproofing Area C Lvl 5	4	4	0%	21-May-25	27-May-25
CTR18	BP-06 MEP OH. R.I. Area C Lvl 5	20	20	0%	02-Jan-26	29-Jan-26
CTR18	BP-06 Framing & In-wall Area C Lvl 5	20	20	0%	23-Jan-26	19-Feb-26
CTR18	BP-06 Finishes Area C Lvl 5	40	40	0%	17-Apr-26	12-Jun-26
CTR24	TCCO Punch Area C Lvl 5	10	10	0%	14-Jul-26	27-Jul-26
Level 6		325	325		21-May-25	31-Aug-26
CTR18	BP-06_Hangers & Top Track Area C Lvl 6	4	4	0%	21-May-25	27-May-25
A635	BP-04 Install Fireproofing Area C Lvl 6	4	4	0%	28-May-25	02-Jun-25
CTR18	BP-06 MEP OH. R.I. Area C Lvl 6	20	20	0%	27-Feb-26	26-Mar-26
CTR19	BP-06 Framing & In-wall Area C Lvl 6	20	20	0%	20-Mar-26	16-Apr-26
CTR19	BP-06 Finishes Area C Lvl 6	40	40	0%	15-Jun-26	10-Aug-26
CTR24	TCCO Punch Area C Lvl 6	5	5	0%	25-Aug-26	31-Aug-26
Level 7		342	342		28-May-25	30-Sep-26
CTR19	BP-06_Hangers & Top Track Area C Lvl 7	4	4	0%	28-May-25	02-Jun-25
A650	BP-04 Install Fireproofing Area C Lvl 7	4	4	0%	03-Jun-25	06-Jun-25
CTR19	BP-06 MEP OH. R.I. Area C Lvl 7	20	20	0%	24-Apr-26	21-May-26
CTR19	BP-06 Framing & In-wall Area C Lvl 7	20	20	0%	15-May-26	12-Jun-26
CTR19	BP-06 Finishes Area C Lvl 7	36	36	0%	04-Aug-26	23-Sep-26
CTR24	TCCO Punch Area C Lvl 7	5	5	0%	24-Sep-26	30-Sep-26
Level 8		337	337		03-Jun-25	29-Sep-26
CTR20	BP-06_Hangers & Top Track Area C Lvl 8	4	4	0%	03-Jun-25	06-Jun-25
A680	BP-04 Install Fireproofing Area C Lvl 8	4	4	0%	09-Jun-25	12-Jun-25

Activity ID	Activity Name	Orig Dur	Rem Dur	% Compl	Start	Finish
CTR20	BP-06 MEP OH. R.I. Area C Lvl 8	20	20	0%	22-Jun-26	20-Jul-26
CTR21	BP-06 Framing & In-wall Area C Lvl 8	20	20	0%	21-Jul-26	17-Aug-26
CTR21	BP-06 Finishes Area C Lvl 8	15	15	0%	01-Sep-26	22-Sep-26
CTR23	TCCO Punch Area C Lvl 8	5	5	0%	23-Sep-26	29-Sep-26
HARDSCAPE/LANDSCAPE		99	99		06-Mar-26	24-Jul-26
North		50	50		06-Mar-26	14-May-26
A200	BP-05 Construct Landscape/Hardscape North	50	50	0%	06-Mar-26	14-May-26
South		49	49		15-May-26	24-Jul-26
A210	BP-08 Construct Landscape/Hardscape South	49	49	0%	15-May-26	24-Jul-26
TURNOVER		20	20		30-Sep-26	28-Oct-26
MS150	**SUBSTANTIAL COMPLETION**	0	0	0%		30-Sep-26*
MS160	FINAL Completion	0	0	0%		28-Oct-26



ATTACHMENT H
Project BIM Requirements

Building Information Modeling (BIM) is the development and use of a three-dimensional computer model to represent a virtual model of the facility and the process for constructing the facility. Once the model is developed, it can be used to simulate the construction process and to manage the operations of the facility. The Building Information Model can be created by combining many different three-dimensional models from the designers and contractors into a federated model. From this federated model, views and data appropriate to various users' needs can be extracted and analyzed to generate information so long that said need is feasible to be met given the format of the delivered composite model, to make decisions and to improve the process of delivering the building.

The Project shall utilize three-dimensional modeling for the coordination of all Sitework, Site Utilities, Architectural, Structural, Mechanical, Plumbing, Fire Protection, Electrical Systems, and Low Voltage Systems.

Virtual Design and Construction Techniques

1. Subcontractor agrees to participate in the use of digital/computer based three dimensional models and other related functionality, generally referred to as building information modeling (such models and functionality are referred to herein as BIM) as Turner may determine to be beneficial for use in facilitating coordination, sequencing, scheduling and/or production of as-built depictions of the Project and performance of the Work and as hereafter provided. The Subcontractor's costs of such participation are included in the Price unless explicitly outlined herein.

2. Subcontractor shall provide digital submissions of information describing its respective Work in a form and manner that Turner may require and that can be loaded into a federated model assembled by Turner.

3. Subcontractor's submissions shall be of sufficient detail to enable accurate and complete clash detection and shall be provided by Subcontractor at a point in time that is reasonably in advance of Subcontractor's shop drawing submittals and the subsequent on site construction of the Subcontractor's Work and such submissions shall contain such details and follow such procedures as Turner may require.

4. The digital format of such BIM submissions shall be as described herein (specifying the necessary digital formats, software requirements, etc.), which will be provided to subcontractor after execution of Agreement and prior to the start of coordination.

5. Subcontractor shall participate in BIM Coordination and review meetings as Turner may require and agrees that, as a result of the information exchanged at such meetings, both the digital submission and the Work depicted in the Subcontractor's digital submission may be required to be changed by Subcontractor to achieve coordination with other elements of the Project being provided by others. Such changes shall be accomplished at no increase in the Price or Time of Completion. Subcontractor acknowledges that such meetings will require attendance of personnel that are familiar with both the data entry aspects of the BIM as well as an understanding of the Work to be performed and its relation to other elements of the Project, and subcontractor therefore agrees that personnel conversant in both shall attend all such meetings.

6. Subcontractor agrees that neither the BIM nor the use of the BIM is in lieu of nor intended to relieve the Subcontractor of its responsibilities under the Subcontract, including to (i) coordinate its Work with the work of others involved in the Project and (ii) strictly comply with the other requirements of the Subcontract Agreement and the Contract Documents. It is expressly understood and agreed that, notwithstanding the requirement for submittals in connection with the BIM, traditional shop drawings and other submissions shall be required of Subcontractor as required by the Contract Documents and no party shall be liable to the other for any claim, dispute, controversy, cost, or expense arising solely out of the use of the BIM.

7. Turner does not waive any of its intellectual property rights and shall have the sole and exclusive

right to use the BIM and all submissions made by Subcontractor as it deems appropriate, whether during or after construction.

8. Subcontractor agrees that notwithstanding the fact that it may participate in the BIM process or receive information or materials from others in connection with the Project through the course of the use or development of the BIM, it shall not take any position that the receipt of such participation or information has or will, in any respect, operate to waive, release or otherwise invalidate any of its obligations or responsibilities under the Subcontract or any intellectual property rights (copyrights, trademarks/logos, patents, etc.) or secure information that may apply to such information or materials.

9. Subcontractor acknowledges and agrees that Turner shall incur no responsibility or liability with respect to the BIM or the use thereof, including those resulting from errors, omissions, or deficiencies in the BIM. In the event that Subcontractor provides deficient information or data that does not represent the Work it will be ultimately providing, that is corrupted, that contains a virus and/or that otherwise damages the BIM, Subcontractor shall bear all costs associated with reconstructing the BIM and to otherwise remediate such deficiencies or their effects.

10. In the event the Subcontractor discovers any error, inconsistency, or omission in its information or submissions, the information or submissions provided by others or any BIM, it shall promptly report the same to Turner via written notice, which shall contain all relevant specifics.

11. Subcontractor acknowledges that the BIM may require updating throughout the life of the Project to address any changes to the Work so that the BIM at the conclusion of the Project accurately depicts the Work as actually performed and installed. Subcontractor agrees to promptly update and provide revised submissions to Turner throughout the course of the Project so that the BIM at the conclusion of the Project accurately depicts the Work as actually performed and installed.

12. Subcontractors will be compensated for any additional modeling as a result of any additions to the scope of work that are approved by the Owner so long that the subcontractor includes the price required for the additional modeling associated with this increase in any document that includes but is not limited to any change order requests, RFIs, and Bulletins submitted to the Owner prior to final approval.

13. The foregoing process is in addition to the Subcontractor's obligations to make the traditional submissions and shall not relieve or lessen in any way the Subcontractor's obligations contained throughout this Agreement and the other Contract Documents.

Subcontractor Roles and Responsibilities – All Trades:

1. Owner/Architect may provide three-dimensional design models for use as backgrounds for coordination. Models may include basic architectural features, such as the floors, a rough approximation of ceilings chases, door openings, partitions exterior wall surfaces, window openings, roofs, elevator shafts, and stairs, and basic Structural features such as slabs and walls, steel framing – columns, beams, and major structural elements. Each Trade Contractor is ultimately responsible for coordinating to all information contained in the 2D contract drawings and specifications as related to their work. The models provide are used as diagrammatic representation only and is not to be relied upon for their accuracy, or as a reflection of the design, design intent, or representation of existing conditions.

2. Turner Construction Company will specify or make available a collaboration platform that will enable all project parties to upload and download their respective "in-progress shop models," manage electronic drawing files or models and other electronic documents used in the coordination process.

3. If three-dimensional design models or two-dimensional CAD files are posted on the collaboration site, it is recommended that each trade use these files as references to create their system models by sequence or geographic area dictated by Turner's representatives. The process is to create and upload system models to the collaboration site as frequently as required by Turner for other trades to use while modeling their systems.

4. Trade Contractor is not required nor encouraged to wait for the distribution of two-dimensional CAD files or three-dimensional background models by Turner to begin their engineering and drafting efforts. Each subcontractor shall proceed with the most haste using the two-dimensional contract documents to begin their engineering and drafting in order to meet the project schedule.

5. Each Trade Contractor is required to use parametric BIM authoring software. Owner project requirements may require specific authoring software such as Revit to be used by all Trades. All objects in the models must be three-dimensional solids, parametric components, or AEC (Architecture, Engineering, and Construction) objects. All files shall be purged prior to submission. All models should reflect the exact material properties and performance data.

6. The model origin shall be consistent with that which is provided by Turner prior to trade coordination. All trade subcontractor's drawing and model files shall be based on this origin point provided by Turner. The cost of any changes required by the Trade Contractor to their drawings or models due to the use of an unauthorized origin shall be borne by the trade contractor.

7. Each Trade Contractor is required to submit all models to Turner in their native Model authoring format, three-dimensional DWG, three-dimensional NWC, with necessary Object Enabler executable(s). The three-dimensional model shall be layered and constructed in a manner such that all elements of the model can be converted into a two-dimensional drawing for use in the field.

8. The three-dimensional models submitted by the Trade Contractor for overall coordination are required to be checked and coordinated with the structure and the Trade Contractor's own work prior to submittal.

9. Each Trade Contractor is to provide a list of minimum typical clearances and access requirements for all model components and coordinate necessary clearances/access within the model. The three-dimensional model is to include clearances for equipment included as a modeled volume such that clash detection and coordination can be accommodated relating to necessary clearances/access. All clearances modeled shall begin at the access points to all the way to the equipment.

10. Each Trade Contractor shall be prepared to attend daily coordination huddles and scheduled coordination meetings to resolve conflicts within the model.

11. Each Trade detailer/drafter shall have the capability to host and attend virtual meetings.

12. Penetrations through building systems shall be identified in the three-dimensional model by means of a modeled sleeve, and shall be identified on penetration and sleeve drawings in a PDF and DWG format to be submitted to Turner as per the coordination schedule.

13. Each Trade shall complete the drawings and model in a time frame capable of meeting the Project Schedule.

14. Each Trade may be asked to provide a three-dimensional mock-up of a specific portion of the project to be designated by Turner, prior to the pre-detailing meeting, in full detail in order to verify the compatibility of the file formats. Each Trade Contractor shall provide object enablers for its specific three-dimensional software if required.

15. Each Trade is responsible for providing their detailer/drafter with the appropriate modeling and coordination hardware/software to meet the requirements herein, including the ability to attend in-person coordination meetings so to be able to make live, real-time changes to the "Shop Model" in the meetings and in order to review the finalized, signed off coordinated models prior to and during the fabrication/installation process.

16. Each Trade is to submit the required number of color copies of their respective, As-Built two-dimensional drawings as required by the contract documents, for approval through the regular closeout process. This is required for each floor as well as each riser.

17. Each Trade is required to digitally submit their three-dimensional As-Built models. The final as-built will be submitted in their native model authoring format, three-dimensional solid object DWG,

three-dimensional NWC, IFC, and 2D DWG/PDF. Turner reserves the right to request additional file formats as the needs of the client or project require.

18. Each Trade is required to update and post any changes originating from RFI's, submittals and bulletins that have changed their respective work. Each Trade making changes shall post to the collaboration site and send out a corresponding notice indicating the changes and reasoning behind the change within 5 business days of receipt of the changes.

19. Each Trade is required to model in a format that a 3rd party individual can highlight and track progress of work by selecting individual items in each trade model. Each trade will make their best effort to organize and categorize the objects within their model files in a useful manner.

20. It is critical that Each Trade use a mandated file naming convention. Turner will provide the file naming convention to all involved contractors at the coordination kick-off meeting. Any files that do not follow the file naming convention will be deleted and removed from the server at any time without any notification.

Coordination Process – All Trades:

1. Turner will provide a BIM Coordinator to manage the BIM Coordination Meetings, Clash Detections and give direction for changes, scope of work per schedules and meeting schedules. Turner's BIM Coordinator will call meetings, as required, which this contractor and vendors must attend. Failure to attend will result in work by the absent contractor on sheets reviewed at meetings being declared improperly coordinated and will require the contractor to relocate work as shown by Turner, or to field run the work not coordinated. No extra compensation will be paid to any contractor for relocating any pipe, conduit, or other material that has been installed without proper coordination between all the contractors and the trades involved. If any improperly coordinated work, or work installed that is not in accordance with the approved coordination composites, necessitates additional work by other contractors, the cost of such additional work shall be assessed to the contractor responsible as determined by Turner. Errors in coordination will be resolved by the contractor at his own expense. Where agreements cannot be reached, Turner will furnish a resolution. The contractor will bear the expense of said resolution.

2. All work on the coordination drawings (including three-dimensional models) shall be performed by an experienced draftsperson in a clear legible manner utilizing standard industry conventions.

3. All trades shall be responsible for providing their coordination drawing files according to the established coordination schedule.

4. It is the responsibility of All Trades to supply a sufficient number of draftsperson so as not to delay the three-dimensional coordination process and shop drawing submittals.

5. Coordination drawings are not to be construed as and not to relieve each contractor from their shop drawing obligations required under the project specifications, and are distinctly separate from the requirements to provide final "As-Built" drawings.

6. All files exchanged by trade contractors will be in a file format that is readable by other trades' CAD system and Navisworks. Being 'readable' means the ability to open a file without any errors (such as proxy, xref resolution, geometry error, etc.) and with objects, layers, and other file properties remaining intact. In addition, all files shall be saved down to the lowest common version.

7. All Trades are responsible for providing three-dimensional solid models (not line, wireframe, or surface models) that represents the actual dimensions of the trade system elements and the equipment that will be installed.

8. Coordination will be expected to start as soon as contracts are awarded or letters of intent are sent (whichever comes first).

9. Each Trade Contractor will model in conformance with the design documents.

10. Turner may require that subcontractors divide their systems models by floors, zones, and/or areas as defined by Turner to better manage the coordination process in a manner that is most conducive to meeting the project's schedule and needs.

11. Each Trade must run the clash detection analysis for their respective trade system against the Architectural/Structural design models to ensure there are no conflicts between the architectural/ structure elements and their system(s). These analysis documents are to be shared with the BIM Coordinator for any major clash issues that cannot be resolved between the trades in working sessions.

12. Each Trade is required to run the clash detection analysis for their respective trade system against the other trade models in sequence to ensure that there are no conflicts between other trade elements and their system(s).

13. Each Trade is required to post to the collaboration site, updated drawings/models at least once a day, and prior to the clash detection analysis run by the BIM Coordinator. (Day and time to be determined). This will continue until the area is completely coordinated.

14. When the coordination models are uploaded, the BIM Coordinator and/or MEP Engineer will download and integrate all trade models into a consolidated model. The clash reports will be run for MEP systems in conflict with other trades and systems. A clash analysis report will be generated by the BIM Coordinator for major coordination issues that cannot be resolved between the active trades. The BIM Coordinator will create a Navisworks .NWD file showing the clash viewpoints. This Clash report & Navisworks .NWD file will be posted to the collaboration site by the BIM Coordinator and a corresponding notice sent by the BIM Coordinator to all parties involved that the report is ready.

15. Each Trade is required to review the clash detection report generated by the BIM Coordinator before the coordination meeting, and arrive at the meeting prepared to address the unresolved clashes in a constructive manner.

16. Each Trade is required to collaborate with each other trade through email, telephone, and in person to resolve basic clashes with the BIM Manager outside of the BIM Coordination Meetings with the BIM Coordinator. It is expected that these coordination meetings between trades be held to address difficult areas that require more effort between the multiple trades themselves. At these meetings, the resolution will be collectively agreed upon, and a trade will be identified as having to "move". This trade will adjust the respective model and repost it for the following coordination meeting. All trades are responsible to update and post the changes agreed upon at the meeting within 2 business days, or at Turner's discretion based on schedule requirements.

17. Each Trade is to submit the required number of copies of their respective, coordinated systems in a two-dimensional format as required by their contract, for approval through the regular submittal process. This is required for each floor as well as each riser. In addition to the development of three-dimensional coordination models, all trade subcontractors are responsible for producing a traditional two-dimensional coordination drawing after cleaning up resolved all clashes and collisions. In the preparation of the final composite two-dimensional coordination drawings, large scale details as well as cross and longitudinal sections developed at Coordination Meetings shall be made by the subcontractor as required to fully delineate all conditions. The final Coordination CAD drawing file will be circulated through all trades in preparation for a BIM sign-off meeting. This electronic coordination drawing files shall include all coordinated drawing information, fully dimensions (especially elevation dimensions), texts, and tags, etc. The fully coordinated overlay drawing will then be signed off and dated by each contractor at the sign-off meeting.

Change Management – All Trades:

1. Each Trade Contractor is responsible for incorporating the following changes into the model and drawings on a regular basis, but in no case later than 5 business days from the date of issuance. If changes are going to take longer than 5 business days then Each Trade Contractor is required to get an extension in writing from Turner within 5 business days from the date of issuance:
    a. RFIs, Bulletins and Owner approved changes.

b. Changes in the sequences of work
c. Field modifications
d. Shop drawing review comments or design modifications and field changes made by Trade Contractors
e. Changes requested by the Construction Manager
f. Clash Resolution

2. The process for quantifying and correcting clashes caused by a design change to a signed off and in-progress area is as follows:
    a. Trade(s) that have work directly affected by the bulletin documents will take the lead in drafting the revised three-dimensional layout, minimizing the clashes w/ other trades as much as possible. Revised layouts are to be drawn in an identifiable layer, labeled to match the respective bulletin.
    b. Once the work is drafted by the affected trade(s), these trades will work to coordinate clash resolutions amongst themselves while keeping the BIM Coordinator informed of their efforts.
    c. A clash report will be prepared by the BIM Coordinator w/ all latest posts when it is determined that clashes remain which could not be resolved by the trades themselves.
    d. A coordination meeting will be held if required to resolve remaining clashes. Actions will be assigned to the appropriate trades the fixes will be made in a timely manner.
    e. Once all new clashes resulting from the change are resolved, a sign-off meeting will be held with a new fully-coordinated overlay drawing to document the resolution of the clashes.

3. All revised three-dimensional model or two-dimensional drawing submittals shall have a written narrative to define changes from previous submittals. Typical drafting techniques such as 'clouds' or 'bubbles' are acceptable means of tracking changes on the 2D drawings. [Layer control shall be used to define changes in the three-dimensional model. All revisions shall be shown in both 2D and three-dimensional formats.]

Individual Subcontractor Roles and Responsibilities:

1. The **TC-013 Site Plumbing Contractor** will generate and provide, in a timely manner, a three-dimensional model of their underground Domestic Water, Fire Protection, Steam, and Chilled Water scope of work in addition to their contractually required two-dimensional documentation. This contractor shall also generate and provide, in a timely manner, a three-dimensional model of the TC-009 Site Electric contractor's underground installations, as well as the TC-014 Excavation contractor's Storm and Sanitary installations. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but is not limited to, concrete slabs, foundation and other structural walls, caissons and footings, grade beams, concrete columns, concrete beams, ramps, concrete stairs, concrete equipment pads and any other concrete scope items necessary for the successful coordination of other building trades. Any structural entities modeled shall have a level of intelligence associated with them including, at a minimum, the type, material, size, etc. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the concrete system in its entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, and 2D DWG/PDF.

2. The **TC-016 Structural Steel Contractor** will generate and provide, in a timely manner, a three-dimensional model of their structural scope of work in addition to their contractually required 2D documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but is not limited to, major structural members such as primary steel members (columns, beams, joists and trusses), secondary and miscellaneous steel connections including equipment support, steel stairs, kickers, bolts, clip angles, gusset plates, miscellaneous metals, railings, bracing, knife plates, etc. necessary for the successful coordination of other building trades. The fabrication level detailed model shall also include structural stair components, façade support angles, lintels, bracing, decks (metal, wood

and concrete, including penetrations and openings). Any structural entities modeled shall have a level of intelligence associated with them including, at a minimum, the type, material, size, etc. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the structural steel system in its entirety. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, and 2D DWG, and 2D PDF.

3. The **TC-020 Cast In Place Shafts and Decks Contractor** will generate and provide, in a timely manner, a three-dimensional model of their concrete scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but is not limited to, concrete slabs, foundation and other structural walls, caissons and footings, grade beams, concrete columns, concrete beams, ramps, concrete stairs, concrete equipment pads and any other concrete scope items necessary for the successful coordination of other building trades. Any structural entities modeled shall have a level of intelligence associated with them including, at a minimum, the type, material, size, etc. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the concrete system in its entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, and 2D DWG/PDF.

4. The **TC-001 Architectural Precast Concrete Contractor** will generate and provide, in a timely manner, a three-dimensional model of their concrete scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but is not limited to, precast concrete columns, beams, spandrel beams, tees, shear walls, miscellaneous walls, precast concrete stairs, precast concrete slabs, foundation and other structural and any other precast concrete scope items necessary for the successful coordination of other building trades. Any structural entities modeled shall have a level of intelligence associated with them including, at a minimum, the type, material, size, etc. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the concrete system in its entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, and 2D DWG/PDF.

5. The **TC-002 Curtainwall Contractor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but is not limited to, major Curtainwall elements such as frames, mullions, glass, windows, curtain walls, storefront systems, skylights, borrowed lites and windows leaves, metal panels, support framing, connections, embeds, etc. necessary for the successful coordination of other building trades. Curtainwall to be modeled like it is to be built, i.e. separate components/panelized for the purpose of time lining. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the curtainwall system in its entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, and 2D DWG, and 2D PDF.

6. The **Drywall Contractor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but is not limited to, major Drywall elements such as head-of-wall conditions, king studs at door and interior glazing, hard lid ceilings and framing, acoustic ceiling framing systems, won-door framing and angle supports, soffit framing and lateral supports, exterior wall framing and supports, required bracing for metal stud systems, vertical and horizontal shafts, etc. necessary for the successful coordination of other building trades.

Exterior walls not included in Structural (including all wall layers, penetrations and openings. Walls to be modeled like they are built: pre-cast walls to be modeled as separate components and masonry walls to be split from floor to floor for the purpose of time lining. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the metal stud and drywall systems in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF.

7. The **Laboratory Equipment Contractor/Vendor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but not limited to, casework systems, overhead service carriers, snorkels, structural elements (hangers, threaded rods, misc. attachment elements), fume hoods and bio-safety cabinets, wood laboratory casework. This contractor must play an active role in all the coordination meetings. Provide the structural elements early to allow coordination by other trades around the necessary hangers. All actual points of connection for other trades must be modeled and coordinated; fixture mounting openings must be designated and assigned for each service, as well as umbilical connections shown in the BIM. The model shall also include equipment pads, inertia pads, and access doors, and, under a separate layer, any items to be included in concrete pours (sleeves, boxouts, etc.) The model shall identify under separate drawing layer accessibility requirements for above listed items for code and maintenance purposes. This Contractor to work closely with the Ceilings Contractor, HVAC Contractor. Plumbing Contractor, Electrical Contractor and any other contractor to ensure overhead laboratory equipment specified is well coordinated with the work of others. Provide all access and services areas in greyscale as a solid object on a separate layer for coordination purposes. Final Shop drawings and approval of this contractor's work shall not precede modeling and collaboration with the BIM team. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of laboratory equipment in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF.

8. The **HVAC Contractor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but not limited to, HVAC piping, chilled water and condenser systems, process chilled water system, steam and condensate systems, heating hot water systems, fuel oil system including all associated piping, all equipment installed in the HVAC Scope of work, AHU's, Built Up AHU's., pumps, tanks, valves, controls, heat exchangers, all valves (including valve stems and handles), gauges & control valves, insulation, hangers & seismic restraints, high & low point drains, motor starters, disconnects, VFD's, boilers, cooling towers, chillers, heaters, etc. The HVAC Contractor shall also include in the three-dimensional model all concrete equipment pads, inertia bases, and access doors. The HVAC Contractor shall identify under separate drawing layer access doors and accessibility requirements for above listed items for code and maintenance purposes. All items modeled should have a level of intelligence associated with them including, at a minimum, the material type, size, insulation, make and model number, equipment/valve tag, fire/penetration seals, etc. The mechanical rooms shall have a level of intelligence associated with them that include at a minimum material type, size, insulation, manufacturer, product numbers, serial numbers, maintenance schedules, operation and maintenance data, etc. Pipes larger than 3/4" outside diameter to be modeled. Turner and other contractors will use this rule for pipes pertaining to HVAC and mechanical systems and will supersede any other rule listed within the contract documents if they contradict with this statement. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the HVAC system in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF.

9. The **Sheetmetal Contractor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but not limited to, supply, return, exhaust and makeup air systems, chemical treatment systems, snow melting systems, all control/power panels, smoke dampers, sensors, valve and damper operators/actuators, duct work, equipment installed in the HVAC Scope of work, Fans, AHU's, Built Up AHU's., air terminal boxes, sound attenuators, smoke & fire dampers, insulation, hangers & seismic restraints, diffusers, registers, louvers, grilles, motor starters, disconnects, VFD's, plenums, etc. The Sheetmetal Contractor shall also include in the three-dimensional model all concrete equipment pads, inertia bases, and access doors for their Scope of Work. The HVAC Contractor shall identify under separate drawing layer access doors and accessibility requirements for above listed items for code and maintenance purposes. All division 23 and 25 systems will be modeled. All items modeled should have a level of intelligence associated with them including, at a minimum, the material type, size, insulation, make and model number, equipment/valve tag, fire/penetration seals, etc. The mechanical rooms shall have a level of intelligence associated with them that include at a minimum material type, size, insulation, manufacturer, product numbers, serial numbers, maintenance schedules, operation and maintenance data, etc. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the sheetmetal systems in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF. The sheetmetal Contractor is to compile and plot the required number of color copies of the two-dimensional, multi-trade, coordinated drawings required by the contract documents for approval through the regular submittal process, for each floor. This is required for each floor as well as each riser.

10. The **Plumbing Contractor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but not limited to, all piping systems, and equipment installed, underground systems, domestic cold water and hot water systems, storm/roof leaders, waste and vent systems, pumps, tanks, water heaters, makeup water systems, all control/power panels associated with the scope of work listed in this subparagraph, in wall carriers, in-wall plumbing equipment., all valves, gauges & control valves, insulation on piping, hangers & seismic restraints, clean-outs, drains, trap primers, rainwater/stormwater systems, natural gas, medical gas, medical vac, sewage ejectors, etc. The Plumbing Contractor shall also include in the three-dimensional model all inertia bases, and access doors for their work. The Plumbing Contractor shall identify under separate drawing layer access doors and accessibility requirements for above listed items for code and maintenance purposes. All items modeled should have a level of intelligence associated with them including, at a minimum, the material type, size, insulation, make and model number, equipment/valve tag, fire/penetration seals, etc. All piping, power and controls associated with the mechanical systems will be modeled. Equipment will be modeled to its overall height, width and depth. Pipes will be modeled to the outside diameter of the pipe or pipe insulation (whichever is greater). All valves, cleanouts and accessories, pipe hangers, hanger assemblies and dunnage will be modeled. The mechanical rooms shall have a level of intelligence associated with them that include at a minimum material type, size, insulation, manufacturer, product numbers, serial numbers, maintenance schedules, operation and maintenance data, etc. Pipes larger than 3/4" outside diameter to be modeled.. Turner and other contractors will use this rule for pipes pertaining to plumbing and fire protection systems and will supersede any other rule listed within the contract documents if they contradict with this statement. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the plumbing systems in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF.

11. The **Fire Protection System Contractor** will generate and provide, in a timely manner, a three-

dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but not limited to, all risers, main and branch piping, (including heads), pumps, controllers, ATS, and equipment installed in the Fire Suppression System Scope of work, pre-action systems, dry system, main fire suppression systems, hangers & seismic bracing, valve assemblies, drain valves, fire department valves, drains, control panels, fire extinguishers, fire department connections and supports, test headers, roof hydrants, etc. The Fire Suppression System Contractor shall also include in the three-dimensional model Concrete Equipment pads, inertia pads, and Access Doors. The Sprinkler Contractor shall identify under separate drawing layer Access doors and Accessibility requirements for above listed items for code and maintenance purposes. All items modeled should have a level of intelligence associated with them including, at a minimum, the material type, size, insulation, make and model number, equipment/valve tag, fire/penetration seals, etc. The mechanical rooms shall have a level of intelligence associated with them that include at a minimum material type, size, insulation, manufacturer, product numbers, serial numbers, maintenance schedules, operation and maintenance data, etc. Pipes larger than 3/4" outside diameter to be modeled. Turner and other contractors will use this rule for pipes pertaining to plumbing and fire protection systems and will supersede any other rule listed within the contract documents if they contradict with this statement. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the fire protection systems in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF.

12. The **Electrical Contractor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include, but not limited to, underground systems, all conduit systems, junction boxes, equipment installed in the Electrical Scope of work, individual conduits 1 1/2" and over, racks carrying more than 4 conduits 1" and smaller, panels, transformers, switch/paralleling gear, ATS's, generators, cable tray, data racks, starters, VFD's, hangers & seismic bracing, etc. for normal, emergency and isolated power systems. The Electrical Contractor shall also include in the three-dimensional model inertia pads, Light Fixtures, primary distribution (Main Electrical Rooms), secondary distribution to the panel boards (floor level M/E Rooms), junction boxes, lighting protection, Exit Signs, Fire Alarm, Speakers, AV Equipment, Recessed Electrical devices, and Access Doors. The Electrical Contractor shall identify under separate drawing layer Access doors and Accessibility requirements for above listed items for code and maintenance purposes. All panel boards modeled should have a level of intelligence associated with them that accurately identifies at a minimum the panel schedule and equipment tag numbers. All items located within electrical/mechanical rooms and closets shall have a level of intelligence associated with them that includes, at a minimum, material type, size, manufacturer, product numbers, serial numbers, maintenance schedules, operation and maintenance data, equipment tags, fire penetration/seals, etc. 1" and larger in outside diameter conduits to be modeled. Turner and other contractors will use this rule for conduits and will supersede any other rule listed within the contract documents if they contradict with this statement. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the electrical systems in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF.

13. The **Technology and Low Voltage Contractor** will generate and provide, in a timely manner, a three-dimensional model of their scope of work in addition to their contractually required two-dimensional documentation. **The three-dimensional model will represent an "as-fabricated" fully detailed level of information.** The fabrication level detailed model shall include all division 27 and 28 systems, but not limited to, all conduit systems, equipment installed in the Low Voltage Scope of work, VFD's, hangers & seismic bracing, individual Conduits 1 1/2" and over, racks carrying more than 4 conduits 1" and smaller, panels, transformers, controls, cable tray, data racks, starters,

VFD's , hangers & seismic bracing, etc. , main distribution equipment, hangers & seismic bracing, antennas access points, antenna enclosures, sleeves, risers, security cameras, access control, emergency communication systems, fire stop assemblies, etc. The Low Voltage Contractor shall identify under separate drawing layer Access doors and Accessibility requirements for above listed items for code and maintenance purposes. All items located within technology rooms and closets shall have a level of intelligence associated with them that includes, at a minimum, material type, size, manufacturer, product numbers, serial numbers, maintenance schedules, operation and maintenance data, equipment tags, fire penetration/seals, etc. All cable trays shall be modeled. All fire stop assemblies shall be modeled. All wireless antennas/Aps, and antenna enclosures shall be modeled. All security cameras shall be modeled. All wall-mounted monitors shall be modeled. 1" and larger in outside diameter conduits to be modeled. Turner and other contractors will use this rule for conduits and will supersede any other rule listed within the contract documents if they contradict with this statement. These models shall be updated and maintained to reflect changes in the work as a result of coordination or design changes and shall be delivered at the end of the project as an as-built record model of the technology and low voltage systems in their entirety. The intent of this model is to show the systems in a true representation of the actual condition at construction completion. The final as-built will be submitted in their native Model authoring format, 3D solid object DWG, 3D NWC, IFC, 2D DWG, and 2D PDF.

14. Each Equipment Vendor/Contractor, if not specifically indicated above, shall provide intelligent models of their Equipment. Provide the following items, including but not limited to:
    a. Models shall be dimensionally accurate
    b. All supply and return connections shall be indicated.
    c. Include connections to all systems
    d. All Skid, support structure, stands shall be Shown in exact configuration
    e. Housekeeping pad layout shall be accurately modeled
    f. Access Doors or panels
    g. Tanks
    h. Valves and valve clearances
    i. Gauges
    j. Power connections, and all raceway
    k. Flanges, blanks, inspection points
    l. Ladders, stairs and guardrails
    m. Exhaust or duct connections
    n. Power and/or control panels
    o. Pumps, filters
    p. Air/liquid separators
    q. Drain locations and piping
    r. Vents and vent lines
    s. Equipment enclosures
    t. No-fly-zones for equipment maintenance/ access (ie tube pull, coil pull, etc…)
    u. No-fly-zones for personnel access
    v. No-fly-zones for safety or code requirements
    w. All vibration isolation

ATTACHMENT "F"
Lean Construction
ATTACHMENT TO THE SUBCONTRACT AGREEMENT BETWEEN TURNER AND SUBCONTRACTOR

Lean focuses on maximizing customer value while eliminating waste through continuous improvement and respect for people. Turner expects that all subcontractors and suppliers will focus on continuous improvement of the construction process. Turner, subcontractors, and suppliers shall in good faith collaboratively participate in learning, planning, control processes, and strategies to achieve the goal of greatest productivity for the project; maximizing the value delivered to the customer. Maximizing value requires elimination of waste in all processes and implementing improvements at every opportunity. Subcontractors and suppliers will assign on-site leadership whose behaviors support collaboration with the project team.

Turner may utilize some or all of the approaches and tools listed below to reduce waste. Subcontractors and suppliers will coordinate with Turner in implementing these activities. The project team may research, develop, and implement other approaches and tools for the betterment of the project.

5S Methodology

5S is a system to optimize productivity and safety through maintaining an orderly workplace and using visual cues to achieve more consistent operational results.

1. **Sort** – Eliminate all unnecessary tools, parts, materials. Keep only essential items, eliminate what is not required, prioritize things per schedules/requirements and keeping them in easily accessible places.
2. **Straighten (Set in Order for Flow)** – Arrange the work, workers, equipment, parts, and instructions in such a way that work flows free of waste through value added tasks. Identify locations where items will be used and place those items close. Organize and communicate the location for items needed in the area.
3. **Shine (Systematic Cleaning)** – Clean the workspace, jobsite, and all equipment, and keep it clean, tidy and organized. At the end of each shift, clean the work area and be sure everything is restored to its place. Remove crates, pallets, dunnage, packing materials, etc., immediately – preferably before entering the building footprint. Create elevated workstations for ergonomic working and more efficient cleanup. Employ a 'Nothing Hits the Ground' mentality to keep the project clean and free of waste.
4. **Standardize –** Develop cleaning schedules and cleanliness standards to maintain the first 3S's. Employ visual management to reveal abnormalities and variations.
5. **Sustain –** Ensure disciplined adherence to rules and procedures to prevent backsliding.

Last Planner® System: Production System Planning

Subcontractors shall participate in weekly coordination meetings and shall provide updated weekly work plans on a weekly basis throughout the scheduled installation period. All subcontractors pledge to cooperate with each other and coordinate their work for the overall good of the project. Turner reserves the right to adjust and update the overall project schedule based on project conditions, actual performance of the work, and detailed schedule information obtained from subcontractors. This update is intended to be for the betterment of the project as a whole, not for advantage of the parts. At Turner's discretion, it may utilize The Last Planner® System (LPS) for developing additional coordination details over the life of the project—this process is part of the Bid Packages as described herein.

Overview: LPS provides principles to improve coordination and create flow between contract milestone dates in the contract (or master) schedule. When production planning becomes reliable and people fulfill their commitments, workflow, performance, and productivity are improved. Turner may require Subcontractor

Foremen, Superintendents and Project Manager to attend orientation and training sessions to prepare for the implementation of LPS. When utilizing LPS, project teams will develop a specific workflow for its completion, detailing requirements for plan submissions and meeting schedule.

Application: LPS differs from traditional construction methods because it decentralizes hierarchical decision-making. With LPS, those closest to the work (On Site Foremen/Field Supervisors—the "Last Planners") must have the authority to make decisions and plan the work.

The project will utilize six key procedures in the implementation of LPS. These steps require the input of the onsite Foremen/Field Supervisors for the subcontractors performing the work. As such, these leaders are required to participate in all the steps that are the LPS and be able to commit to perform work they know can be made ready for their crews and to collaborate with the team to ensure this work can be started and completed without interruption. The Last Planner for your crew must be involved before you mobilize to the project in order to attend these Phase Production Planning meetings.

Pull Planning – This represents the team's specific plan for how they intend to reach the milestone dates in the contract schedule. Pull plans must meet the contract schedule requirements, and teams must work together to achieve these project milestones. Turner requires team members to make and keep commitments based on their confidence that prerequisite work, design information, materials, labor, and equipment will be ready so they can start and complete installations meeting their commitments to reach milestones in the contract schedule.

Production Planning – This is simply the future weeks (typically six weeks) of the pull plans, updated with actual information weekly. Constraints preventing these activities in the next six weeks are identified and added to the constraint log. The Production Plan is prepared by Turner and distributed to the project team based upon the information collected in the pull-planning sessions and by actual weekly production results.

Constraint Log – The constraint log is maintained by Turner and used to aid the team in managing the Production Plan. A constraint is any information, material, equipment or resource needed to start and/or complete a specific task on the project, except prerequisite work. The constraint log is used to visualize and communicate information regarding constraints as well as to track and record commitments from individuals to remove the constraints.

Weekly Work Plans (WWP) –The WWP is a detailed day-by-day, one week production plan created by each trade foremen to plan the next week's work, based on the project's production plan. WWP's are due weekly at a time established by Turner for the work to be performed the following week. Turner will establish the format for WWP's and the method of delivery, typically in Microsoft Excel.

Percent Plan Complete (PPC) – PPC is a calculation of the team's planning reliability. This is done to identify trends preventing the reliability of commitments. The PPC represents the percentage of tasks completed as planned compared to the total number of tasks planned within the week.

Daily Production Huddle – Subcontractor foremen and Turner will meet for daily discussion with their peers from other trades and Turner field staff to assess the day's performance and discuss any new issues discovered. Turner's project superintendent will identify the time and place of the daily huddle.

SK575.32
262.5' MAX. HR.
Single TROLLEY
2 PART CAPACITY

RADIUS (ft)	CAPACITY (lbs)
9.8	35,274
to	35,274
86.1	35,274
98.4	30,203
114.8	25,353
131.2	21,605
147.6	18,519
164.0	16,314
180.4	14,550
196.9	12,787
213.3	11,464
229.7	10,362
246.1	9,480
262.5	8,598

MD485B.20
246.1' MAX. HR.
1C/2C TROLLEY
2 PART CAPACITY

RADIUS (ft)	CAPACITY (lbs)
12.3	22,046
to	22,046
119.1	22,046
131.2	19,621
147.6	16,975
164.0	14,991
180.4	13,228
196.9	11,905
213.3	10,803
229.7	9,700
246.1	8,818

Note:
1. The plan view was taken from a drawing prepared by JRA Architects and titled "Overall First & Second Floor Plan" dated October 20, 2023.
2. It is the contractor's responsibility to verify the location of the crane(s) and confirm the crane components do not conflict with any part of the existing or proposed structure at all elevations whether shown or not represented on this drawing prior to installing the foundation.

SK-001.0

FOR APPROVAL

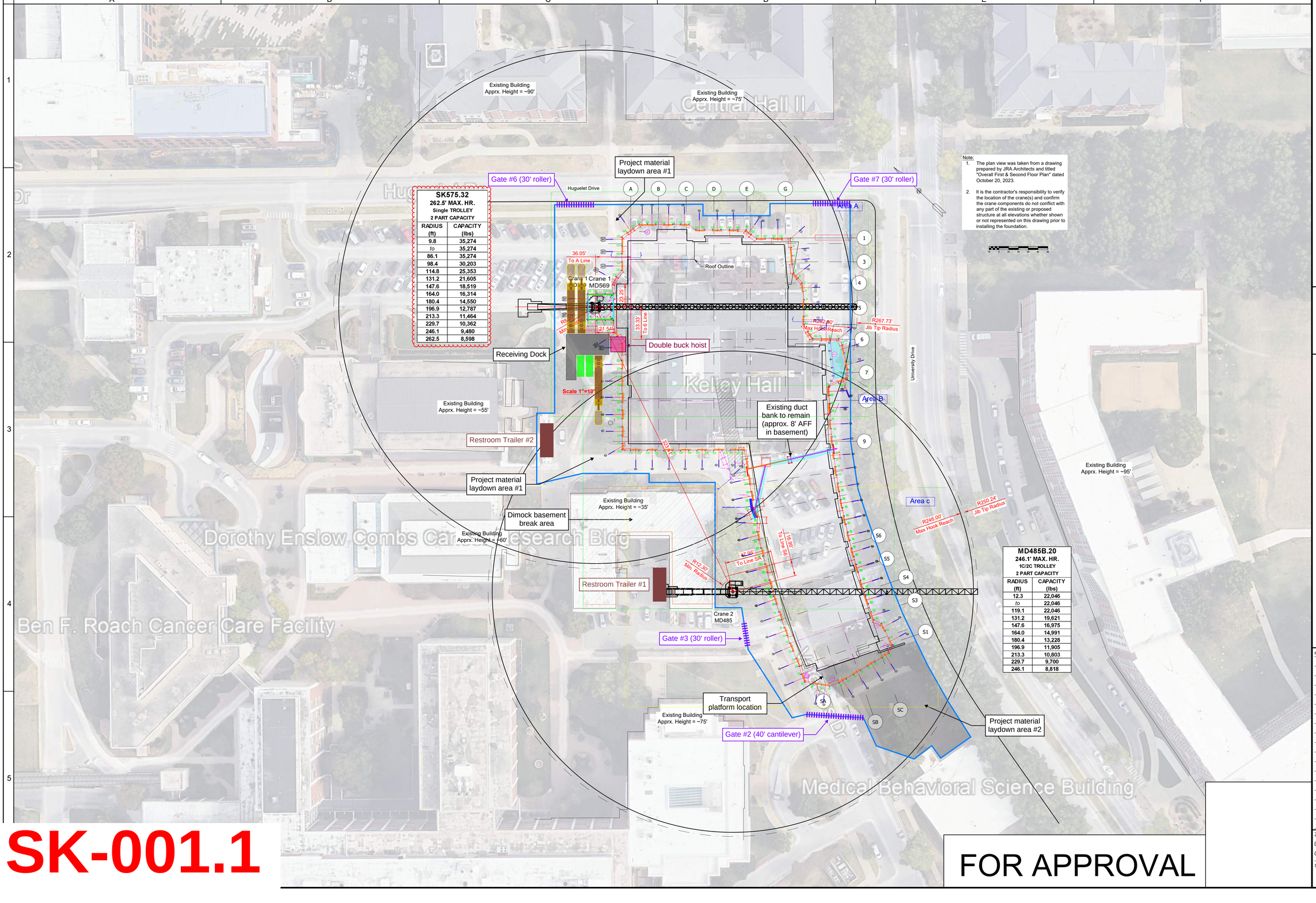
UK HEB
LEXINGTON, KY
OVERALL SITE PLAN

TURNER CONSTRUCTION

REV	NOTE	DATE

Job #: 24-0006
Drw by: KWH
Chk by: RWN
Sheet: X-4.1

plot size: ANSI D (22.00 x 34.00 Inches)
plot scale: 1:1
plot date: 5/3/24
filename: X-4.1 OVERALL SITE PLAN.DWG



Note:
1. The plan view was taken from a drawing prepared by JRA Architects and titled "Overall First & Second Floor Plan" dated October 20, 2023.
2. It is the contractor's responsibility to verify the location of the crane(s) and confirm the crane components do not conflict with any part of the existing or proposed structure at all elevations whether shown or not represented on this drawing prior to installing the foundation.

SK-001.1

FOR APPROVAL

Maxim Crane Works, L.P.

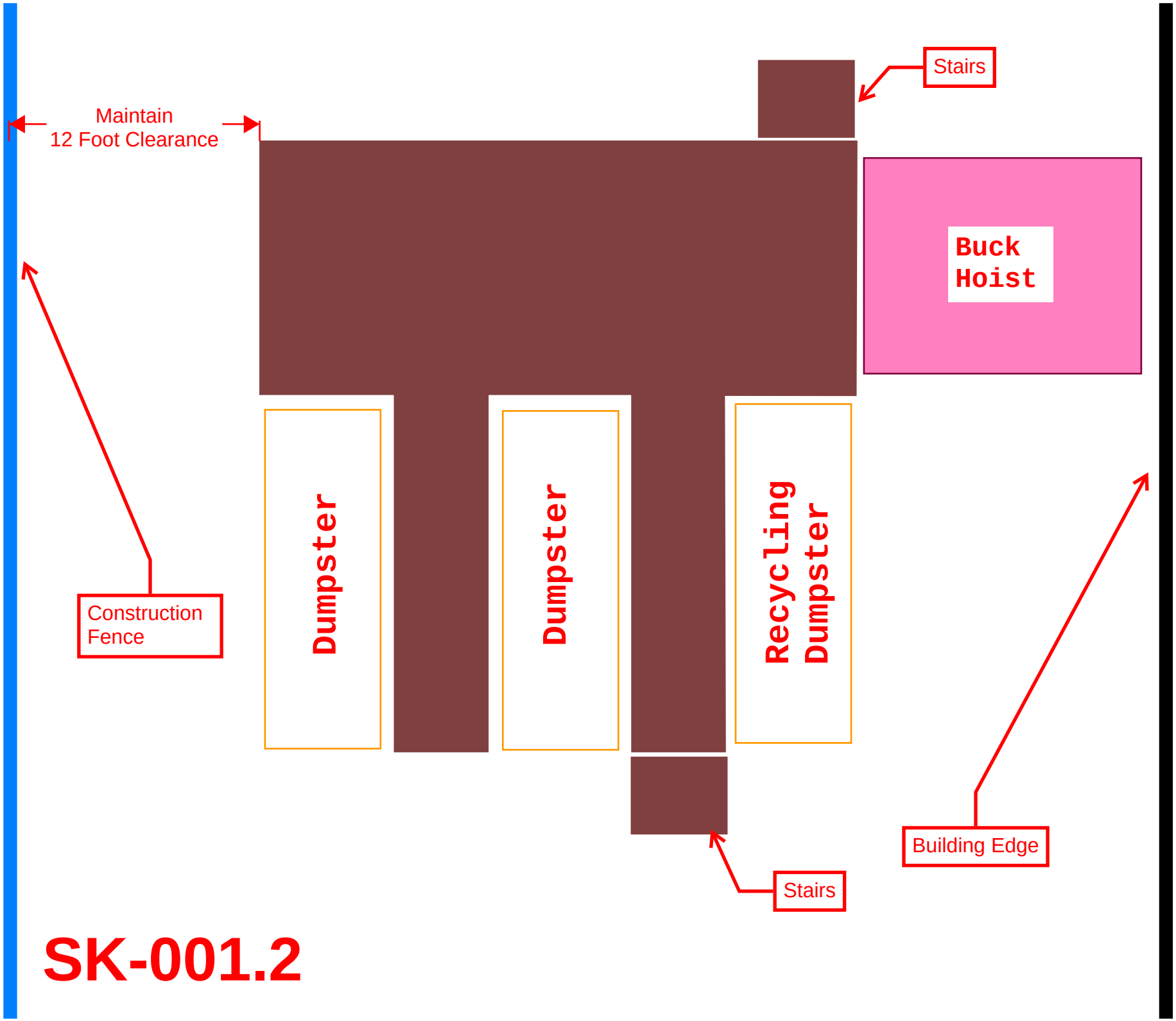
UK HEB
LEXINGTON, KY
OVERALL SITE PLAN

TURNER CONSTRUCTION

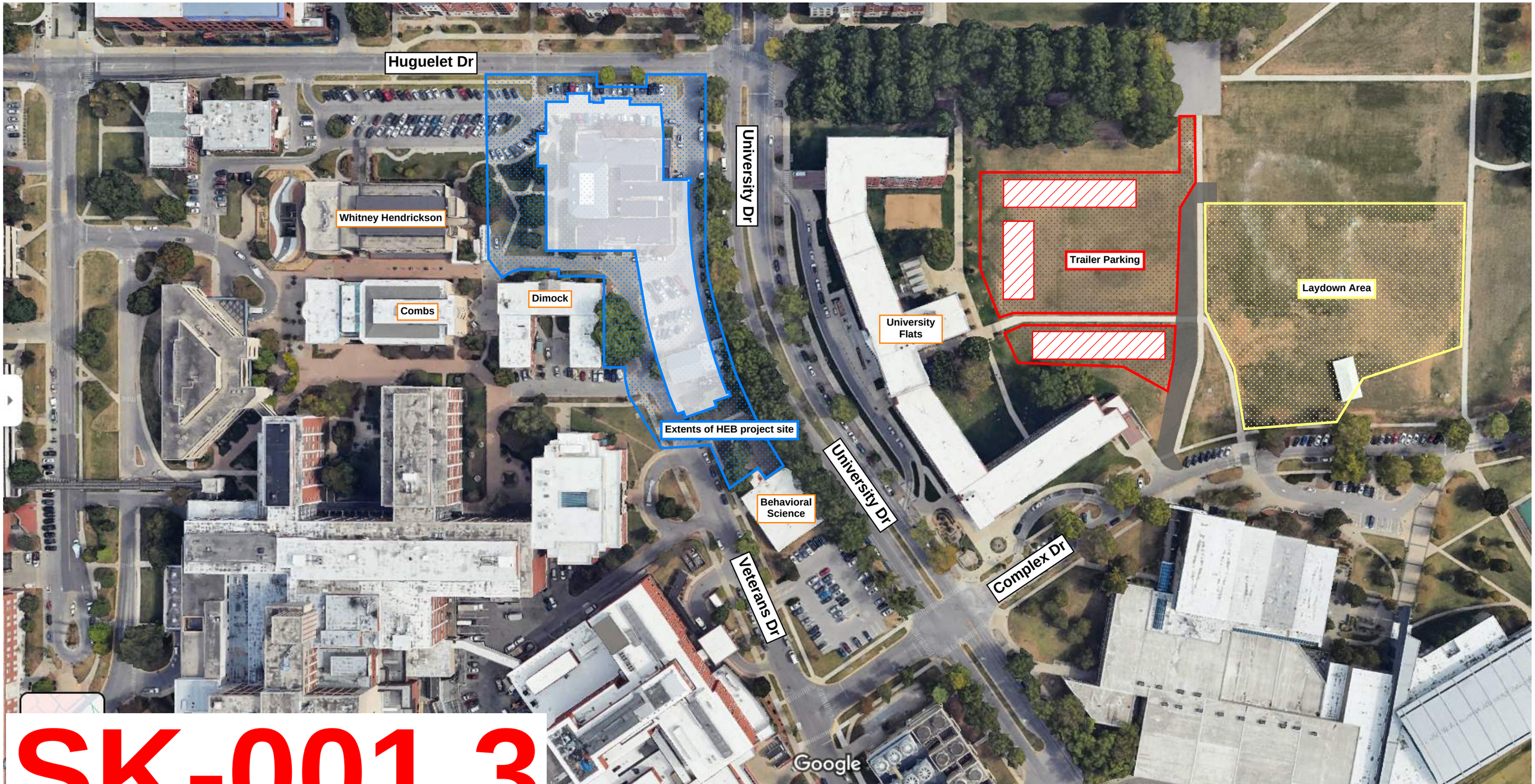
REV	NOTE	DATE

Job #: 24-0006
Drw by: KWH
Chk by: RWN
Sheet: X-4.1

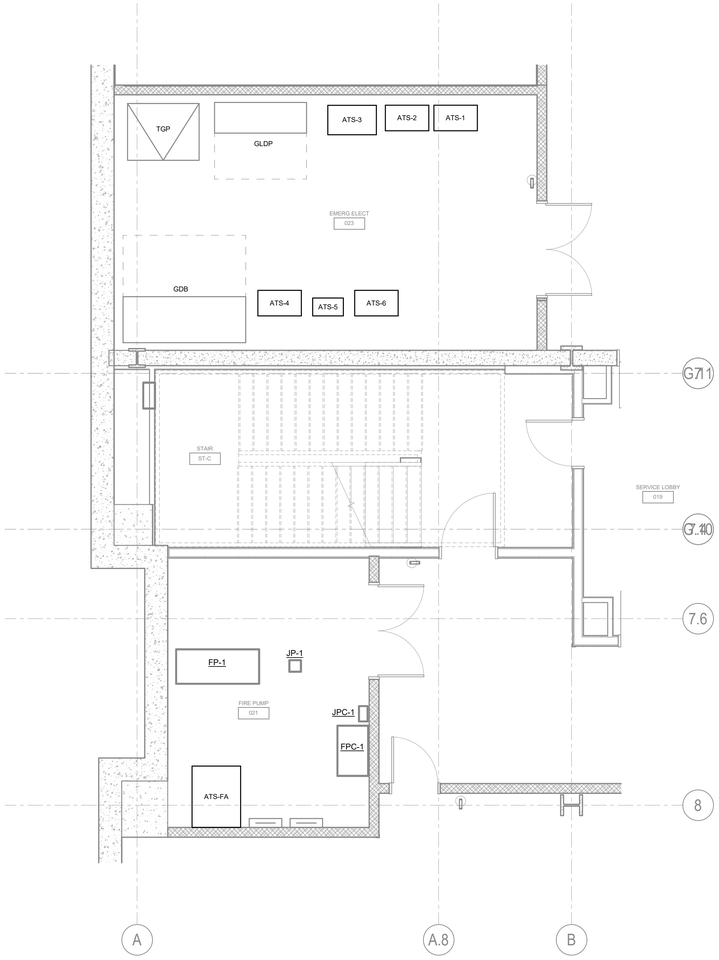
plot size: ANSI D (22.00 x 34.00 Inches)
plot scale: 1:1
plot date: 5/3/24
filename: X-4.1 OVERALL SITE PLAN.DWG


Stairs
Maintain
12 Foot Clearance
Buck
Hoist
Construction
Fence
Dumpster
Dumpster
Recycling
Dumpster
Building Edge
Stairs

SK-001.2


Huguelet Dr
University Dr
Whitney Hendrickson
Combs
Dimock
Trailer Parking
Laydown Area
University Flats
Extents of HEB project site
Behavioral Science
University Dr
Veterans Dr
Complex Dr
Google

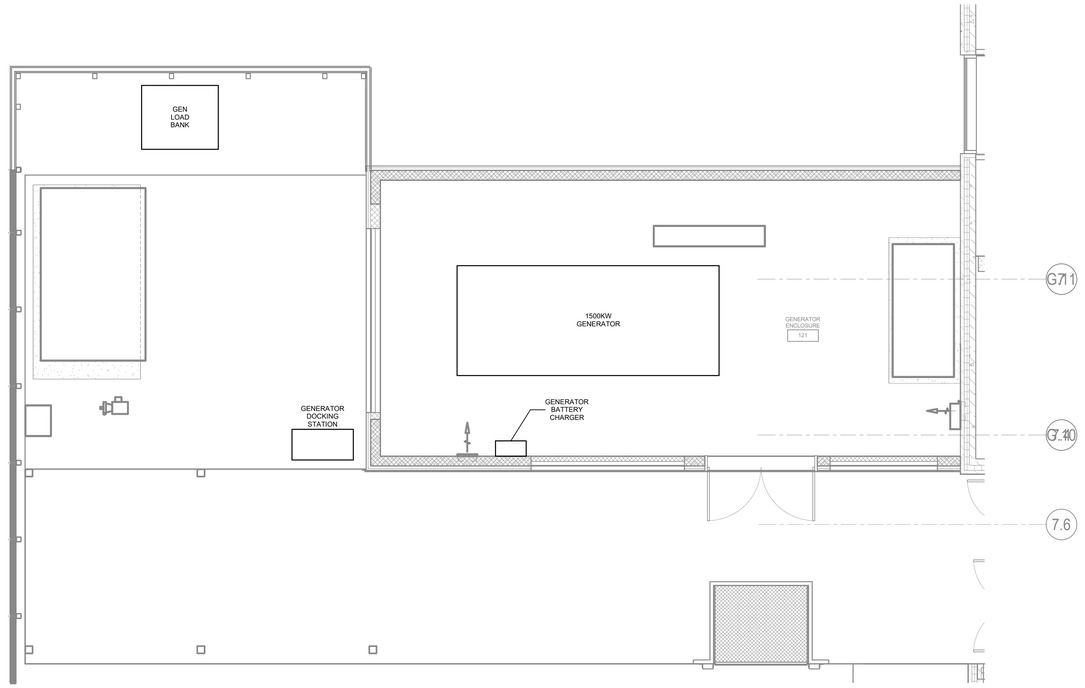
SK-001.3



1 ENLARGED BASEMENT FLOOR PLAN

SCALE: 1/4" = 1'-0"

0 1' 2' 4' 8' 12' 16'



FIRST FLOOR - ENLARGED POWER - GENERATOR 121 - BP4

2 SCALE: 1/4" = 1'-0"

0 1' 2' 4' 8' 12' 16'

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

COMMONWEALTH OF KENTUCKY
ALAN R. KELLWOOD
20166
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

ELECTRICAL

PROJECT	202170/XKSM21
DATE	07/26/2024

REVISIONS

No.	Description	Date

ENLARGED ELECTRICAL POWER PLANS - BP4

E-406E

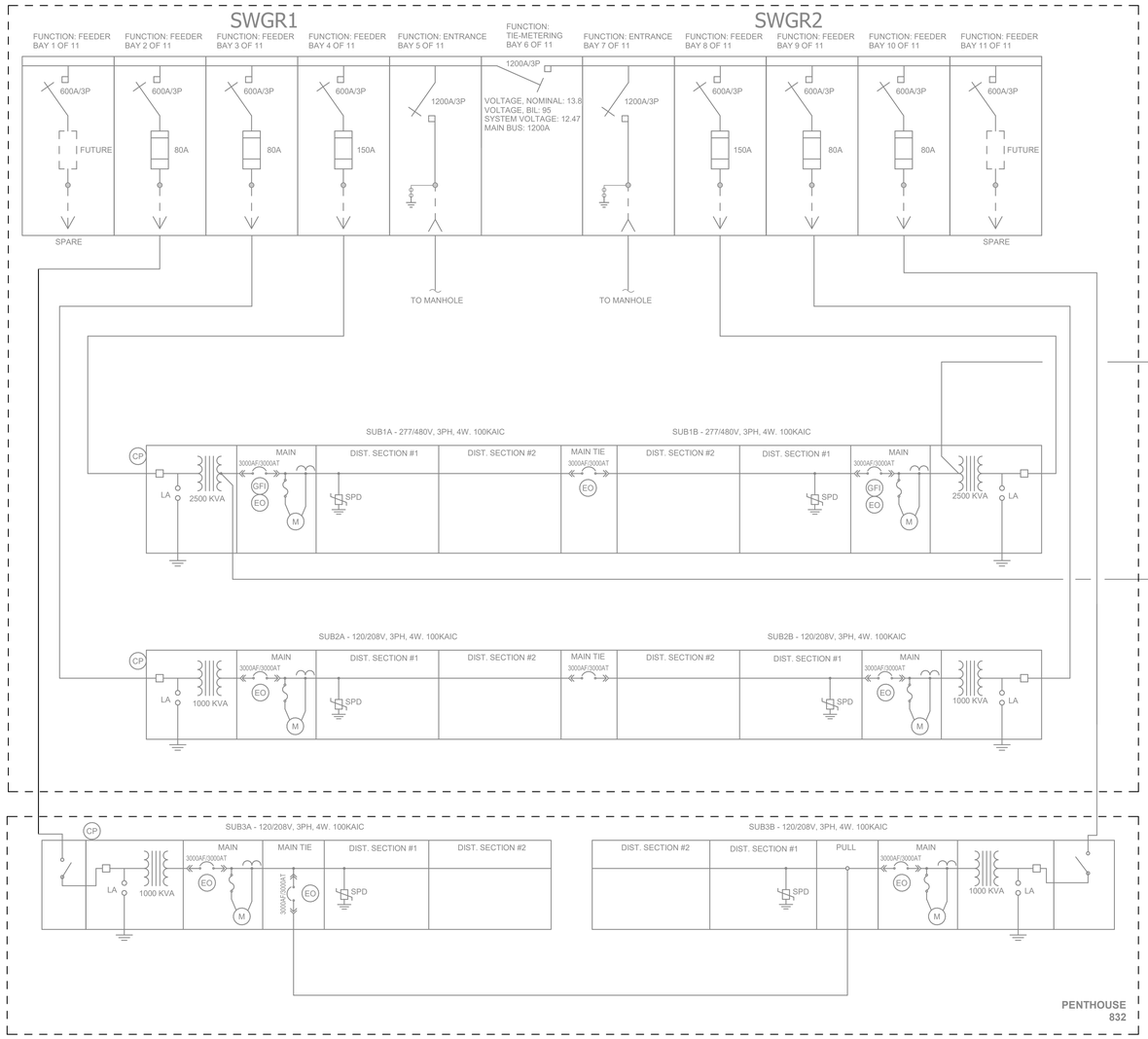
ONE-LINE FEEDER SCHEDULE (COPPER)

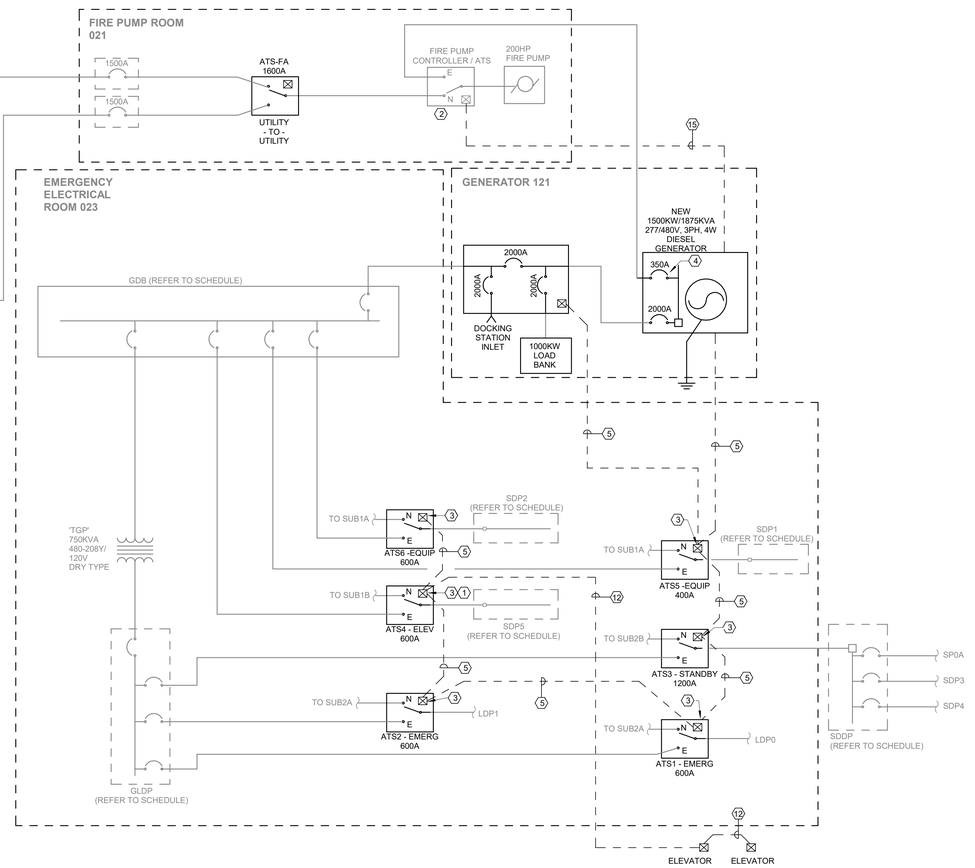
NOTES:
• TAGS WITH SUFFIX "-3W" ARE THREE-WIRE, NO NEUTRAL.

TAG	OCPD SETTING	WIRE SIZE	EQUIP. GROUND SIZE	CONDUIT SIZE
-	-	-	-	-
20	20/3 (4W)	(4) #12	(1) #12	3/4"
30	30/3 (4W)	(4) #10	(1) #10	3/4"
50	40/3 OR 50/3 (4W)	(4) #8	(1) #10	1"
60	60/3 (4W)	(4) #6	(1) #10	1"
80	70/3 OR 80/3 (4W)	(4) #4	(1) #8	1-1/4"
100	90/3 OR 100/3 (4W)	(4) #3	(1) #8	1-1/4"
110	110/3 (4W)	(4) #2	(1) #6	1-1/2"
125	125/3 (4W)	(4) #1	(1) #6	1-1/2"
150	150/3 (4W)	(4) #1/0	(1) #6	2"
175	175/3 (4W)	(4) #2/0	(1) #6	2"
200	200/3 (4W)	(4) #3/0	(1) #6	2"
225	225/3 (4W)	(4) #4/0	(1) #4	2-1/2"
250	250/3 (4W)	(4) #250 KCMIL	(1) #4	3"
300	300/3 (4W)	(4) #350 KCMIL	(1) #4	3"
350	350/3 (4W)	(4) #500 KCMIL	(1) #3	3-1/2"
400	400/3 (4W)	(4) #500 KCMIL	(1) #3	3-1/2"
500	500/3 (4W)	2 RUNS OF (4) - #250 KCMIL/PHASE	(1) #2	3"
600	600/3 (4W)	2 RUNS OF (4) - #350 KCMIL/PHASE	(1) #1	3"
700	700/3 (4W)	2 RUNS OF (4) - #500 KCMIL/PHASE	(1) #1/0	3-1/2"
800	800/3 (4W)	2 RUNS OF (4) - #500 KCMIL/PHASE	(1) #1/0	3-1/2"
1000	1000/3 (4W)	3 RUNS OF (4) - #500 KCMIL/PHASE	(1) #2/0	3-1/2"
1200	1200/3 (4W)	4 RUNS OF (4) - #350 KCMIL/PHASE	(1) #3/0	3-1/2"
1600	1600/3 (4W)	5 RUNS OF (4) - #500 KCMIL/PHASE	(1) #4/0	3-1/2"
2000	2000/3 (4W)	6 RUNS OF (4) - #500 KCMIL/PHASE	(1) #250 KCMIL	3-1/2"
3000	3000/3 (4W)	8 RUNS OF (4) - #500 KCMIL/PHASE	(1) #400 KCMIL	3-1/2"
4000	4000/3 (4W)	11 RUNS OF (4) - #500 KCMIL/PHASE	(1) #500 KCMIL	3-1/2"
EX	EXISTING TO REMAIN			

LEGEND

(GF)	GROUND FAULT TRIP
(EO)	ELECTRICALLY OPERATED
(KI)	KIRK KEY INTERLOCKED
(M)	SQAURE 'D' MODEL PM5563RD ENERGY METER / MONITOR
(CP)	CONTROL PANEL FOR REMOTE PLC CONTROL OF MAINS AND TIES
(E)	ELECTRONIC LSI TRIP BREAKER
(LA)	LIGHTNING ARRESTER
□	CABLE TO BUS CONNECTION
SPD	SURGE PROTECTION DEVICE





1 POWER DISTRIBUTION RISER DIAGRAM
SCALE: NONE

GENERAL NOTES: (POWER DISTRIBUTION RISER DIAGRAM)

A. ALL NEW CONDUCTORS SHALL BE COPPER (REFER TO SPECIFICATIONS FOR TYPES).
B. REFER TO DETAILS FOR TYPICAL PANEL LABELING REQUIREMENTS.
C. REFER TO PANEL SCHEDULES FOR EQUIPMENT ACCESSORIES, BREAKER SIZES, AND RELATED INFORMATION.
D. AS PART OF THIS CONTRACT, PROVIDE A COMPREHENSIVE ARC FLASH HAZARD ANALYSIS FOR ALL POWER DISTRIBUTION DEVICES ON THIS PROJECT. PROVIDE ALL LABELS, WARNING SIGNAGE, ETC. PER NPFA-70E AND OSHA REQUIREMENTS. ALL LABELS SHALL BE AFFIXED PRIOR TO FINAL ELECTRICAL INSPECTIONS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DATA TO THE SWITCHGEAR MANUFACTURER NO LATER THAN TWO WEEKS FOLLOWING AWARD OF PROJECT AS REQUIRED TO COMPLETE THE ANALYSIS. STUDY SHALL INCLUDE ALL EXISTING EQUIPMENT IN EXISTING FACILITY. REFER TO SPECIFICATION SECTION 260573, "ELECTRICAL STUDIES", FOR ADDITIONAL REQUIREMENTS.
E. AS PART OF THIS CONTRACT, PROVIDE A COORDINATION/FAULT CURRENT STUDY FOR BREAKERS ON THIS PROJECT. STUDY SHALL INCLUDE ALL MAINS AND FEEDERS SHOWN ON THESE DRAWINGS AND SHALL EXTEND TO THE MAIN LUGS OR BREAKER OF THE FURTHEST DEVICE DOWNSTREAM. THE EQUIPMENT, CRITICAL, AND LIFE SAFETY EMERGENCY POWER SYSTEMS SHALL BE SELECTIVELY COORDINATED TO 0.1 SECONDS THROUGH BOTH THE UTILITY AND GENERATOR DERIVED SYSTEMS. EQUIPMENT PRESENTLY SHOWN IS THE BASIS OF DESIGN - OTHER MANUFACTURERS LISTED AS EQUALS MAY NEED TO MODIFY LAYOUTS AND EQUIPMENT IN ORDER TO MEET THIS REQUIREMENT. ALL MANUFACTURERS MUST UTILIZE ELECTRONIC TRIP BREAKERS WITH ADJUSTABLE TRIP SETTINGS WHERE REQUIRED TO MEET SELECTIVE COORDINATION REQUIREMENTS. WHERE MODIFICATION TO EQUIPMENT INDICATED ON THESE DRAWINGS IS REQUIRED IN ORDER TO ACHIEVE COORDINATION, THESE CHANGES SHALL BE CLEARLY NOTED IN THE STUDY. WHERE ACTUAL BREAKER AMPACITIES ARE INCREASED TO ACHIEVE COORDINATION, THE CONTRACTOR IS RESPONSIBLE FOR INCLUDING ALL COST ASSOCIATED WITH THESE CHANGES IN THEIR BID (INCLUDING INCREASES IN FEEDER SIZES). SUBMIT STUDY AS SHOP DRAWING TO ENGINEER PRIOR TO ORDERING ANY POWER DISTRIBUTION EQUIPMENT. ANY EQUIPMENT SUBMITTED PRIOR TO SUBMISSION OF THIS STUDY WILL NOT BE REVIEWED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DATA TO THE SWITCHGEAR MANUFACTURER NO LATER THAN TWO WEEKS FOLLOWING AWARD OF PROJECT AS REQUIRED TO COMPLETE THE ANALYSIS. REFER TO SPECIFICATION SECTION 260573, "ELECTRICAL STUDIES", FOR ADDITIONAL REQUIREMENTS.
F. AS PART OF THIS CONTRACT, PROVIDE AN IEEE 1547 CERTIFICATION.
G. CONTRACTOR SHALL INSTALL SEPARATE CONDUITS, PULL BOXES, ETC. FOR EMERGENCY POWER AND NORMAL POWER FEEDERS PER NEC FOR COMPLETE SEPARATION OF POWER SERVICES.
H. THERMAL SCAN OF PANEL AND LARGE EQUIPMENT TERMINATIONS SHALL BE PROVIDED TO OWNER AT COMPLETION OF PROJECT. CONTRACTOR TO CORRECT DIFICIENCIES DISCOVERED AT NO ADDITIONAL COST TO CONTRACT.
I. POWER INTERRUPTIONS SHALL BE PLANNED WITH TWO WEEK MINIMUM NOTICE PRIOR TO INTERRUPTION TO EXISTING FACILITY POWER. CONTRACTOR SHALL COORDINATE ALL EXPECTED PROCEDURES WITH OWNER AND ALL LOCAL INSPECTION AGENCIES. ONE MONTH PRIOR TO INTERRUPTING POWER, CONTRACTOR SHALL SUBMIT TO ENGINEER A DETAILED OUTLINE AND DESCRIPTION OF HOW THIS PROCEDURE IS TO TAKE PLACE, FOR HOW LONG POWER WIL BE DOWN, WHO HAS BEEN CONTACTED, ETC. THIS OUTLINE AND DESCRIPTION IS TO BE SUBMITTED AS SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. NO INTERRUPTION OF MAIN SERVICE POWER SHALL OCCUR WITHOUT THE ENGINEER'S WRITTEN APPROVAL OF THE ABOVE REFERENCED MATERIAL.
J. REFER TO PANEL AND EQUIPMENT SCHEDULES FOR FEEDER AND OVERCURRENT DEVICE SIZES.
K. SERVICE EQUIPMENT SHALL BE MARKED WITH THE MAXIUM AVAILABLE FAULT-CURRENT AT THE EQUIPMENT AND THE DATE THE CALCULATION WAS PERFORMED. APPLY A TYPE-WRITTEN ADHESIVE LABEL WITH WHITE BACKGROUND 1/2" HIGH BLACK LETTERING.
L. ALL CIRCUIT BREAKERS AND/OR DISCONNECTS SERVING THE PRIMARY SIDE OF A TRANSFORMER WHICH ARE NOT WITHIN SITE OF THE TRANSFORMER SHALL BE PROVIDED WITH PERMANENTLY INSTALLED MEANS TO LOCK THE BREAKER IN THE OFF POSITION. SUCH TRANSFORMERS SHALL HAVE THE ROOM NAME AND NUMBER OF THE PRIMARY DISCONNECTING MEANS ENGRAVED ON THE EQUIPMENT NAMEPLATE.

RISER KEYNOTES

1. PROVIDE ADDITIONAL AUXILIARY RELAY IN TRANSFER SWITCH FOR EM SIGNAL TO ELEVATORS. PROVIDE NECESSARY CONTROL WIRING TO ELEVATOR CONTROLLERS PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE REQUIREMENTS WITH ELEVATOR VENDOR.
2. FIRE PUMP AUTOMATIC TRANSFER SWITCH AND CONTROLLER SHALL BE FURNISHED WITH FIRE PUMP.
3. PROVIDE CONNECTIONS TO AUTOMATIC TRANSFER SWITCHES, AS REQUIRED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE 100% RATED SOLID STATE, ELECTRONIC TRIP BREAKER WITH GROUND FAULT INDICATION ONLY (SHALL NOT TRIP BREAKER PER NEC #700.6D), AS INDICATED.
5. PROVIDE TWENTY (20) #14 STRANDED CONDUCTORS IN 2" CONDUIT FROM GENERATOR CONTROLLER TO EACH TRANSFER SWITCH FOR CONTROLS AS REQUIRED BY GENERATOR AND TRANSFER SWITCH MANUFACTURERS.
6. NOT USED.
7. NOT USED.
8. NOT USED.
9. NOT USED.
10. NOT USED.
11. NOT USED.
12. PROVIDE FOUR (4) #14 FROM ATS TO ELEVATOR CONTROLLER. ONLY ONE (1) ELEVATOR FED BY ATS WILL OPERATE AT A TIME DURING EMERGENCY POWER OPERATION.
13. NOT USED.
14. NOT USED.
15. CONTROLS WIRING FROM GENERATOR TO FIRE PUMP CONTROLLERA/TS SHALL BE ROUTED IN RIGID STEEL CONDUIT ENCASED IN CONCRETE AND ROUTED BELOW SLAB IN SAME DUCT BANK AS EMERGENCY POWER FEED FROM GENERATOR TO FIRE PUMP CONTROLLER/ATS PER DUCT BANK DETAIL.
16. NOT USED.
17. NOT USED.

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

COMMONWEALTH OF KENTUCKY
ALAN R. KELLUM
20166
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

ELECTRICAL

PROJECT	202170/XKSM21
DATE	07/26/2024

REVISIONS

No.	Description	Date

ELEC POWER DISTRIBUTION ONE-LINE DIAGRAM - BP4

E-600E

MECHANICAL GENERAL NOTES

A COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.

B THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.

C WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.

D ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.

E COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.

F PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.

G OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)

H CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING, HVAC AND ELECTRICAL WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.

I IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB, CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.

J WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.

K ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.

L ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.

M ALL DUCTWORK, PIPING, CONDUITS, ETC. IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.

N INSTALL AIR VENTS AT HIGH POINTS IN PIPING AND DRAINS IN LOW POINTS. USE CARE TO AVOID FREEZING OF EXTERIOR VENTS.

O LOCATIONS OF PIPING, DUCTS AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.

P ALL OFFSETS IN DUCTS AND PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.

Q COORDINATE ALL HVAC WORK WITH ELECTRICAL, PLUMBING AND OTHER TRADES TO AVOID INTERFERENCE WITH PIPING, DUCTS, CONDUIT AND OTHER EQUIPMENT.

R INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.

S SEAL AIRTIGHT AROUND ALL DUCTS AND PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.

T SEAL ALL NEW DUCTWORK JOINTS WITH UNITED MCGILL, IRONGRIP 601 OR EQUAL WATER BASED SEALANT.

U ALL MOTOR DRIVEN EQUIPMENT SHALL BE INSTALLED WITH FLEXIBLE CONNECTIONS TO DUCTWORK, PIPING, ETC., UNLESS OTHERWISE NOTED.

V THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.

W WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.

X DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS. TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS.

Y ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.

Z DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.

AA VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.

AB ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.

AC PIPING SHALL NOT BE LOCATED UNDER A FOOTER OR IN THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.

AD WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.

ABBREVIATIONS

AC	ALTERNATING CURRENT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AHJ	AUTHORITY HAVING JURISDICTION
AMP	AMPERE (AMP, AMPS)
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APD	AIR PRESSURE DROP
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS
ATU	AIR TERMINAL UNIT
AVG	AVERAGE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BREAK HORSEPOWER
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
C.I.	CAST IRON
CLG	CEILING
CLR	CLEAR
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COND	CONDENS (-ER, -ING, -ATION, -ATE)
CONT	CONTINU (-ED, -OUS)
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CV	VALVE FLOW COEFFICIENT
dB	DECIBEL
DB	DRY BULB
DBT	DRY BULB TEMPERATURE
DC	DIRECT CURRENT
DD	DUCT SMOKE DETECTOR
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE (-S)
DIA	DIAMETER (-S)
DN	DOWN
DWG	DRAWING
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVA (-TION, -TOR)
ENGR	ENGINEER
EQ	EQUAL
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EVAP	EVAPORAT (-E, -ING, -ED, -OR, -ION)
EWT	ENTERING WATER TEMPERATURE
EXP	EXPANSION
EXT	EXTERIOR
FA	FREE AREA

ABBREVIATIONS (CONTINUED)

FD	FIRE DAMPER
FL	FLOOR
FLA	FULL LOAD AMPS
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPC	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET **OR** FOOT
FUT	FUTURE
FV	FACE VELOCITY
GA	GAGE/GAUGE
GAL	GALLON (-S)
GC	GENERAL CONTRACTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRAINS
H	HUMIDITY
HD	HEAD
HG	MERCURY
HORIZ	HORIZONTAL
HP	H (-ORSEPOWER, -EAT PUMP)
HR	HOUR (-S)
HVAC	HEATING, VENTILATING, & AIR-CONDITIONING
Hz	HERTZ
ID	I (-DENTIFICATION, -NSIDE DIAMETER, -NSIDE DIMENSION)
IN	INCH (-ES)
INSUL	INSULAT (-ED, -ION)
INT	INTER (-IOR, -ERVAL)
IPS	IRON PIPE SIZE
kW	KILOWATT
kWh	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LF	LINEAR FEET/FOOT
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	BTU PER HOUR [THOUSANDS]
MCA	MINIMUM CIRCUIT AMPS
MFG	MANUFACTURER
MIN	MIN (-IMUM, -UTE)
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVERCURRENT PROTECTION [AMPS]
MTG	MOUNTING
N/A	NOT APPLICABLE
NC	NOISE CRITERIA **OR** NORMALLY CLOSED
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NIC	NOT IN CONTRACT

ABBREVIATIONS (CONTINUED)

NO	NORMALLY OPEN **OR** NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DI (-AMETER, -MENSION)
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OR	OPEN RECEPTACLE
OZ	OUNCE (-S)
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE [ELECTRICAL]
PLBG	PLUMBING
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	PPSI GAUGE
RH	RELATIVE HUMIDITY [%]
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SD	SMOKE DAMPER
SP	STATIC PRESSURE
SQ	SQUARE
SQ FT	SQUARE FEET **OR** FOOT
SQ IN	SQUARE INCH **OR** INCHES
TAB	TESTING AND BALANCING
TBD	TO BE DETERMINED
TE	TOP ELEVATION
TEMP	TEMPERATURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT (-AGE, -S)
VAR	VARI (-ABLE, -IES)
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FEQUENCY DRIVE
W	WATT (-AGE, -S)
WB	WET BULB
WBT	WET BULB TEMPERATURE
WPD	WATER PRESSURE DROP
WT	WEIGHT
W/	WITH
W/O	WITHOUT
%	PERCENT
ΔP	DIFFERENTIAL PRESSURE
ΔT	TEMPERATURE DIFFERENCE
℄	CENTERLINE

GENERAL SYMBOLS

(#)	TAGGED NOTE DESIGNATOR
(A)	REVISION TRIANGLE
ROOM NAME (SIZE IF)	ROOM TAG
TAG XXX-# INSTANCE XXXX	EQUIPMENT TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION

HVAC LEGEND

	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST AIR DIFFUSER
	TRANSFER AIR DIFFUSER W/ SOUND ATTENUATING BOOT
	SIDEWALL DIFFUSER/GRILLE
	SIDEWALL DIFFUSER/GRILLE
TAG XXX AIRFLOW #,###	AIR DEVICE TAG (REGISTER, GRILLE, DIFFUSER,LOUVER)
##x##	RECTANGULAR DUCT
#ø	ROUND/SPIRAL DUCT
##/##	FLAT OVAL DUCT
SA	SUPPLY AIR DUCT
SA SPF	SUPPLY AIR STAIRWELL PRESSURIZATION FAN DUCT
RA	RETURN AIR DUCT
EA	EXHAUST AIR DUCT
OA	OUTSIDE AIR DUCT
TA	TRANSFER AIR DUCT
CAE	COMBUSTION AIR EXHAUST DUCT
CAI	COMBUSTION AIR INTAKE DUCT
SA	SA AIR DUCT TURNING UP
SA	SA AIR DUCT TURNING DOWN
RA	RA AIR DUCT TURNING UP
RA	RA AIR DUCT TURNING DOWN
EA	EA AIR DUCT TURNING UP
EA	EA AIR DUCT TURNING DOWN
E(XXX)	EXISTING DUCT - (XXX) DENOTES SYSTEM
D(XXX)	DUCT TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
A(XXX)	DUCT TO BE ABANDONED IN PLACE - (XXX) DENOTES SYSTEM
	MITERED ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
T	THERMOSTAT
T_S	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CARBON DIOXIDE SENSOR
TC	TEMPERATURE & CARBON DIOXIDE SENSOR
VERT. HORIZ.	MANUAL BALANCING/VOLUME DAMPER
VERT. HORIZ.	MOTORIZED DAMPER
VERT. HORIZ.	FIRE DAMPER
VERT. HORIZ.	SMOKE DAMPER
VERT. HORIZ.	COMBINATION FIRE & SMOKE DAMPER

MECHANICAL PIPING LEGEND

	PIPE ELBOW TURNING UP
	PIPE ELBOW TURNING DOWN
	PIPE TEE; CONNECTION ON TOP
	PIPE TEE; CONNECTION ON BOTTOM
	PIPE CAP
BFW	BOILER FEEDWATER
CAI/E	COMBUSTION AIR INTAKE/EXHAUST
CBS/R	CHILLED BEAM SUPPLY/RETURN
CD	CONDENSATE DRAIN
CHWS/R	CHILLED WATER SUPPLY/RETURN
CST	CLEAN STEAM PIPING
CWS/R	CONDENSER WATER SUPPLY/RETURN
DTS/R	DUAL TEMP. WATER SUPPLY/RETURN
GS/R	GEOTHERMAL WATER SUPPLY/RETURN
HPC	HIGH PRESSURE STEAM CONDENSATE
HPS(#)	HIGH PRESSURE STEAM; (#) DENOTES PRESSURE
HPS/R	HEAT PUMP WATER SUPPLY/RETURN
HRS/R	HEAT RECOVERY SUPPLY/RETURN PIPING
HWS/R	HEATING WATER SUPPLY/RETURN
LPC	LOW PRESSURE STEAM CONDENSATE
LPS(#)	LOW PRESSURE STEAM; (#) DENOTES PRESSURE
MPC	MEDIUM PRESSURE STEAM RETURN
MPS(#)	MEDIUM PRESSURE STEAM; (#) DENOTES PRESSURE
SPD	STEAM CONDENSATE PUMPED DISCHARGE
SVT	STEAM VENT PIPING
D(XXX)	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
E(XXX)	EXISTING PIPING - (XXX) DENOTES SYSTEM
A(XXX)	ABANDONED IN PLACE PIPING - (XXX) DENOTES SYSTEM
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	AUTOMATIC AIR VENT (AAV)
	MANUAL AIR VENT (MAV)
	MANUAL BALANCING VALVE (BV)
	BALL VALVE
	BUTTERFLY VALVE
	TRIPLE DUTY VALVE (TDV)
	STRAINER
	MANUAL ISOLATION VALVE
	GLOBE VALVE
	OS&Y (GATE) VALVE
	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	AUTO-FLOW CONTROL VALVE
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	FLEXIBLE PIPE CONNECTION
	FLOW METER (VENTURI)
	PIPING UNION
	FLOW SWITCH
	PRESSURE SWTICH
	TAMPER SWITCH
	THERMOMETER
	PETE'S PLUG; TEMPERATURE/PRESSURE PORT

APPLICABLE BUILDING CODES

APPLICABLE BUILDING CODES	DOCUMENT	YEAR
ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES	ANSI A117.1	2009
FIRE SPRINKLER CODE	NFPA 13	2013
INTERNATIONAL BUILDING CODE (IBC)	STATE EDITION	2015
INTERNATIONAL ENERGY CONSERVATION CODE (IECC)	STATE EDITION	2012
INTERNATIONAL FIRE CODE (IFC)	STATE EDITION	2015
INTERNATIONAL FUEL GAS CODE (IFGC)	STATE EDITION	2015
INTERNATIONAL MECHANICAL CODE (IMC)	STATE EDITION	2015
INTERNATIONAL PLUMBING CODE (IPC)	STATE EDITION	2015
INTERNATIONAL EXISTING BUILDING CODE (IEBC)	STATE EDITION	2009
NATIONAL ELECTRIC CODE (NEC)	NFPA 70	2017
NATIONAL FIRE ALARM & SIGNALING CODE	NFPA 72	2013
UNIFORM STATEWIDE BUILDING CODE		2018

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

COMMONWEALTH OF KENTUCKY — CHRISTOPHER M. REEVES — 25045 — LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

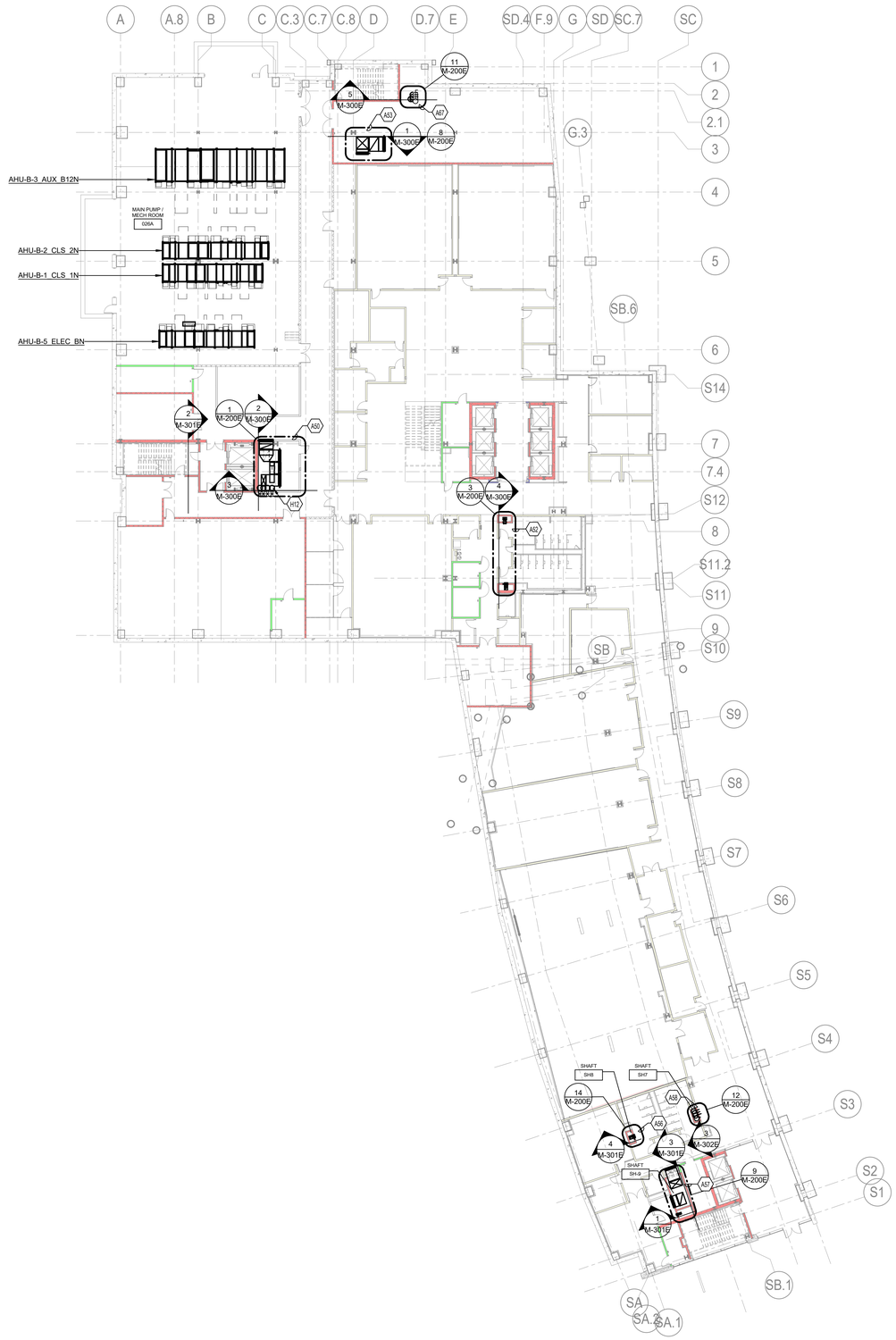
PROJECT	XKSM21
DATE	05/20/2024

REVISIONS

No.	Description	Date

MECHANICAL LEGEND

M-001E



1 MECHANICAL - BASEMENT OVERALL

1" = 20'-0"

GENERAL HVAC DESIGN NOTES

A. DUCTWORK SHALL STOP AT FIRE DAMPER AND BE CAPPED FOR FUTURE CONNECTION.
B. HYDRONIC PIPING SHALL CONTINUE 6" PAST ISOLATION VALVE AND CAPPED FOR FUTURE CONNECTION.
C. AHU'S ARE INCLUDED IN THIS BID PACKAGE AS AN EQUIPMENT ONLY PACKAGE. THE INSTALLATION OF THIS EQUIPMENT WILL BE INCLUDED IN A FUTURE BID PACKAGE.

TAGGED NOTES

(#)

A50	SUPPLY AND RETURN DUCTWORK UP FROM BASEMENT AIR HANDLERS TO SERVE LECTURE HALLS. HYDRONIC PIPING FROM BASEMENT UP IN SHAFT TO SERVE AIR HANDLERS LOCATED ON PENTHOUSE AND TERMINAL UNITS ON EVERY FLOOR.
A52	GENERAL EXHAUST DOWN FROM FAN LOCATED IN NORTH PENTHOUSE.
A53	SUPPLY AND RETURN DUCTWORK UP FROM BASEMENT AIR HANDLER TO SERVE FLOORS 1 AND 2; AREAS A AND B.
A56	GENERAL EXHAUST DOWN FROM FAN LOCATED IN SOUTH PENTHOUSE.
A57	SUPPLY AND RETURN DUCTWORK DOWN FROM SOUTH PENTHOUSE TO SERVE BASEMENT AND FIRST FLOOR; AREAS B AND C. GENERAL EXHAUST DOWN FROM SOUTH PENTHOUSE TO SERVE EACH FLOOR. STAIRWELL PRESSURIZATION DUCTWORK DOWN FROM FAN LOCATED IN SOUTH PENTHOUSE.
A58	HYDRONIC RISERS UP FROM BASEMENT TO SERVE AIR HANDLERS LOCATED ON SOUTH PENTHOUSE AND TERMINAL UNITS ON EACH FLOOR.
A67	HYDRONIC PIPING UP TO SERVE FANCOIL UNITS ON EACH FLOOR.
H12	PROVIDE CAPPED DRAIN VALVES AT THE BASE OF EACH HYDRONIC RISER. TYPICAL.

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1140 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

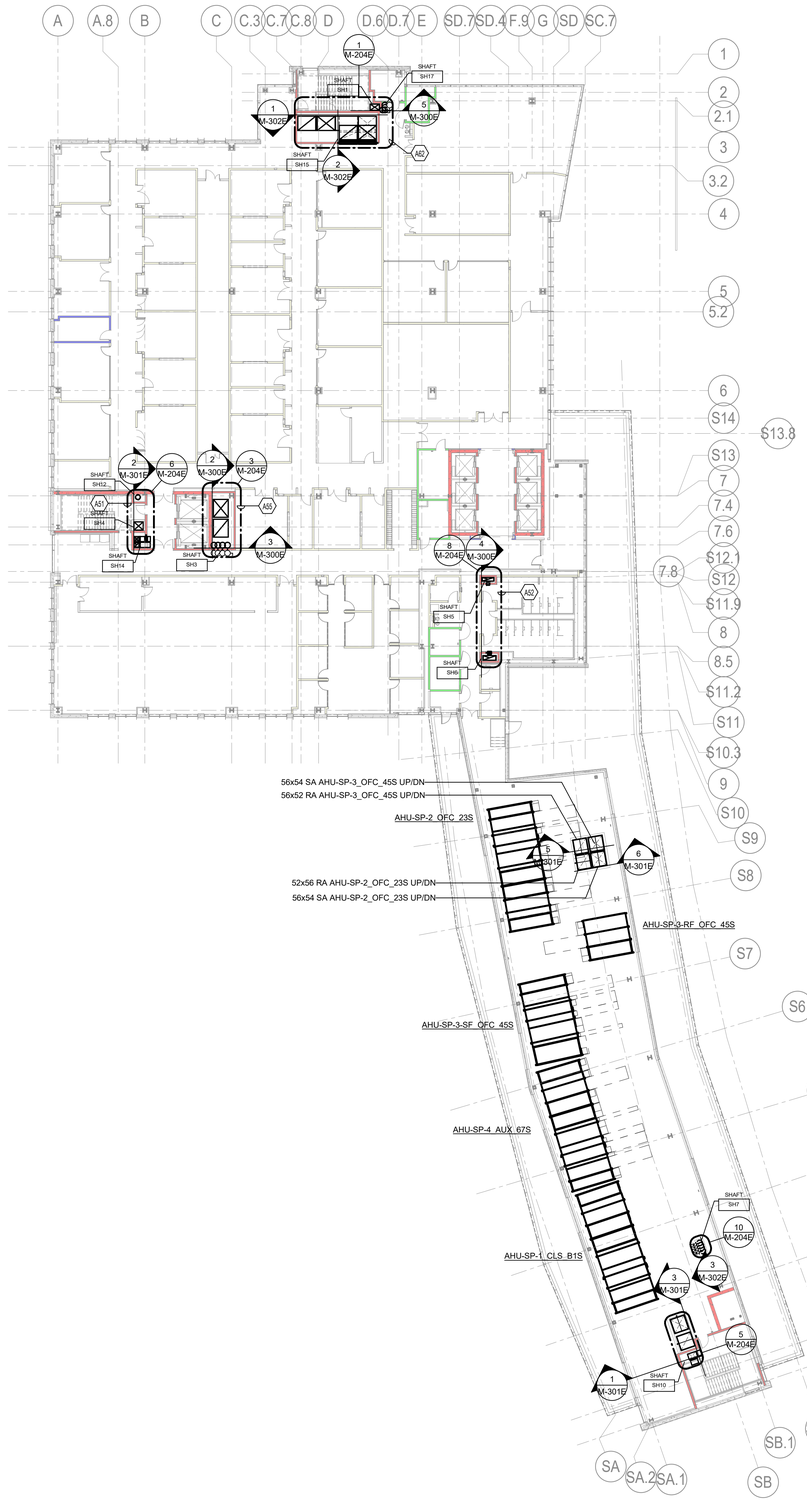
REVISIONS

No.	Description	Date

MECHANICAL PLAN - BASEMENT OVERALL

M-100E

5/20/2024 11:07:51 AM



1 MECHANICAL - 8TH FLOOR OVERALL

1" = 20'-0"

GENERAL HVAC DESIGN NOTES

A. DUCTWORK SHALL STOP AT FIRE DAMPER AND BE CAPPED FOR FUTURE CONNECTION.
B. HYDRONIC PIPING SHALL CONTINUE 6" PAST ISOLATION VALVE AND CAPPED FOR FUTURE CONNECTION.
C. AHU'S ARE INCLUDED IN THIS BID PACKAGE AS AN EQUIPMENT ONLY PACKAGE. THE INSTALLATION OF THIS EQUIPMENT WILL BE INCLUDED IN A FUTURE BID PACKAGE.

TAGGED NOTES

(##)

A51 LAB EXHAUST FROM STROBIC FAN AND SUPPLY DUCTWORK FROM NORTH PENTHOUSE AIR HANDLER DOWN FROM 9TH FLOOR. STAIRWELL PRESSURIZATION DUCTWORK DOWN FROM FAN LOCATED IN NORTH PENTHOUSE. GENERATOR EXHAUST FLUE CONTINUOUS THROUGH PENTHOUSE ROOF.

A52 GENERAL EXHAUST DOWN FROM FAN LOCATED IN NORTH PENTHOUSE.

A55 SUPPLY AND RETURN DUCTWORK DOWN FROM PENTHOUSE AIR HANDLERS TO SERVE FLOORS 3 AND 4; AREAS A AND B. HYDRONIC PIPING UP FROM BASEMENT TO SERVE AIR HANDLERS LOCATED ON PENTHOUSE AND TERMINAL UNITS ON EVERY FLOOR.

A62 SUPPLY AND RETURN DUCTWORK DOWN FROM NORTH PENTHOUSE AIR HANDLERS TO SERVE FLOORS 5, 6, 7 & 8; AREAS A & B. STAIRWELL PRESSURIZATION DUCTWORK DOWN FROM FAN LOCATED IN NORTH PENTHOUSE. HYDRONIC PIPING UP FROM BASEMENT TO SERVE FANCOIL UNITS ON EACH FLOOR.

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

REVISIONS

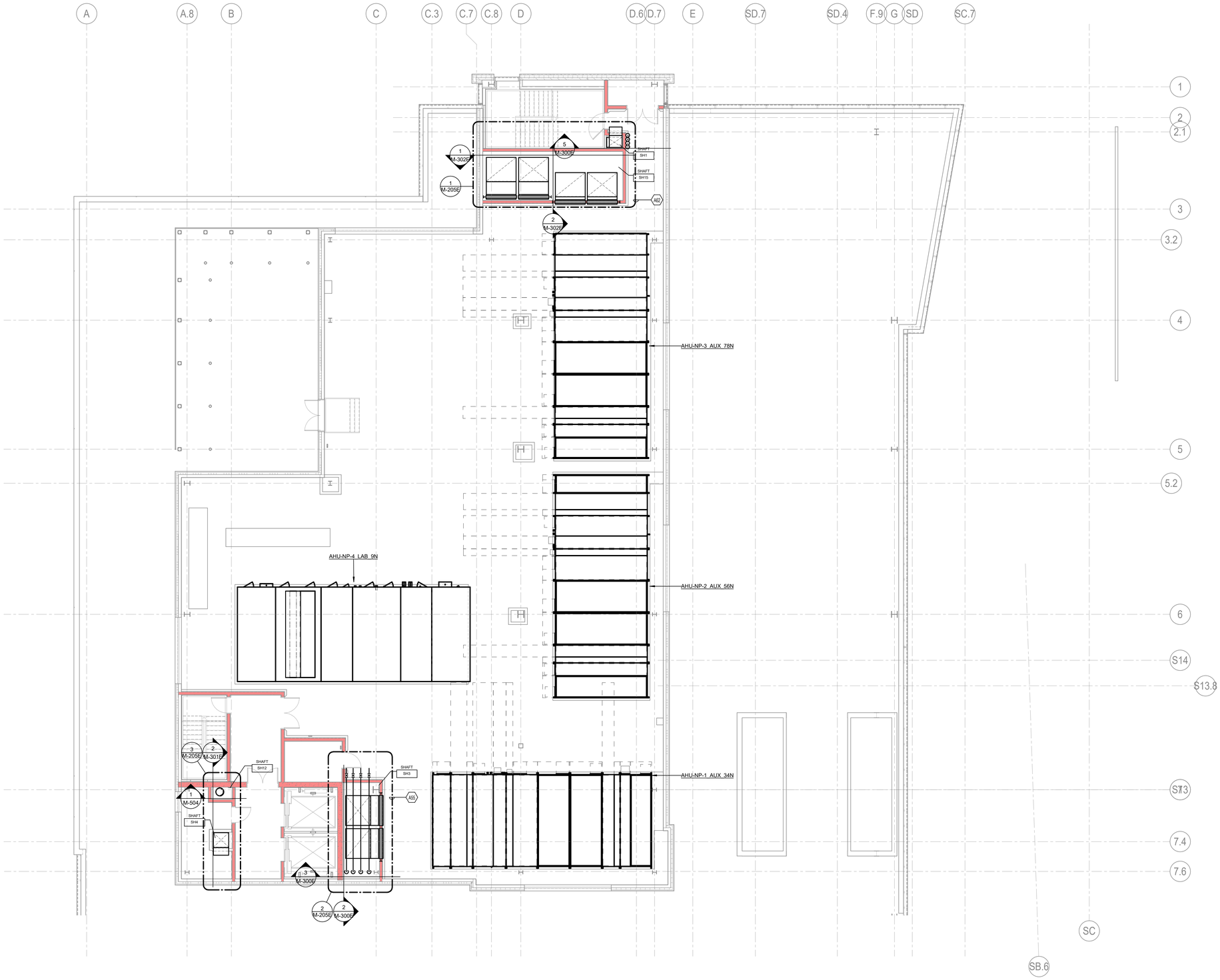
No.	Description	Date

MECHANICAL PLAN - EIGHTH FLOOR OVERALL

M-108E

GENERAL HVAC DESIGN NOTES

A. DUCTWORK SHALL STOP AT FIRE DAMPER AND BE CAPPED FOR FUTURE CONNECTION.
B. HYDRONIC PIPING SHALL CONTINUE 6" PAST ISOLATION VALVE AND CAPPED FOR FUTURE CONNECTION.
C. AHU'S ARE INCLUDED IN THIS BID PACKAGE AS AN EQUIPMENT ONLY PACKAGE. THE INSTALLATION OF THIS EQUIPMENT WILL BE INCLUDED IN A FUTURE BID PACKAGE.



1 MECHANICAL - PENTHOUSE - AREA A
1/8" = 1'-0"

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

STATE OF KENTUCKY
CHRISTOPHER M. REVELS
25045
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

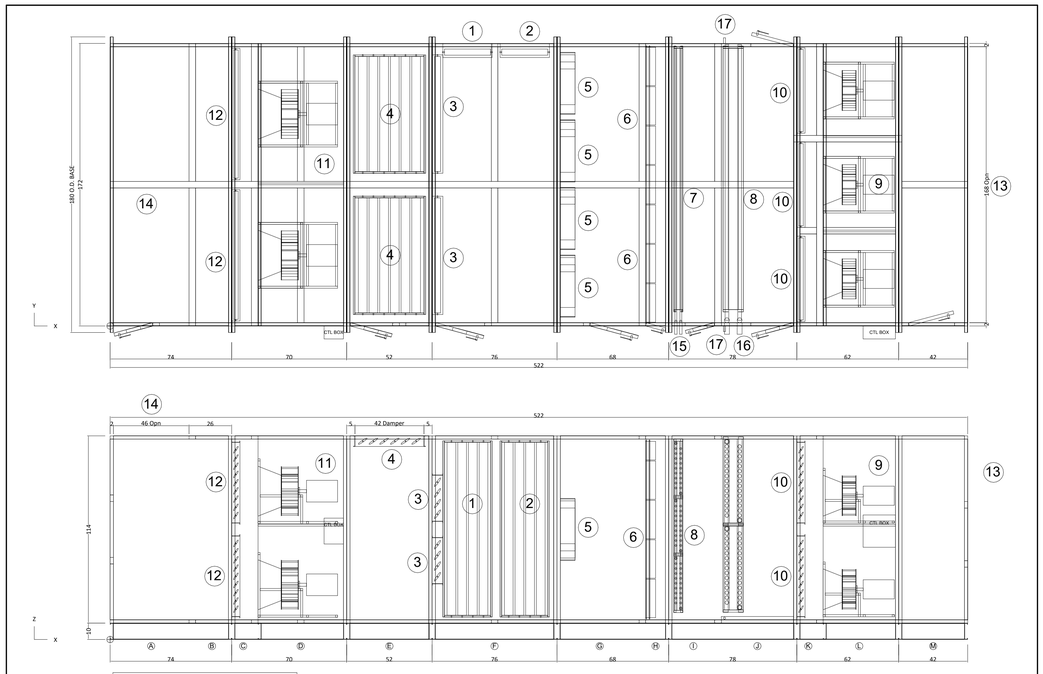
REVISIONS

No.	Description	Date

MECHANICAL - PENTHOUSE

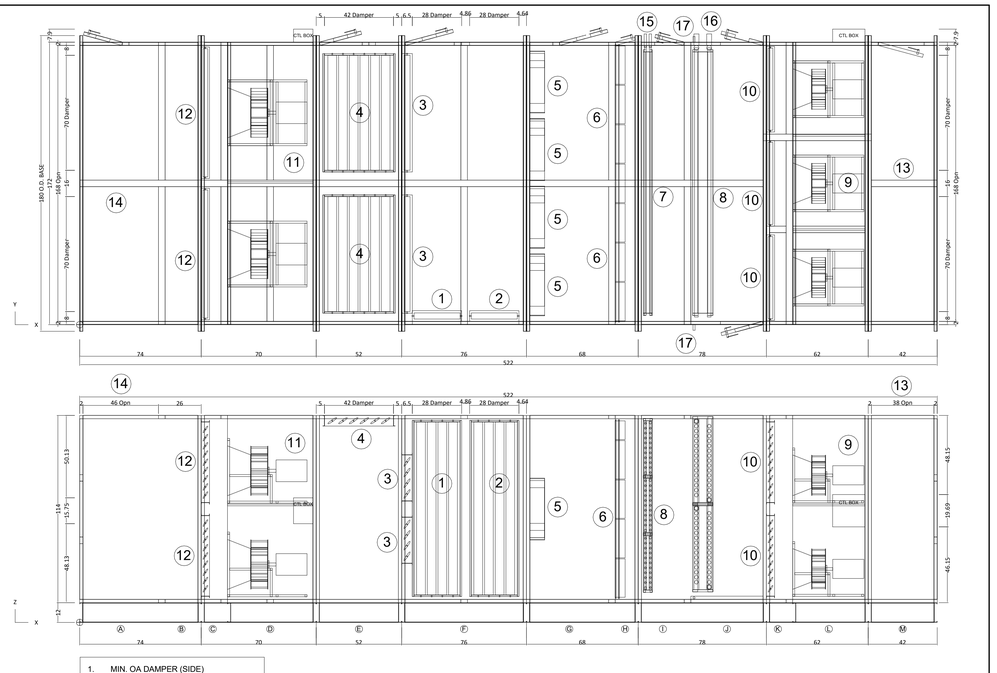
M-110E

5/20/2024 11:09:46 AM



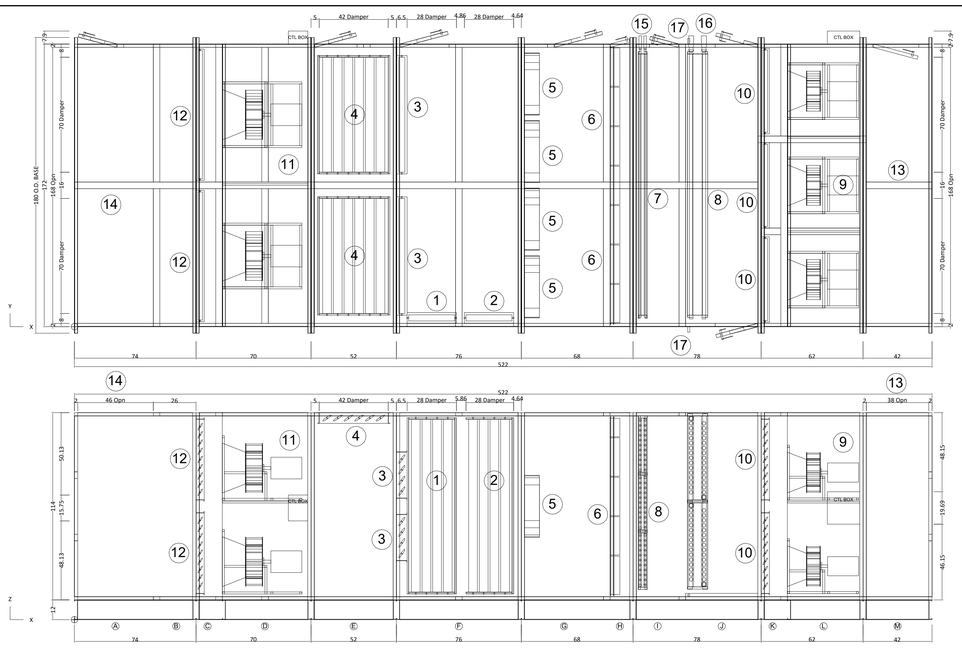
1. MIN. OA DAMPER
2. ECONOMIZER OA DAMPER
3. RA DAMPER
4. RELIEF AIR DAMPER
5. AIR BLENDER
6. MERV 13 PREFILTER
7. HOT WATER COIL
8. COOLING COIL
9. SUPPLY FAN ARRAY
10. SUPPLY FAN BACKDRAFT DAMPER
11. RETURN FAN ARRAY
12. RETURN FAN BACKDRAFT DAMPER
13. SA OPENING
14. RA OPENING
15. HOT WATER COIL CONNECTIONS
16. CHILLED WATER COIL CONNECTIONS
17. CONDENSATE DRAIN

1 AHU-NP-1 DETAIL
SCALE: NONE



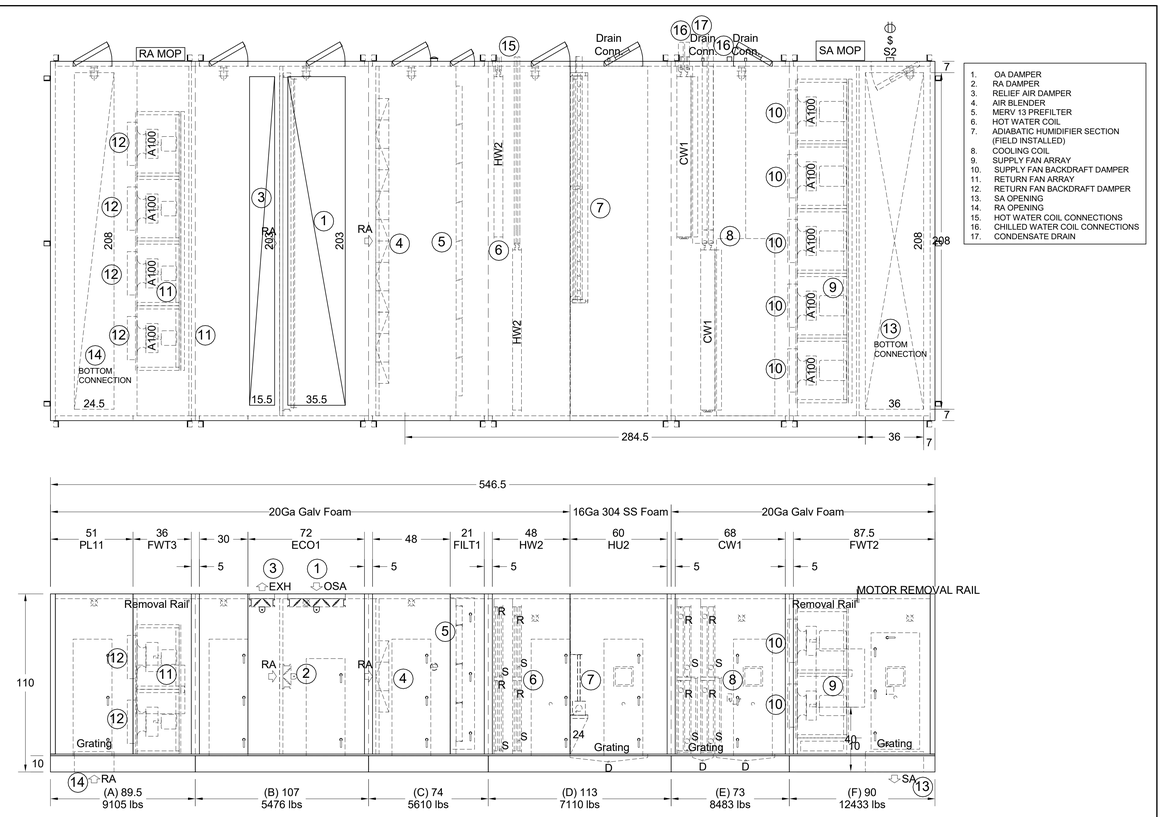
1. MIN. OA DAMPER (SIDE)
2. ECONOMIZER OA DAMPER (SIDE)
3. RA DAMPER (TOP)
4. RELIEF AIR DAMPER (TOP)
5. AIR BLENDER
6. MERV 13 PREFILTER
7. HOT WATER COIL
8. COOLING COIL
9. SUPPLY FAN ARRAY
10. SUPPLY FAN BACKDRAFT DAMPER
11. RETURN FAN ARRAY
12. RETURN FAN BACKDRAFT DAMPER
13. SA OPENING
14. RA OPENING
15. HOT WATER COIL CONNECTIONS
16. CHILLED WATER COIL CONNECTIONS
17. CONDENSATE DRAIN

2 AHU-NP-2 DETAIL
SCALE: NONE



1. MIN. OA DAMPER (SIDE)
2. ECONOMIZER OA DAMPER (SIDE)
3. RA DAMPER (TOP)
4. RELIEF AIR DAMPER (TOP)
5. AIR BLENDER
6. MERV 13 PREFILTER
7. HOT WATER COIL
8. COOLING COIL
9. SUPPLY FAN ARRAY
10. SUPPLY FAN BACKDRAFT DAMPER
11. RETURN FAN ARRAY
12. RETURN FAN BACKDRAFT DAMPER
13. SA OPENING
14. RA OPENING
15. HOT WATER COIL CONNECTIONS
16. CHILLED WATER COIL CONNECTIONS
17. CONDENSATE DRAIN

3 AHU-NP-3 DETAIL
SCALE: NONE



1. OA DAMPER
2. RA DAMPER
3. RELIEF AIR DAMPER
4. AIR BLENDER
5. MERV 13 PREFILTER
6. HOT WATER COIL
7. ADIABATIC HUMIDIFIER SECTION (FIELD INSTALLED)
8. COOLING COIL
9. SUPPLY FAN ARRAY
10. SUPPLY FAN BACKDRAFT DAMPER
11. RETURN FAN ARRAY
12. RETURN FAN BACKDRAFT DAMPER
13. SA OPENING
14. RA OPENING
15. HOT WATER COIL CONNECTIONS
16. CHILLED WATER COIL CONNECTIONS
17. CONDENSATE DRAIN

4 AHU-NP-4 DETAIL
SCALE: NONE

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

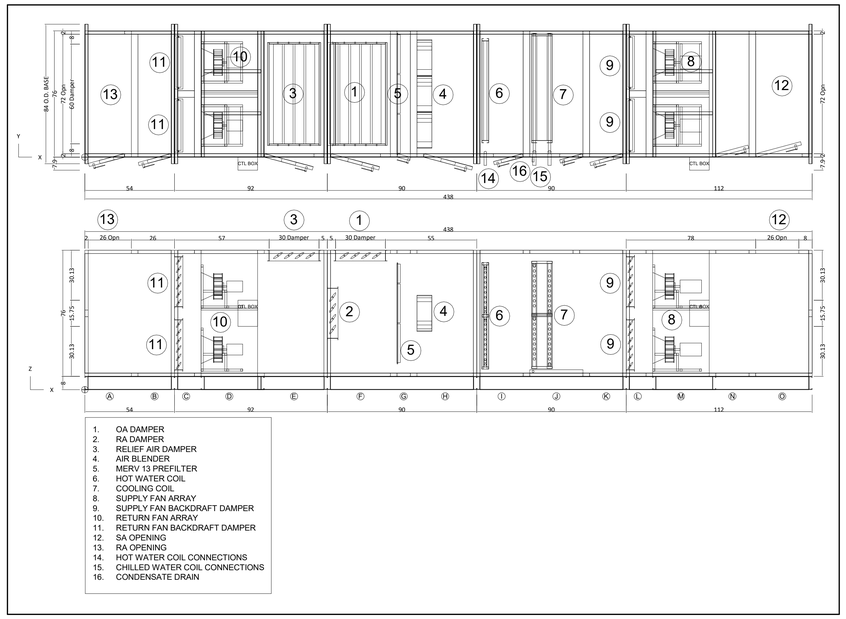
REVISIONS

No.	Description	Date

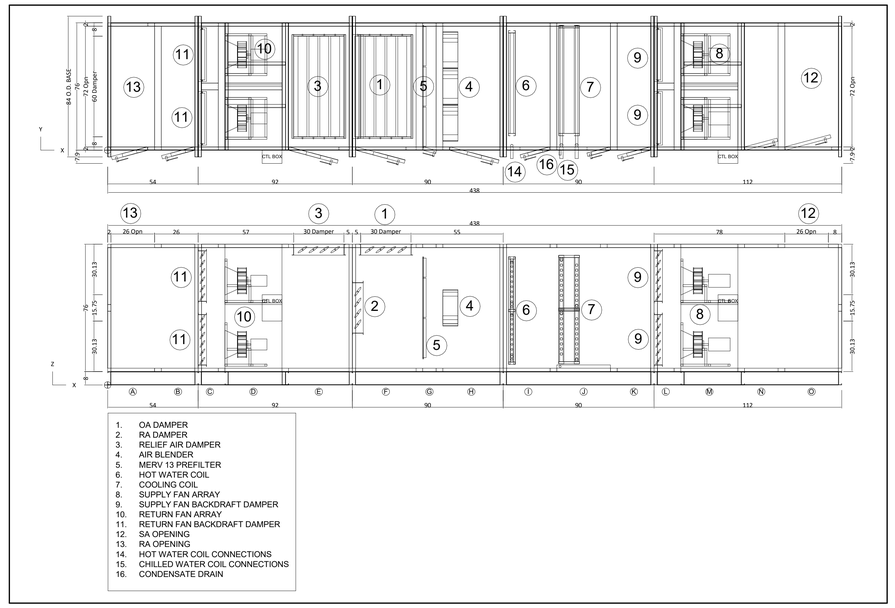
MECHANICAL DETAILS

M-500E

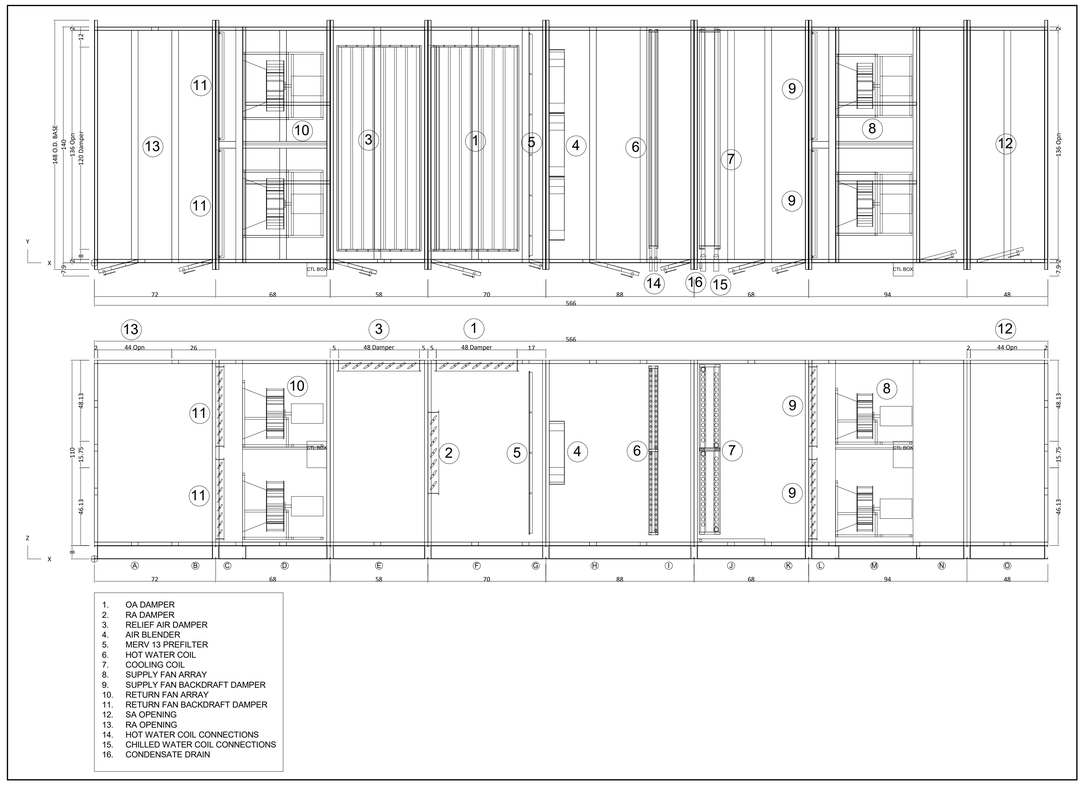
5/20/2024 11:13:38 AM



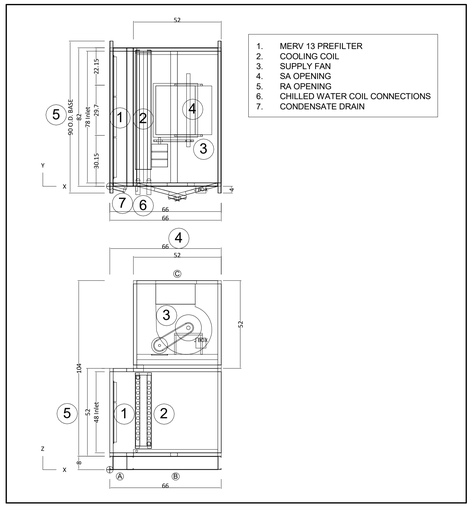
1 AHU-B-1 DETAIL
SCALE: NONE



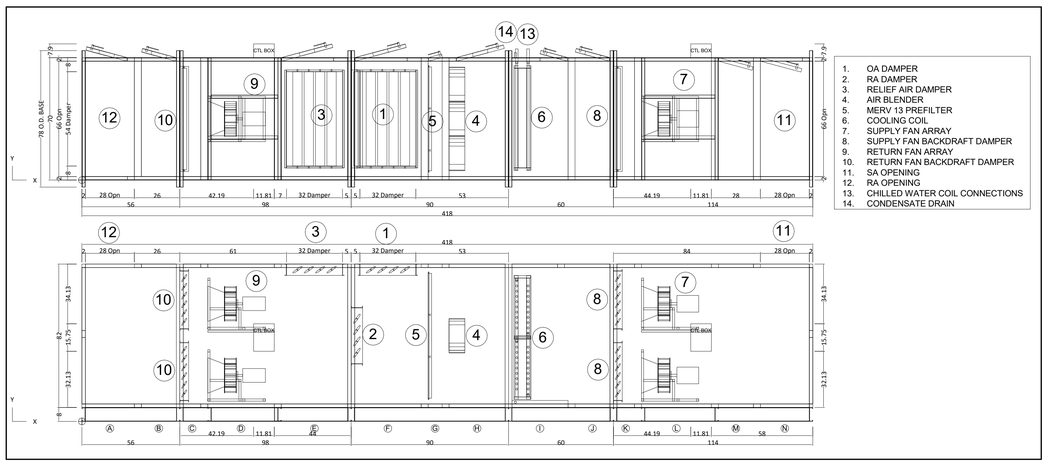
2 AHU-B-2 DETAIL
SCALE: NONE



3 AHU-B-3 DETAIL
SCALE: NONE



4 AHU-B-4 DETAIL
SCALE: NONE



5 AHU-B-5 DETAIL
SCALE: NONE

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

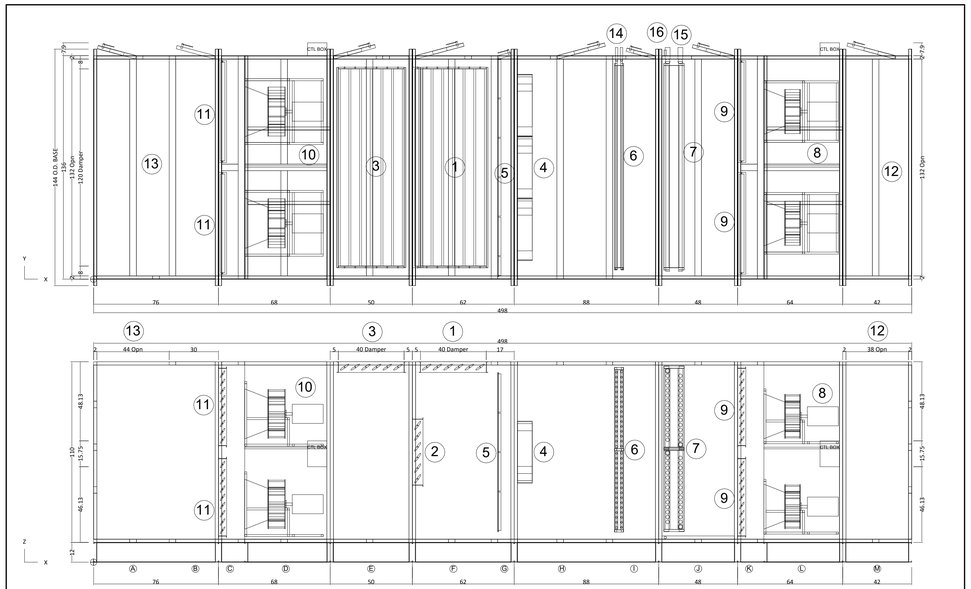
REVISIONS

No.	Description	Date

MECHANICAL DETAILS

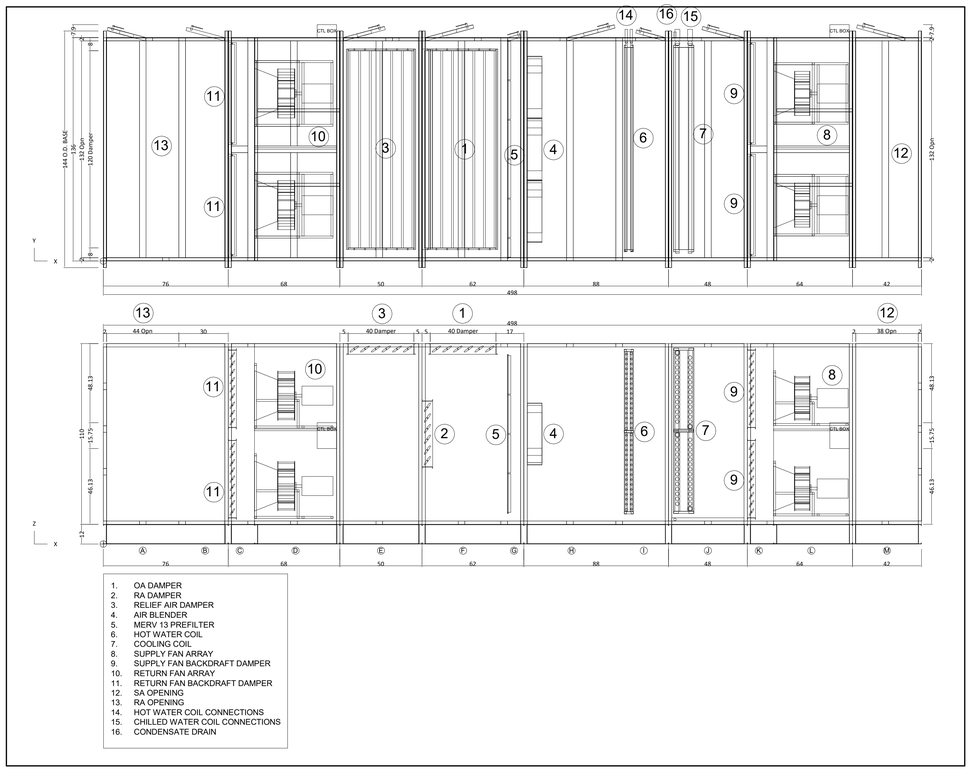
M-501E

5/20/2024 11:13:43 AM



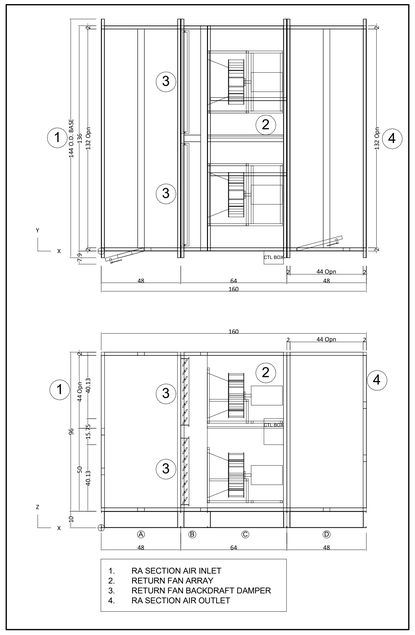
1. OA DAMPER
2. RA DAMPER
3. RELIEF AIR DAMPER
4. AIR BLENDER
5. MERV 13 PREFILTER
6. HOT WATER COIL
7. COOLING COIL
8. SUPPLY FAN ARRAY
9. SUPPLY FAN BACKDRAFT DAMPER
10. RETURN FAN ARRAY
11. RETURN FAN BACKDRAFT DAMPER
12. SA OPENING
13. RA OPENING
14. HOT WATER COIL CONNECTIONS
15. CHILLED WATER COIL CONNECTIONS
16. CONDENSATE DRAIN

1 AHU-SP-1 DETAIL
SCALE: NONE



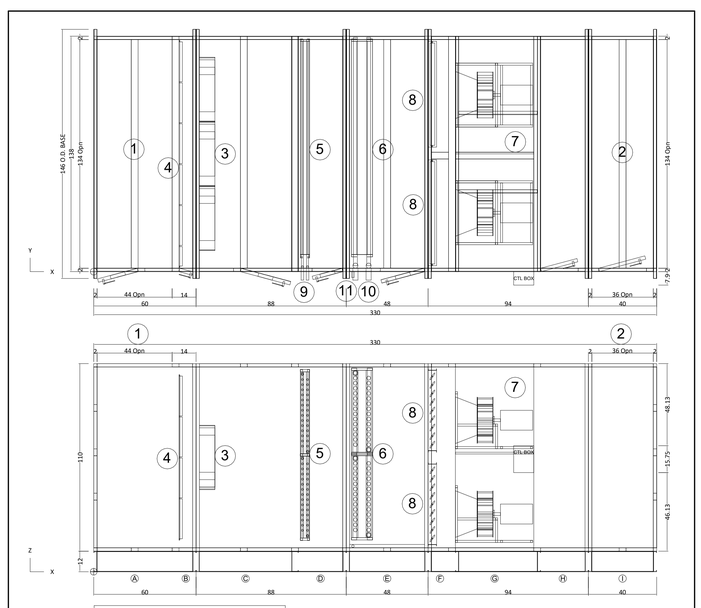
1. OA DAMPER
2. RA DAMPER
3. RELIEF AIR DAMPER
4. AIR BLENDER
5. MERV 13 PREFILTER
6. HOT WATER COIL
7. COOLING COIL
8. SUPPLY FAN ARRAY
9. SUPPLY FAN BACKDRAFT DAMPER
10. RETURN FAN ARRAY
11. RETURN FAN BACKDRAFT DAMPER
12. SA OPENING
13. RA OPENING
14. HOT WATER COIL CONNECTIONS
15. CHILLED WATER COIL CONNECTIONS
16. CONDENSATE DRAIN

2 AHU-SP-2 DETAIL
SCALE: NONE



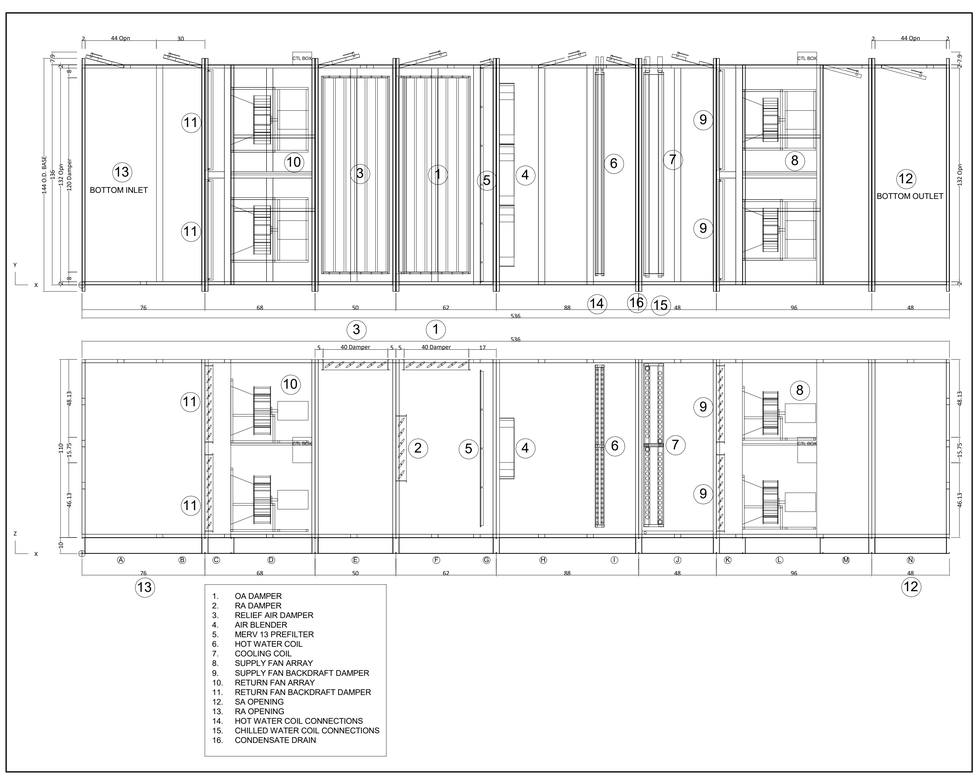
1. RA SECTION AIR INLET
2. RETURN FAN ARRAY
3. RETURN FAN BACKDRAFT DAMPER
4. RA SECTION AIR OUTLET

3 AHU-SP-3 RETURN SECTION DETAIL
SCALE: NONE



1. SUPPLY SECTION INLET
2. SUPPLY SECTION OUTLET
3. AIR BLENDER
4. MERV 13 PREFILTER
5. HOT WATER COIL
6. COOLING COIL
7. SUPPLY FAN ARRAY
8. SUPPLY FAN BACKDRAFT DAMPER
9. HOT WATER COIL CONNECTIONS
10. CHILLED WATER COIL CONNECTIONS
11. CONDENSATE DRAIN

4 AHU-SP-3 SUPPLY SECTION DETAIL
SCALE: NONE



1. OA DAMPER
2. RA DAMPER
3. RELIEF AIR DAMPER
4. AIR BLENDER
5. MERV 13 PREFILTER
6. HOT WATER COIL
7. COOLING COIL
8. SUPPLY FAN ARRAY
9. SUPPLY FAN BACKDRAFT DAMPER
10. RETURN FAN ARRAY
11. RETURN FAN BACKDRAFT DAMPER
12. SA OPENING
13. RA OPENING
14. HOT WATER COIL CONNECTIONS
15. CHILLED WATER COIL CONNECTIONS
16. CONDENSATE DRAIN

5 AHU-SP-4 DETAIL
SCALE: NONE

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

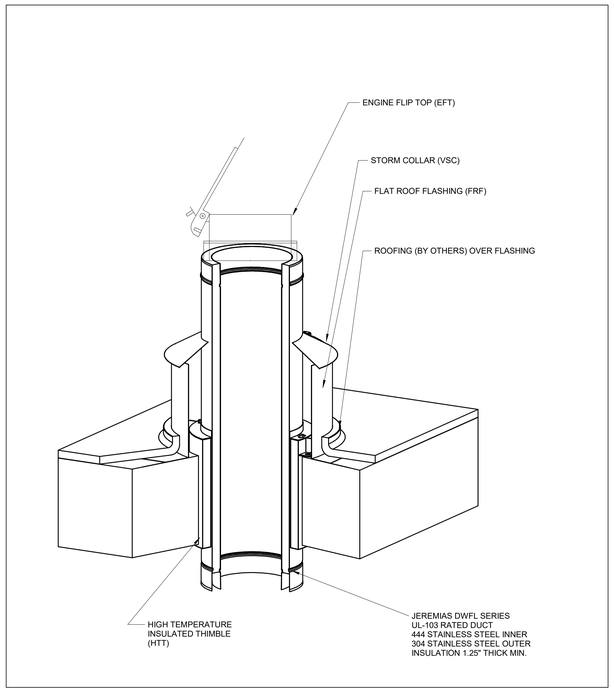
REVISIONS

No.	Description	Date

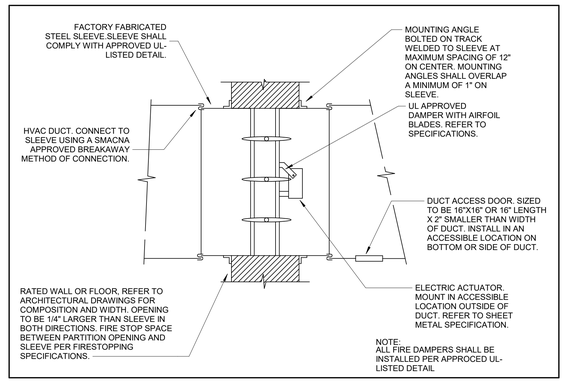
MECHANICAL DETAILS

M-502E

5/20/2024 11:13:48 AM



2 GENERATOR EXHAUST DETAIL
SCALE: NONE



1 FIRE/SMOKE DAMPER DETAIL
SCALE: NONE

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781

STATE OF KENTUCKY
CHRISTOPHER M. REEVES
25045
LICENSED PROFESSIONAL ENGINEER

RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

REVISIONS

No.	Description	Date

MECHANICAL DETAILS

M-503E

AIR HANDLING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL #	UNIT CONFIGURATION	SERVICE	LOCATION	SUPPLY FAN: PHYSICAL DATA WIDTH (IN.)	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LBS)	SUPPLY FAN 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	MOCP	VFD	RETURN FAN: 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	MOCP	VFD	REMARKS
AHU-B-1_CLS_1N	DAIKIN	CAH030GDHM	SEMI-CUSTOM	FLOOR 1, CLASSROOMS 111-112	BASEMENT	76	438	84	11500	12500	4600	PLENUM PLUG	4	2461	2.00	3.98	5.00	2.92	460 V	3	28 A	30	Yes	12500	PLENUM PLUG	4	1999	1.75	1.88	2.00	1.49	460 V	3	12 A	15	Yes	1,10,11,12,16, 18
AHU-B-2_CLS_2N	DAIKIN	CAH029GDHM	SEMI-CUSTOM	FLOOR 2 , CLASSROOMS 211-212	BASEMENT	70	464	90	10500	12500	4600	PLENUM PLUG	2	2116	2.25	4.36	10.00	6.22	460 V	3	28 A	40	Yes	12500	PLENUM PLUG	2	1778	2.00	2.14	5.00	3.38	460 V	3	15 A	20	Yes	1,10,11,12,16
AHU-B-3_AUX_B12N	DAIKIN	CAH090GDHM	SEMI-CUSTOM	BASEMENT, FLOORS 1 & 2, AREAS A & B	BASEMENT	140	566	118	28000	40000	14450	PLENUM PLUG	4	1495	2.50	4.52	15.00	10.01	460 V	3	77 A	90	Yes	40000	PLENUM PLUG	4	1027	2.25	2.40	7.50	5.40	460 V	3	48 A	50	Yes	1,10,11,12,16
AHU-B-4_MER_BN	DAIKIN	CAH021GDAC	SEMI-CUSTOM	PUMP / HEAT EXCHANGER ROOM	BASEMENT	82	66	112	2900	10000	0	CENTRIFUGAL DWDI	1	2075	1.50	3.15	10.00	8.83	460 V	3	13 A	20	Yes	-	N/A	-	-	-	-	-	-	0 V	0	0 A	0	No	2, 10, 11, 14, 16
AHU-B-5_ELEC_BN	DAIKIN	CAH029GDHM	SEMI-CUSTOM	MAIN ELECTRICAL ROOM	BASEMENT	70	418	90	9300	12000	2400	PLENUM PLUG	2	1927	1.50	3.33	7.50	4.63	460 V	3	22 A	30	Yes	12000	PLENUM PLUG	2	1598	1.25	1.39	5.00	2.30	460 V	3	15 A	20	Yes	3, 10, 11, 12, 16
AHU-NP-1_AUX_34N	DAIKIN	CAH116GDHM	SEMI-CUSTOM	FLOORS 3 & 4, AREAS A & B	NORTH PENTHOUSE	172	522	124	34000	52500	17000	PLENUM PLUG	4	1804	3.00	5.54	15.00	10.78	460 V	3	113 A	125	Yes	52500	PLENUM PLUG	4	1253	3.00	3.22	15.00	9.73	460 V	3	87 A	100	Yes	4, 10, 11, 12, 16
AHU-NP-2_AUX_56N	DAIKIN	CAH116GDHM	SEMI-CUSTOM	FLOORS 5 & 6, AREAS A & B	NORTH PENTHOUSE	172	522	126	35000	52500	17000	PLENUM PLUG	6	1807	3.00	5.57	15.00	10.84	460 V	3	113 A	125	Yes	52500	PLENUM PLUG	4	1253	3.00	3.22	15.00	9.73	460 V	3	87 A	100	Yes	5, 10, 11, 12, 16
AHU-NP-3_AUX_78N	DAIKIN	CAH116GDHM	SEMI-CUSTOM	FLOORS 7 & 8 AREAS A & B	NORTH PENTHOUSE	172	522	126	35000	52500	17000	PLENUM PLUG	6	1807	3.00	5.57	15.00	10.84	460 V	3	113 A	125	Yes	52500	PLENUM PLUG	4	1253	3.00	3.22	15.00	9.73	460 V	3	87 A	100	Yes	5, 10, 11, 12, 16
AHU-NP-4_LAB_9N	TEMTROL	CUSTOM	CUSTOM	FLOOR 9, AREA A	NORTH PENTHOUSE	208	547	110	48250	55000	28000	PLENUM PLUG	10	3143	2.50	8.24	15.00	9.55	460 V	3	185 A	200	Yes	27000	PLENUM PLUG	8	1948	2.00	3.11	3.00	2.65	460 V	3	29 A	30	Yes	6, 10, 11, 12, 15, 16, 17
AHU-SP-1_CLS_B1S	DAIKIN	CAH087GDHM	SEMI-CUSTOM	BASEMENT, FLOOR 1, AREAS B & C	SOUTH PENTHOUSE	136	498	122	27000	40000	11000	PLENUM PLUG	4	1541	2.75	4.92	15.00	10.88	460 V	3	77 A	90	Yes	40000	PLENUM PLUG	4	1065	2.50	2.69	7.50	6.01	460 V	3	48 A	50	Yes	1, 10 , 11, 12, 16
AHU-SP-2_OFC_23S	DAIKIN	CAH087GDHM	SEMI-CUSTOM	FLOORS 2 & 3, AREAS B & C	SOUTH PENTHOUSE	136	498	122	27000	40000	13500	PLENUM PLUG	4	1540	2.75	4.91	15.00	10.86	460 V	3	77 A	90	Yes	40000	PLENUM PLUG	4	1065	2.50	2.69	7.50	6.01	460 V	3	48 A	50	Yes	1,10,11,12,16
AHU-SP-3-RF_OFC_45S	DAIKIN	CAH075GVHM	SEMI-CUSTOM	FLOORS 4 & 5, AREAS B & C	SOUTH PENTHOUSE	136	160	106	8600	-	-	N/A	-	-	-	-	-	-	0 V	0	0 A	0	No	40000	PLENUM PLUG	4	1281	2.50	2.71	7.50	6.25	460 V	3	48 A	50	Yes	7, 10, 11, 13, 16
AHU-SP-3-SF_OFC_45S	DAIKIN	CAH088GDHM	SEMI-CUSTOM	FLOORS 4 & 5, AREAS B & C	SOUTH PENTHOUSE	138	330	122	18000	40000	14500	PLENUM PLUG	4	1532	2.75	4.84	15.00	10.71	460 V	3	77 A	90	Yes	-	N/A	-	-	-	-	-	-	0 V	0	0 A	0	No	8, 10, 11, 14, 16
AHU-SP-4_AUX_67S	DAIKIN	CAH087GDHM	SEMI-CUSTOM	FLOORS 6 & 7, AREAS B & C	SOUTH PENTHOUSE	136	536	120	28000	40000	13500	PLENUM PLUG	4	1541	2.75	4.92	15.00	10.88	460 V	3	77 A	90	Yes	40000	PLENUM PLUG	4	1052	2.50	2.69	7.50	6.11	460 V	3	48 A	50	Yes	9, 10, 11, 12, 16

REMARKS:

1. AIR HANDLING UNIT SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH TOP RETURN AIR INLET. RETURN AIR FAN ARRAY WITH BACKDRAFT DAMPERS, ECONOMIZER SECTION WITH TOP RELIEF, INTERNAL RETURN AND TOP OUTSIDE AIR DAMPERS (DAMPER ACTUATORS PROVIDED BY CONTROL'S CONTRACTOR). SIDE LOAD MERV 13 PRE FILTER, AIR BLENDER, HOT WATER HEATING COIL, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH TOP DISCHARGE OUTLET.
2. AIR HANDLING UNIT SHALL BE PROVIDED WITH A FRONT RETURN AIR INLET, MERV 13 PRE FILTER, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH TOP DISCHARGE OUTLET.
3. AIR HANDLING UNIT SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH TOP RETURN AIR INLET. RETURN AIR FAN ARRAY WITH BACKDRAFT DAMPERS, ECONOMIZER SECTION WITH TOP RELIEF, INTERNAL RETURN AND TOP OUTSIDE AIR DAMPERS (DAMPER ACTUATORS PROVIDED BY CONTROL'S CONTRACTOR). SIDE LOAD MERV 13 PRE FILTER, AIR BLENDER, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH TOP DISCHARGE OUTLET.
4. AIR HANDLING UNIT SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH TOP RETURN AIR INLET. RETURN AIR FAN ARRAY WITH BACKDRAFT DAMPERS, ECONOMIZER SECTION WITH TOP RELIEF, INTERNAL RETURN AND SIDE OUTSIDE AIR DAMPERS (DAMPER ACTUATORS PROVIDED BY CONTROL'S CONTRACTOR). SIDE LOAD MERV 13 PRE FILTER, AIR BLENDER, HOT WATER HEATING COIL, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH FRONT DISCHARGE OUTLET.
5. AIR HANDLING UNIT SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH TOP RETURN AIR INLET. RETURN AIR FAN ARRAY WITH BACKDRAFT DAMPERS, ECONOMIZER SECTION WITH TOP RELIEF, INTERNAL RETURN AND SIDE OUTSIDE AIR DAMPERS (DAMPER ACTUATORS PROVIDED BY CONTROL'S CONTRACTOR). SIDE LOAD MERV 13 PRE FILTER, AIR BLENDER, HOT WATER HEATING COIL, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH TOP DISCHARGE OUTLET.
6. AIR HANDLING UNIT SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH BOTTOM RETURN AIR INLET WITH SAFETY GRATE, RETURN AIR FAN ARRAY WITH BACKDRAFT DAMPERS, ECONOMIZER SECTION WITH TOP RELIEF, INTERNAL RETURN AND TOP OUTSIDE AIR DAMPERS (DAMPER ACTUATORS PROVIDED BY CONTROL'S CONTRACTOR). SIDE LOAD MERV 13 PRE FILTER, AIR BLENDER, HOT WATER HEATING COIL, 60" SECTION FOR FUTURE FIELD INSTALLED ADIABATIC HUMIDIFIER, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH BOTTOM DISCHARGE OUTLET WITH SAFETY GRATE.
7. RETURN FAN AIR HANDLING UNIT SECTION SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH BACK RETURN AIR INLET, RETURN AIR FAN ARRAY WITH BACKDRAFT DAMPERS, RELIEF, RETURN AND OUTSIDE AIR DAMPERS SHALL BE FIELD INTSTALLED AND MOUNTED IN DUCTWORK AND DISCHARGE PLENUM WITH FRONT DISCHARGE OUTLET.
8. AIR HANDLING UNIT SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH TOP RETURN AIR INLET, SIDE LOAD MERV 13 PRE FILTER, AIR BLENDER, HOT WATER HEATING COIL, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH TOP DISCHARGE OUTLET.
9. AIR HANDLING UNIT SHALL BE PROVIDED WITH A RETURN PLENUM SECTION WITH BOTTOM RETURN AIR INLET WITH SAFETY GRATE, RETURN AIR FAN ARRAY WITH BACKDRAFT DAMPERS, ECONOMIZER SECTION WITH TOP RELIEF, INTERNAL RETURN AND TOP OUTSIDE AIR DAMPERS (DAMPER ACTUATORS PROVIDED BY CONTROL'S CONTRACTOR). SIDE LOAD MERV 13 PRE FILTER, AIR BLENDER, HOT WATER HEATING COIL, ACCESS SECTION, CHILLED WATER COOLING COIL, ACCESS SECTION, SUPPLY FAN WALL WITH BACKDRAFT DAMPERS AND DISCHARGE PLENUM WITH BOTTOM DISCHARGE OUTLET WITH SAFETY GRATE.
10. PROVIDE PREMIUM EFFICIENT MOTOR COMPLETE WITH TYPE H INSULATION.
11. REFER TO DETAIL ON DRAWINGS M-500E, M-501E & M-502E FOR ALL ACCESS DOOR'S LOCATIONS, DUCT CONNECTIONS AND COIL CONNECTIONS LOCATIONS.
12. UNIT SHALL HAVE THE FOLLOWING ELECTRICAL POWER CONNECTIONS: (1) 480V/3PH SUPPLY FAN MOTOR CONTROL PANEL, (1) 480/3PH RETURN FAN MOTOR CONTROL PANEL, (1) 120V/1PH TO INTERIOR LIGHTS VIA FACTORY MOUNTED EXTERNAL J-BOX. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE POWER WIRING FROM VFD TO FAN ARRAYS POWER PANELS UNDER THE INSTALLALTION BID PACKAGE. VFDS SHALL BE PROVIDED BY CONTROLS CONTRACTOR UNDER THE INSTALLATION BID PACKAGE.
13. UNIT SHALL HAVE THE FOLLOWING ELECTRICAL POWER CONNECTIONS: (1) 480/3PH RETURN FAN MOTOR CONTROL PANEL, (1) 120V/1PH TO INTERIOR LIGHTS VIA FACTORY MOUNTED EXTERNAL J-BOX. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE POWER WIRING FROM VFD TO FAN ARRAYS POWER PANELS UNDER THE INSTALLALTION BID PACKAGE. VFDS SHALL BE PROVIDED BY CONTROLS CONTRACTOR UNDER THE INSTALLATION BID PACKAGE.
14. UNIT SHALL HAVE THE FOLLOWING ELECTRICAL POWER CONNECTIONS: (1) 480V/3PH SUPPLY FAN MOTOR CONTROL PANEL, (1) 120V/1PH TO INTERIOR LIGHTS VIA FACTORY MOUNTED EXTERNAL J-BOX. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE POWER WIRING FROM VFD TO FAN ARRAYS POWER PANELS UNDER THE INSTALLALTION BID PACKAGE. VFDS SHALL BE PROVIDED BY CONTROLS CONTRACTOR UNDER THE INSTALLATION BID PACKAGE.
15. PROVIDE FAN REMOVAL HOIST I-BEAM IN EACH FAN SECTION.
16. ALL AIRFLOW MEASURING STATIONS SHALL BE PROVIDED AND INSTALLED BY THE CONTROLS CONTRACTOR UNDER THE INSTALLATION BID PACKAGE.
17. PROVIDE AIR HANDLING UNIT WITH HEATING AND COOLING COONEY COILS.

AIR HANDLING UNIT SCHEDULE - CHILLED WATER COIL

MARK	CHILLED WATER COIL: 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-B-1_CLS_1N	564.1	364.8	80.3	67.3	52.7	52.3	476	0.81	44.0	56.0	93.7	12.30	8	2	8
AHU-B-2_CLS_2N	574.0	370.5	80.3	67.3	52.3	52.0	478	0.88	44.0	56.2	93.7	9.40	8	2	9
AHU-B-3_AUX_B12N	1796.1	1161.2	80.1	67.2	52.6	52.2	472	0.80	44.0	58.1	296.8	16.60	8	2	8
AHU-B-4_MER_BN	419.3	279.6	80.0	67.0	53.6	53.1	497	0.80	44.0	56.1	69.1	11.80	6	1	11
AHU-B-5_ELEC_BN	422.3	306.7	76.5	64.1	52.3	51.9	459	0.68	44.0	56.3	68.9	14.30	6	2	11
AHU-NP-1_AUX_34N	2228.4	1479.6	79.3	66.5	52.6	52.2	466	0.78	44.0	56.1	369.6	17.00	8	2	8
AHU-NP-2_AUX_56N	2228.4	1479.6	79.3	66.5	52.6	52.2	466	0.78	44.0	56.1	369.6	17.00	8	2	8
AHU-NP-3_AUX_78N	2228.4	1479.6	79.3	66.5	52.6	52.2	466	0.78	44.0	56.1	369.6	17.00	8	2	8
AHU-NP-4_LAB_9N	2983.6	1814.6	83.5	69.9	51.6	51.6	460	0.89	44.0	56.0	495.7	9.37	5	4	14
AHU-SP-1_CLS_B1S	1575.2	1075.8	78.1	65.6	52.7	52.2	488	0.84	44.0	56.1	261.4	12.90	8	2	8
AHU-SP-2_OFC_23S	1714.6	1134.4	79.6	66.7	52.8	52.4	488	0.84	44.0	56.0	286.7	15.30	8	2	8
AHU-SP-3-RF_OFC_45S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHU-SP-3-SF_OFC_45S	1786.6	1156.9	80.1	67.2	52.7	52.3	480	0.82	44.0	56.0	296.8	16.40	8	2	8
AHU-SP-4_AUX_67S	1765.4	1160.9	79.6	66.7	52.1	51.9	488	0.91	44.0	56.3	286.2	15.30	8	2	8

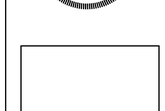
AIR HANDLING UNIT SCHEDULE - HOT WATER COIL

MARK	HEATING AIRFLOW (CFM)	HOT WATER COIL: 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-B-1_CLS_1N	6250	264.2	16.2	56.2	250	0.12	140.0	98.8	12.8	1.20	1	2	12
AHU-B-2_CLS_2N	6250	264.2	16.2	56.6	505	0.12	140.0	98.8	12.8	1.20	1	2	12
AHU-B-3_AUX_B12N	26800	744.6	29.0	55.3	317	0.08	140.0	99.6	36.8	4.20	1	2	8
AHU-B-4_MER_BN	-	-	-	-	-	-	-	-	-	-	-	-	-
AHU-B-5_ELEC_BN	-	-	-	-	-	-	-	-	-	-	-	-	-
AHU-NP-1_AUX_34N	26400	950.5	22.1	56.2	242	0.09	140.0	98.6	45.9	1.40	1	3	9
AHU-NP-2_AUX_56N	26400	950.5	22.1	56.2	242	0.09	140.0	98.6	45.9	1.40	1	3	9
AHU-NP-3_AUX_78N	26400	950.5	22.1	56.2	242	0.09	140.0	98.6	45.9	1.40	1	3	9
AHU-NP-4_LAB_9N	55000	1539.7	31.0	55.8	460	0.10	140.0	100.0	77.8	6.28	1	4	10
AHU-SP-1_CLS_B1S	26000	786.0	27.8	56.4	312	0.09	140.0	97.9	37.4	4.30	1	2	9
AHU-SP-2_OFC_23S	26000	786.0	27.8	56.4	312	0.09	140.0	97.9	37.4	4.30	1	2	9
AHU-SP-3-RF_OFC_45S	-	-	-	-	-	-	-	-	-	-	-	-	-
AHU-SP-3-SF_OFC_45S	26000	786.0	27.8	56.4	312	0.09	140.0	97.9	37.4	4.30	1	2	9
AHU-SP-4_AUX_67S	29000	653.3	34.0	55.3	516	0.08	140.0	99.4	32.2	3.20	1	2	7

AIR HANDLING UNIT SCHEDULE - FILTER SECTION

MARK	FILTER SECTION: PREFILTER TYPE	FILTER EFFICIENCY	FACE VELOCITY (FPM)	PRESSURE DROP (CLEAN) (\"WC)	PRESSURE DROP (DIRTY) (\"WC)
AHU-B-1_CLS_1N	PRE-PLEATED	MERV 13	442	0.30	1.00
AHU-B-2_CLS_2N	PRE-PLEATED	MERV 13	442	0.30	1.00
AHU-B-3_AUX_B12N	PRE-PLEATED	MERV 13	480	0.33	1.00
AHU-B-4_MER_BN	PRE-PLEATED	MERV 13	591	0.44	1.00
AHU-B-5_ELEC_BN	PRE-PLEATED	MERV 13	424	0.28	1.00
AHU-NP-1_AUX_34N	PRE-PLEATED	MERV 13	441	0.29	1.00
AHU-NP-2_AUX_56N	PRE-PLEATED	MERV 13	441	0.29	1.00
AHU-NP-3_AUX_78N	PRE-PLEATED	MERV 13	441	0.29	1.00
AHU-NP-4_LAB_9N	PRE-PLEATED	MERV 13	491	0.29	1.00
AHU-SP-1_CLS_B1S	PRE-PLEATED	MERV 13	480	0.33	1.00
AHU-SP-2_OFC_23S	PRE-PLEATED	MERV 13	480	0.33	1.00
AHU-SP-3-RF_OFC_45S					
AHU-SP-3-SF_OFC_45S	PRE-PLEATED	MERV 13	480	0.33	1.00
AHU-SP-4_AUX_67S	PRE-PLEATED	MERV 13	480	0.33	1.00

JRA architects
3225 Summit Square Place, Suite 200
Lexington, Kentucky 40509
859.252.6781



RESERVED FOR AHJ STAMP

CMTA

BP-04

MICHAEL D. RANKIN MD HEALTH EDUCATION BUILDING
UNIVERSITY OF KENTUCKY
1149 UNIVERSITY DRIVE, LEXINGTON, KENTUCKY

MECHANICAL

PROJECT	XKSM21
DATE	05/20/2024

REVISIONS

No.	Description	Date

MECHANICAL SCHEDULES

M-600E

5/20/2024 11:14:05 AM