Request for Proposal
UK-2047-20
Proposal Due Date – 03/04/2020

Construction Management Services
for Addition and Renovation of Alpha Delta Pi
Sorority House

Project No. 2524.0
### ATTENTION: This is not an order. Read all instructions, terms and conditions carefully.

**REQUEST FOR PROPOSAL (RFP)**

**PROPOSAL NO.:** UK-2047-20  
**Issue Date:** 02/11/2020  
**Title:** CM Services for Addition and Renovation of Alpha Delta Pi Sorority House  
**Purchasing Officer:** Matt Spalding  
**Phone:** 859-323-5405

**RETURN ORIGINAL COPY OF PROPOSAL TO:**  
**UNIVERSITY OF KENTUCKY PURCHASING DIVISION**  
**411 S LIMESTONE ROOM 322 PETERSON SERVICE BLDG.**  
**LEXINGTON, KY 40506-0005**

**IMPORTANT: PROPOSALS MUST BE RECEIVED BY: 03/04/2020 3 P.M. LEXINGTON, KY TIME.**

**NOTICE OF REQUIREMENTS**

1. The University’s General Terms and Conditions and Instructions to Bidders, viewable at [www.uky.edu/Purchasing/terms.htm](http://www.uky.edu/Purchasing/terms.htm), apply to this RFP. When the RFP includes construction services, the University’s General Conditions for Construction and Instructions to Bidders, viewable at [www.uky.edu/Purchasing/ccphome.htm](http://www.uky.edu/Purchasing/ccphome.htm), apply to the RFP.

2. Contracts resulting from this RFP must be governed by and in accordance with the laws of the Commonwealth of Kentucky.

3. Any agreement or collusion among offerors or prospective offerors, which restrains, tends to restrain, or is reasonably calculated to restrain competition by agreement to bid at a fixed price or to refrain from offering, or otherwise, is prohibited.

4. Any person who violates any provisions of KRS 45A.325 shall be guilty of a felony and shall be punished by a fine of not less than five thousand dollars nor more than ten thousand dollars, or be imprisoned not less than one year nor more than five years, or both such fine and imprisonment. Any firm, corporation, or association who violates any of the provisions of KRS 45A.325 shall, upon conviction, be fined not less than ten thousand dollars or more than twenty thousand dollars.

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

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

1. That I am the offeror (if the offeror is an individual), a partner, (if the offeror is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the offeror is a corporation);

2. That the attached proposal has been arrived at by the offeror independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other Contractor of materials, supplies, equipment or services described in the RFP, designed to limit independent bidding or competition;

3. That the contents of the proposal have not been communicated by the offeror or its employees or agents to any person not an employee or agent of the offeror or its surety on any bond furnished with the proposal and will not be communicated to any such person prior to the official closing of the RFP;

4. That the offeror is legally entitled to enter into contracts with the University of Kentucky and is not in violation of any prohibited conflict of interest, including, but not limited to, those prohibited by the provisions of KRS 45A.330 to .340, and 164.390;

5. That the offeror, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sale and use tax imposed by Chapter 139 to the extent required by Kentucky law and will remain registered for the duration of any contract award;

6. That I have fully informed myself regarding the accuracy of the statement made above.

**SWEORN 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:**

**IMPORTANT:** The contents of the proposal have not been communicated by 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.

---

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**CITY, STATE & ZIP CODE:**  
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**TYPED OR PRINTED NAME:**  
**WEB ADDRESS:**

**FEDERAL EMPLOYER ID NO.:**  
**SIGNATURE:**  
**DATE:**
Table of Contents

1.0 DEFINITIONS ..................................................................................................................... 6

2.0 GENERAL OVERVIEW ................................................................................................. 7
  2.1 Intent and Scope ........................................................................................................... 7
  2.2 Background Information ............................................................................................ 8
  2.3 University Information ............................................................................................... 9

3.0 PROPOSAL REQUIREMENTS ......................................................................................... 11
  3.1 Key Event Dates ......................................................................................................... 11
  3.2 Offeror Communication ............................................................................................. 11
  3.3 Pre-Proposal Conference ........................................................................................... 12
  3.4 Offeror Presentations ................................................................................................ 12
  3.5 Preparation of Offers .................................................................................................. 13
  3.6 Proposed Deviations from the RFP ............................................................................. 13
  3.7 Proposal Submission and Deadline .......................................................................... 14
  3.8 Modification or Withdrawal of Offer ........................................................................ 14
  3.10 Rejection .................................................................................................................. 14
  3.11 Addenda ................................................................................................................... 15
  3.12 Disclosure of Offeror’s Response ............................................................................. 15
  3.13 Restrictions on Communications with University Staff ........................................... 15
  3.14 Cost of Preparing Proposal ...................................................................................... 15
  3.15 Disposition of Proposals .......................................................................................... 15
  3.16 Alternate Proposals ................................................................................................... 16
  3.17 Questions ................................................................................................................... 16
  3.18 Section Titles in the RFP .......................................................................................... 16
  3.19 No Contingent Fees .................................................................................................. 16
  3.20 Proposal Addenda and Rules for Withdrawal ........................................................... 16

4.0 PROPOSAL FORMAT AND CONTENT ...................................................................... 17
  4.1 Proposal Information and Criteria .............................................................................. 17
  4.2 Signed Authentication of Proposal and Statements of Non-Collusion and Non-Conflict of Interest Form ........................................................................................................... 17
  4.3 Transmittal Letter ........................................................................................................ 17
  4.4 Executive Summary and Proposal Overview ............................................................ 18
Attachments

Attachment "A" General Conditions for CM at Risk
Attachment "B" Contract Agreement between the University of Kentucky and CM at Risk
Attachment "C" Special Conditions for CM at Risk
Attachment "D" Current Schedule
Attachment “E” Staffing Matrix
Attachment "F" Bonds and Affidavit
Attachment "G" MBE/WBE Participation Goals
Attachment "H" Tree Protection Standards
Attachment “I” Geotechnical Report
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, Purchasing Division, Room 322 Peterson Service Building, Lexington, KY 40506-0005.

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

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

The term "solicitation" means RFP.

The term "University" means University of Kentucky.
2.0 GENERAL OVERVIEW

2.1 Intent and Scope

The University of Kentucky desires the services of an experienced and highly qualified construction management firm to provide "FULL SERVICE" construction management on the proposed projects. The Construction Manager (CM) selected will become a responsible, cooperative and contributing member of the Owner's professional team for the design and construction of the project. The Construction Manager (CM) will provide assistance and advice and provide management services to the Owner and design consultants to assure the project is completed within defined budget, program and schedule.

This project is currently has a total maximum construction budget of approximately $4,425,000, to include costs for Construction Management Services as well as for the award of trade contracts, including all CM related activities.

The contracts established for construction management services will be of a pure agency relationship through Phase 4 Bidding, and then convert to a “LUMP SUM, AT RISK” contract.

The Construction Manager (CM) will not be allowed to self-perform work or bid on any of the proposed work categories. The Construction Manager will hold all construction contracts.

The CM shall break the trade packages down such that there are no fewer than 12 trade contracts.

A Pre-Proposal Conference will be held on 02/18/2020 at 3:00 PM in Room 114 Chemistry-Physics Building, 505 Rose Street, Lexington, KY. Please see Section 3.3 for additional information.

The Scope of Services is further defined in Section 7.0 of this Request for Proposal (RFP).

In addition, the following Attachments apply to this RFP:

Attachment "A" General Conditions for CM at Risk
Attachment "B" Contract Agreement between the University of Kentucky and CM at Risk
Attachment "C" Special Conditions for CM at Risk
Attachment "D" Current Schedule
Attachment “E” Staffing Matrix
Attachment “F” Bonds and Affidavit
Attachment "G" MBE/WBE Participation Goals
Attachment "H" Tree Protection Standards
Attachment "I" Geotechnical Report
2.2 Background Information

Project Vision

Updating the Alpha Delta Pi House assures the future of Beta Psi chapter on UK’s campus by appealing to past, present and potential members of Alpha Delta Pi and by engaging with the campus and demonstrating the chapter’s continued vitality on the corner of Rose and Columbia.

Project Background

The Beta Psi Chapter of Alpha Delta Pi was founded on University of Kentucky’s campus on December 6, 1941. In the late 40s, Alpha Delta Pi moved into its current location, across from Maxwell Place, the home of UK’s President. In the mid-60s, an addition was made to the rear of the House to expand dining facilities and the capacity for members to live there.

The House’s prime location in the heart of campus continues to allow the members of Alpha Delta Pi to fully participate in the life of the University through academics, leadership development and service to others. ADPi is the top-ranked Greek organization on campus academically.

While the Alpha Delta Pi House is home to 49 college women and a house director, the chapter house is the focal point for academics, training, meeting, gathering and dining for nearly 300 members during the course of the school year.

The welcoming front door of this two-story house is considered its signature feature by alumnae and current members alike. The first floor is dedicated primarily to common areas: a formal living room, a dining room, a library/study, full catering kitchen, snack kitchen and guest restroom. The house director’s suite, just off the foyer, includes a sitting room, bedroom and bathroom. Sleep/study rooms for eight members, including two bathrooms, round out the first floor.

The second floor contains sleep/study rooms for 41 members ranging from two to three people per room. A study area, kitchenette and two bathroom facilities complete the second floor.

The partial basement contains the chapter study room, creative educational space, laundry facilities and mechanicals.

The chapter house, including the basement, is 13,607 square feet. While the property and house are owned by the University of Kentucky, Beta Psi of Alpha Delta Pi House Corporation leases the house from UK and is responsible for maintenance, renovation and construction expenses.

Project Outcomes

With the proposed addition and renovation, this project will enlarge the existing building to 15,507 square feet, enhancing the size and flexible use of common areas, increasing the occupancy to 54 members and the house director and upgrading the infrastructure. The following outlines the outcomes for this project:

- Maintain the warmth, character and architectural integrity of the House
- Increase the square footage dedicated to common, multi-purpose spaces
- Enlarge and improve the existing housing amenities (bathroom/laundry areas)
- Expand kitchen facilities to support meal preparation and service from 50 or 250
- Increase sleep/study accommodations by five to allow more members to live on campus
• Incorporate a private entrance/exit and laundry facilities into the house director suite
• Enhance outdoor living spaces and landscaping
• Upgrade the infrastructure, including mechanicals, security and technology accessibility, to improve livability, to ensure cost efficiency of ongoing maintenance and upkeep, and to meet and exceed overall safety and ADA compliance measures

The chapter members will be vacating the House in May 2020, at the conclusion of the school year, to facilitate the timely start to the renovation and expansion. The expectation is for the chapter to re-occupy the House in August 2021 in preparation for the beginning of the school year and new member recruitment.

2.3 University Information

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

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

Research at the University of Kentucky is a dynamic enterprise encompassing both traditional scholarship and emerging technologies, and UK’s research faculty, staff and students are establishing UK as one of the nation’s most prolific public research universities. UK’s research enterprise attracted $285 million in research grants and contracts from out-of-state sources, which generated a $580 million impact on the Kentucky economy. Included in this portfolio is $153 million in federal awards from the National Institutes of Health, non-NIH grants from the Department Health and Human Services, the National Science Foundation, Department of Energy, Department of Agriculture and NASA, among others. The National Science Foundation ranks UK’s research enterprise 44th among public institutions.
With more than 50 research centers and institutes, UK researchers are discovering new knowledge, providing a rich training ground for current students and the next generation of researchers, and advancing the economic growth of the Commonwealth of Kentucky. Several centers excel in the services offered to the public. The Gluck Equine Research Center is one of only three facilities of its kind in the world, conducting research in equine diseases.

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

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

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

UK Chandler Hospital includes the only Level 1 Trauma Center for both adult and pediatric patients in Central and Eastern Kentucky. In addition, UK HealthCare recently opened one of the country's largest robotic hybrid operating rooms and the first of its kind in the region. While our new patient care pavilion is the leading healthcare facility for advanced medical procedures in the region, our talented physicians consult with and travel to our network of affiliate hospitals so Kentucky citizens can receive the best health care available close to their home and never need to leave the Bluegrass for complex subspecialty care.

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

3.1 Key Event Dates

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<tr>
<th>PHASE 1</th>
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<tbody>
<tr>
<td>Release of RFP</td>
<td>02/11/2020</td>
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<tr>
<td>Pre-Proposal Conference at 3:00 PM</td>
<td>02/18/2020</td>
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<tr>
<td>Deadline for Written Questions Phase 1 at 3:00 PM</td>
<td>02/24/2020</td>
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<tr>
<td>RFP Proposals Due Date at 3:00 PM*</td>
<td>03/04/2020</td>
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<tr>
<td>Evaluation of Phase 1 Proposals</td>
<td>03/09/2020</td>
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<th>PHASE 2**</th>
<th>Date</th>
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<tr>
<td>Notification of Phase 2 Finalist</td>
<td>03/10/2020</td>
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<tr>
<td>Deadline for Written Questions from Phase 2 Finalist</td>
<td>03/12/2020</td>
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<tr>
<td>Offeror Presentations from Phase 2 Finalist</td>
<td>03/26/2020</td>
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<tr>
<td>Offeror Financial Proposal</td>
<td>03/26/2020</td>
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<tr>
<td>Contract Award</td>
<td>04/02/2020</td>
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*Decisions and Clarification's will be incorporated into the proposal documents by an addendum.
**The Phase 2 Key Events are projected dates.

3.2 Offeror Communication

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

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

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

Mr. Matt Spalding  
Purchasing Division  
University of Kentucky  
322 Peterson Service Building  
Lexington, KY 40506-0005  
Phone: (859) 323-5405  
Fax: (859) 257-1951  
E-mail: matthew.spalding@uky.edu

All communication with the University regarding this RFP shall only be directed to the purchasing officer listed above.
3.3 **Pre-Proposal Conference**

A pre-proposal conference will be held in Lexington, Kentucky on 02/18/2020 at 3:00 PM in Room 114 Chemistry-Physics Building, 505 Rose Street, Lexington, KY, to allow prospective contractors an opportunity to ask questions and clarify the University’s expectations. This conference provides offerors 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 and copies of prior year financial reports will be distributed.

- 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 Phase 2 Finalists shall be required to make a presentation to the evaluation committee. The interviews are scheduled to be held on **Thursday, March 26, 2020**. Actual interview times for the Phase 2 finalist will be scheduled at a later time. Also, an agenda for the Phase 2 finalist will be issued prior to the interviews.

The Financial Proposal shall be submitted only by the Offerors that are selected as Phase 2 Finalist for performing the Work. The Financial Proposal shall be a lump sum proposal to include all costs through warranty. Phase 2 Finalists must provide one (1) copy of the Financial Proposal at the interview presentation and addressed to:

Mr. Matt Spalding  
Purchasing Division  
University of Kentucky  
411 South Limestone St.  
322 Peterson Service Building  
Lexington, KY 40506-0005

Financial Proposals shall be enclosed in envelopes to the above referenced address and shall show the solicitation number and the name and address of the Offeror on the face of the envelope.

The fee shall include no less than the services requested in the RFP, and as listed below:

a. All pre-construction services and expenses  
b. All field office expenses  
c. All field staff expenses  
d. All office equipment and supplies  
e. All office maintenance and furnishings  
f. All communications services including phone and internet services
g. All job-site computers, software and printers, including electronic submittals
h. All project transportation costs including vehicles and travel
i. All miscellaneous printing and photo costs for documents printed for the use of the CM’s staff
j. Costs for a thorough constructability and interdisciplinary coordination review of the Construction Documents. The Construction Manager will work with the University and the Designer of Record in identifying and preparing Bid Packages for soliciting trade representation. The University requires a minimum of seven (7) trade contracts, with more provided as appropriate.

k. Detailed cost estimates at the Construction Document phase of the project, plus a final cost estimate broken down to correspond to the respective trade contracts to be bid.
l. All overhead and profit
m. Premium from performance and payment bonds shall assume a $4,425,000 construction cost (construction costs will be the sum total of all trade contracts and the Construction Manager contract and will be adjusted after procurement of all trades).
n) Premium for General Liability insurance shall assume a $4,425,000 construction cost (construction costs will be the sum total of all trade contracts and the Construction Manager contract and will be adjusted after procurement of all trades)

3.5 Preparation of Offers

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

The offeror will furnish all information required by this solicitation.

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

An electronic version of the RFP, in .PDF format only, is available through the University of Kentucky Purchasing Division web site: www.uky.edu/purchasing/bidlist.htm

3.6 Proposed Deviations from the RFP

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

Note: Offerors shall not submit their standard terms and conditions as exceptions to the University’s General Terms and Conditions. Each exception to the University’s General Terms and Conditions shall be individually addressed.
3.7 **Proposal Submission and Deadline**

Offeror must provide one (1) printed and one (1) digital (pdf) copies of each technical proposal under a sealed cover, prior to **3:00 P.M. Lexington, KY. time on Wednesday, March 4, 2020** and addressed to:

Mr. Matt Spalding  
Purchasing Division  
University of Kentucky  
322 Peterson Service Building  
Lexington, KY 40506-0005

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

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

Proposals shall be enclosed in sealed envelopes to the above referenced address and shall show on the face of the envelope: the closing time and date specified, the solicitation number and the name and address of the offeror.

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 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.

3.10 **Rejection**

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

- Failure of a proposal to conform to the essential requirements of the RFP.

- Imposition of conditions that would significantly modify the terms and conditions of the solicitation or limit the offeror’s liability to the University on the contract awarded on the basis of such solicitation.

- Failure of the offeror to sign the University RFP. This includes the Authentication of Proposal and Statement of Non-Collusion and Non-Conflict of Interest statements.

- Receipt of proposal after the closing date and time specified in the RFP.
3.11 Addenda

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

3.12 Disclosure of Offeror’s Response

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

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

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

3.13 Restrictions on Communications with University Staff

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

3.14 Cost of Preparing Proposal

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

3.15 Disposition of Proposals

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

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

3.17 **Questions**

All questions should be submitted by either fax or e-mail to the purchasing officer listed in Section 3.2 no later than the date listed in Section 3.1. Please address email to matthew.spalding@uky.edu and copy sbowlin@uky.edu.

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.
4.0 PROPOSAL FORMAT AND CONTENT

4.1 Proposal Information and Criteria

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

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

- Signed Authentication of Proposal and Statement of Non-Collusion and Non-Conflict of Interest Form
- Transmittal Letter
- Executive Summary and Proposal Overview
- Criteria 1 - Offeror Qualifications
- Criteria 2 – Project Team Qualifications
- Criteria 3 – Services Defined
- Criteria 4 – Scheduling Ability
- Criteria 5 – Constructability and Interdisciplinary Coordination Review

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

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

4.3 Transmittal Letter

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

- A statement referencing all addenda and written questions, the answers and any clarifications to this RFP issued by the University and received by the offeror (If no addenda have been received, a statement to that effect should be included.).

- A statement that the offeror’s proposal shall remain valid for six (6) months after the closing date of the receipt of the proposals.

- A statement that the offeror will accept financial responsibility for all travel expenses incurred for oral presentations (if required) and candidate interviews.
• A statement that summarizes any deviations or exceptions to the RFP requirements and includes a detailed justification for the deviation or exception.

• A statement that identifies the confidential information as described in Section 6.11.

4.4 Executive Summary and Proposal Overview

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

4.5 Criteria 1 - Offeror Qualifications

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

a) Please provide a brief narrative describing of the history of your firm. Identify the number of employees in your firm, and the ownership.

b) Please provide an executive summary profile of your firm indicating the total annual volume of work; an overview of the firm's resources; the approximate percentage of University related work versus other project types; a breakdown of your firm's volume relative to CM @ Risk, CM Agency, Lump-sum negotiated, Lump-sum hard bid, design-build, etc.; Indicate whether your firm routinely self performs any trade work and if so the relative amount of self-performed work to the total volume. Indicate what resources, if any, your firm has regarding self-performed trade work. Provide any other information necessary to describe your core business parameters.

c) Provide an organizational chart of your firm indicating the lines of authority for the senior personnel involved in performance of this contract and relationships of this staff to other programs or functions of the firm. This chart should show lines of authority to the next senior level of management beyond the project team level.

d) Has your firm had a contract terminated for default in the last five years? If so, describe such incident.

e) Indicate any other experience that demonstrates the qualifications of your firm for the performance of this contract.
4.6 **Criteria 2 – Project Team Qualifications**

a) Please provide an organization chart, resumes of key team members, and brief description of roles and responsibilities.

b) **Complete and provide the detailed staffing chart for construction indicating the on-site staffing that you recommend to adequately provide the construction management services requested.** Refer to Attachment (“E”) Staffing Matrix.

c) Please describe at least 5 projects of similar scale and complexity to which project members of the team have been involved and the level of their involvement. Provide the project name, size, cost, date, firm role, team member role, and owner contact information.

d) The CM must commit that staff identified in your proposal will actually perform the assigned work and be committed for the duration. Describe the level of commitment and the ability your firm has regarding this assurance and the stability of the proposed team.

4.7 **Criteria 3 – Services Defined**

a) The CM should provide documentation of their understanding of the services requested in the RFP and contract documents.

b) Your proposal must provide for the completion of all work necessary to accomplish the scope of work defined in this RFP. Include a complete description of the proposed approach and methodology to accomplish the work described. The plan must be in sufficient detail to convey to the evaluation team the CM’s knowledge of projects of similar scale and complexity and the CM’s knowledge of the requirements, demands, and constraints of this project.

c) Explain how your firm/team approaches budgeting and budget maintenance to assure a successful completion within budget.

d) Describe your firm’s Disadvantaged Business Enterprise program and strategy for achieving DBE participation as well as your strategy to promote local trade, contractor, and vendor participation this project.

4.8 **Criteria 4 – Scheduling Ability**

a) Explain how your firm/team approaches scheduling and schedule maintenance to assure a successful on time completion of the design and construction phases.

b) Provide examples of schedules your firm has generated in support of projects of the size and complexity of this project.
4.9 Criteria 5 – Constructability and Interdisciplinary Coordination Review

a) Describe the process your firm will undertake to accomplish a comprehensive constructability and interdisciplinary coordination review of the final construction documents for Bid Packages. Confirm this process will identify constructability problems and document related conflicts which will be corrected and incorporated into bidding documents to reduce RFI’s and minimize change orders.

b) Provide examples of the final products of such reviews and describe how their results can be productively incorporated into the construction documents.
5.0 EVALUATION CRITERIA PROCESS

A committee of University officials appointed by the Director of Purchasing will evaluate proposals and make a recommendation to the Director of Purchasing. The University of Kentucky will use a multi-phase evaluation process as outlined below.

The evaluation will be based upon the information provided in the proposal, the Financial Proposal, additional information requested by the University for Clarification, information obtained from references and independent sources, and oral presentations, if requested.

The evaluation of proposals will include consideration of responses to the list of criteria in Section 4.1 through 4.9. Offerors must specifically address all criteria in their response. Any deviations or exceptions to the specifications or requirements must be described and justified in the Transmittal Letter. Failure to list such exceptions or deviations in the transmittal letter may be considered sufficient reason to reject the proposal.

The evaluation of responsive proposals shall then be completed by an evaluation committee and will be evaluated strictly in accordance with the requirements set forth in this RFP, including any addenda that are issued.

Phase 1 Evaluation Process and Scoring

The evaluation committee shall review proposals and each committee member shall independently score each proposal based on the Phase 1 Evaluation Criteria contained in this document. The score as determined by each evaluation committee member will be averaged to determine the Phase 1 committee composite score for each Offeror. Insofar as it is practical, no less than two (2) Offerors will be selected to participate in Phase 2.

A minimum score to proceed to Phase 2 is 75.

The relative weight and available points/score of the criteria for Phase 1 is defined below:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualifications – Firm</td>
<td>20</td>
</tr>
<tr>
<td>Project Team Qualifications</td>
<td>30</td>
</tr>
<tr>
<td>Services Defined</td>
<td>30</td>
</tr>
<tr>
<td>Scheduling Ability</td>
<td>10</td>
</tr>
<tr>
<td>Constructability and Interdisciplinary Coordination</td>
<td>10</td>
</tr>
<tr>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>Maximum Points available for Phase 1</td>
<td>100</td>
</tr>
</tbody>
</table>

Phase 2 Evaluation Process and Scoring

Each Offeror selected to participate in Phase 2 shall be required to participate in a Presentation before the evaluation committee and shall submit a Financial Proposal. Phase 2 finalist may also be required to submit additional information as requested by the University.

Phase 2 Step 1 - The Phase 2 Presentations and any additional information supplied by the finalist shall be evaluated and ranked by the evaluation committee members, who shall not have knowledge of the Financial Proposal component. Each evaluator shall independently evaluate the Phase 2 non price offers and indicate a ranking (1st, 2nd, 3rd, etc...).
The evaluation committee shall then discuss and determine the ranking for each Offeror.
The relative weight and available points/score of the criteria for Phase 2 Step 1 is defined below:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Points/Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>100 Points</td>
</tr>
<tr>
<td>2nd</td>
<td>75 Points</td>
</tr>
<tr>
<td>3rd</td>
<td>50 Points</td>
</tr>
<tr>
<td>4th or below</td>
<td>25 Points</td>
</tr>
</tbody>
</table>

The total maximum points/scores available for the Non Price committee composite score for Phase 2 Step 1 will be 100 points/score.

**Phase 2 Step 2** - A total average Non-Price score for Phase 1 and for Phase 2 Step 1 shall be calculated for each Offeror taking part in Phase 2. The maximum points/score available for Non-Price Score will be 200. The Offerors shall have their Non-Price Score determined by applying the following formula:

\[ \text{Phase 1} + \text{Phase 2 Step 1} = \text{Phase 2 Step 2 Non-Price Score} \]

**Phase 2 Step 3** - The Financial Proposals are evaluated in Phase 2 Step 3. The maximum points/score available for Offeror’s Financial Score will be 200. The Offeror proposing the lowest price/score shall receive the maximum price/score of 200 points. The Offerors shall have their price/score determined by applying the following formula:

\[ \frac{\text{Lowest price}}{\text{Offeror’s price}} \times 200 = \text{Offeror’s Financial Score} \]

**Phase 2 Step 4** - The Offeror with the highest point total from Phase 2 Step 2 plus Phase 2 Step 3 shall receive the award unless the Financial Proposal is in excess of the authorized budget. If two or more of the Offerors achieve the same highest point total at the end of the final phase scoring, the purchasing officer shall request best and final proposals from each Offeror. The Offerors shall have their price/score determined by applying the following formula:

\[ \text{Non Price Score (Phase 1 and Phase 2)} + \text{Offeror’s Financial Score} = \text{Offeror’s Total Score} \]

The financial evaluation of this work will be based on the total lump sum for the two projects.
Total Evaluation Scoring

The relative importance and available points/score of the criteria for Phase 2 is defined below:

- Maximum Financial Proposal Point/Score: 200 (50%)
- Maximum Non Price Points/Score for Phase 1 and Phase 2: 200 (50%)

Maximum Points available for Financial and Non Price Score: 400 Points

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).
6.0 SUPPLEMENTAL CONDITIONS

6.1 Terms and Conditions

The General Conditions of the Contract for Construction by a Construction Manager at Risk are attached as Attachment “A”.

6.2 Contract

The Contract between University of Kentucky and Construction Manager at Risk are attached as Attachment “B”.

The proposal shall include pricing for all phases as described herein.

6.3 Special Conditions

The Special Conditions of the Contract for Construction by a Construction Manager are attached as Attachment “C”

6.4 Bonding

Only Phase 2 Offerors shall submit a bid guarantee of not less than five (5%) percent of the amount of the base bid.

A 100% Performance Bond and 100% Payment Bond shall be furnished by the successful bidder. All bonding and insurance requirements are contained in the RFP and/or General Conditions.

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond as defined in the Agreement, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void.

The Construction Manager shall provide a Performance and Payment Bond initially in the amount of the Construction Management Service fee and, subsequently, the Construction Manager shall provide performance and payment bonds for each phase of the Work to be performed under the Contract at such time the phase of the Work is awarded, each in a penal amount equal to the dollar amount for the Work included in the applicable phase.

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 Director of Purchasing and incorporated as a written modification to the contract. Memoranda of understanding and correspondence shall not be interpreted as a modification to the contract.
6.6 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 waiver shall in no way modify the RFP requirements or excuse the offeror from full compliance with the RFP specifications and other contract requirements if the offeror is awarded the contract.

6.7 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.

6.8 Construction Manager Cooperation in Related Efforts

The University of Kentucky reserves the right to undertake or award other contracts for additional or related work. The Construction Manager shall fully cooperate with such other Contractors and University employees and carefully fit their work to such additional work. The Construction Manager shall not commit or permit any act, which will interfere with the performance of work by any other Contractor(s) or by University employees. This clause shall be included in the contracts of all parties with whom this Construction Manager will be required to cooperate. The University shall equitably enforce this clause to all parties, to prevent the imposition of unreasonable burdens on any Construction Manager.

6.9 Construction Manager 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.
6.10 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.

6.11 Confidentiality

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

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

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

6.12 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 is certifying that no actual, apparent or potential conflict of interest exists between the interests of the University and the interests of the offeror. A conflict of interest (whether contractual, financial, organizational or otherwise) exists when any individual, contractor or subcontractor has a direct or indirect interest because of a financial or pecuniary interest, gift or other activities or relationships with other persons (including business, familial or household relationships) and is thus unable to render or is impeded from rendering impartial assistance or advice, has impaired objectivity in performing the proposed work or has an unfair competitive advantage.

Questions concerning this section or interpretation of this section should be directed to the University purchasing officer identified in this RFP.
6.13 **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/pmarketing/brand-standards](http://www.uky.edu/pmarketing/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://ourbrand.ukhealthcare.org](https://ourbrand.ukhealthcare.org).

Contractor warrants that its products or services provided hereunder will be in compliance with all applicable Federal disabilities laws and regulations, including without limitation the accessibility requirements of Section 255 of the Federal Telecommunications Act of 1996 (47 U.S.C. § 255) and Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d), and its implementing regulations set forth at Title 36, Code of Federal Regulations, Part 1194. For purposes of clarity, updated regulations under Section 508 standards now incorporate WCAG 2.0, and for purposes of this agreement WCAG 2.0 Level AA compliance is expressly included. Contractor agrees to promptly respond to, resolve and remediate any complaint regarding accessibility of products or services in a timely manner and provide an updated version to University at no cost. If deficiencies are identified, University reserves the right to request from Contractor, a timeline by which accessibility standards will be incorporated into the products or services provided by Contractor and shall provide such a timeline within a commercially reasonable duration of time. Failure to comply with these requirements shall constitute a material breach of this Agreement and shall be grounds for termination of this Agreement.

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

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

The Construction Manager (CM) will provide the following services:

- Design Phase (Estimating, Budget Reconciliation, and Constructability Reviews for each phase, Schematic through Construction Documents)
- Bid and Award
- Construction, including Acceptance
- Post Construction, including Warranty.

The CM, in consultation with the Designer of Record (EOP Architects) and the University, will recommend the deliverables of project schedule consistent with Bid Packages necessary to complete the construction within the specified time. Subject to the approval by both the Designer of Record (EOP Architects) and University, the CM will assume the lead in maintaining the project schedule, bidding, construction progress, facility acceptance, and all post construction activities.

Project Outcomes
With the proposed addition and renovation, this project will enlarge the existing building to 15,507 square feet, enhancing the size and flexible use of common areas, increasing the occupancy to 54 members and the house director and upgrading the infrastructure. The following outlines the outcomes for this project:

- Maintain the warmth, character and architectural integrity of the House
- Increase the square footage dedicated to common, multi-purpose spaces
- Enlarge and improve the existing housing amenities (bathroom/laundry areas)
- Expand kitchen facilities to support meal preparation and service from 50 or 250
- Increase sleep/study accommodations by five to allow more members to live on campus
- Incorporate a private entrance/exit and laundry facilities into the house director suite
- Enhance outdoor living spaces and landscaping
- Upgrade the infrastructure, including mechanicals, security and technology accessibility, to improve livability, to ensure cost efficiency of ongoing maintenance and upkeep, and to meet and exceed overall safety and ADA compliance measures

The chapter members will be vacating the House in May 2020, at the conclusion of the school year, to facilitate the timely start to the renovation and expansion. The expectation is for the chapter to re-occupy the House in August 2021 in preparation for the beginning of the school year and new member recruitment.
7.1 Preliminary Project Schedule:

The proposed schedule for this project is as follows:

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase III Final Construction Documents presented to CPMD</td>
<td>05/13/2020</td>
</tr>
<tr>
<td>Phase III Project Advertised for Bids</td>
<td>05/19/2020</td>
</tr>
<tr>
<td>Phase III Bid Date</td>
<td>06/18/2020</td>
</tr>
<tr>
<td>Phase III Post Bid Reviews</td>
<td>06/23/2020</td>
</tr>
<tr>
<td>Phase III Contracts Awarded</td>
<td>06/29/2020</td>
</tr>
<tr>
<td>Phase III Construction Begins*</td>
<td>07/06/2020</td>
</tr>
<tr>
<td>Substantial Completion - All Trade Contracts</td>
<td>06/29/2021</td>
</tr>
<tr>
<td>Final Completion - All Trade Contracts</td>
<td>07/29/2021</td>
</tr>
</tbody>
</table>

* Duration is contingent upon review by CM and house being unoccupied.

7.2 Proposal Submittal Requirement

Each Offeror shall provide information, documentation and other necessary materials that best demonstrates and informs the University of the firm’s abilities, professional competence, experience and expertise that will enable the firm to provide the construction management services desired. Demonstrated experience and success in promoting and achieving project MBE/WBE participation is desirable. Each Offeror is expected to examine all specifications, terms, conditions, and instructions in this Request for Proposal. Failure to do so will be at the Offeror's risk.

The submittal response should be focused with straightforward concise descriptions of the firm’s capabilities. In keeping with this requirement, the Offeror’s response to this request should be no more than (50) fifty pages, not including any preprinted firm information and brochures. Broad scope of services that may be required on this project include, but not necessarily be limited to those described below:

7.3 Construction Management Team

The ultimate success of the project is dependent on the skills and expertise of the CM Project Manager and the individuals assigned to provide the services required. The proposal shall provide detailed information on the key personnel and support staff proposed to be assigned on this project. The CM Project Manager is the individual who is assigned to the project to provide overall management during both design and construction and who has the total responsibility for the successful completion of the project. This submittal should include responsibilities of each team member along with resume and qualifications of each member proposed. The individuals named shall be available for assignment to this project. Team members proposed and/or assigned must be available for the duration of the project and cannot be changed or reassigned without the approval of the University of Kentucky. The University of Kentucky may request team members be replaced at any time.

Please complete the attached matrix entitled “Staffing Matrix”, Attachment “E” providing the staffing level you would recommend for the duration of construction activities.
7.4 **Construction Management Experience**

The proposal submittal shall include projects completed or that are still under construction that demonstrates your experience in supplying construction management services on projects of similar size, type and complexity. The Owner’s and the design consultant’s contact person(s) on each of the projects listed shall be provided along with current telephone numbers. The submittal should include a written narrative on how your organization managed the design and construction process on these projects. Select relevant projects. The projects selected should be projects completed by the personnel that will supply management services for this project.

7.5 **Design Phase Services**

The University has retained the firm of EOP Architects, Lexington, KY to provide design and conventional architectural contract administration services for the project. The CM, in consultation with EOP Architects and the University, will take the lead and develop the remainder of the project schedule, subject to approval by both EOP Architects and the university.

The CM shall:

1. Provide all project scheduling as defined above, including the development of a CPM type master schedule for all significant activities during the pre-construction period. Also, prepare a CPM type master construction schedule for inclusion in the construction contract documents.
2. Assist the University and the design consultant in determining the feasibility of issuing of early bid packages or phasing of construction.
3. Prepare required detailed construction cost estimates to support the design process. Each estimate will be reconciled with an estimate complied by the design team’s cost consultant.
4. Prepare a report containing detailed value engineering assessments at the end of each phase of design. The report shall consider cost estimates, value engineering estimates, constructability, materials and construction techniques, sequencing of construction, separation of contracts, etc. Recommend action, if required, to maintain project budgets and schedule.
5. Participate in Phase III Construction Document progress review sessions for the purpose of providing input with respect to constructability, contractibility, value engineering, scheduling and document development. In addition, the Construction manager will provide a comprehensive, independent constructability and interdisciplinary coordination review of the final construction documents for Bid Packages.
6. Provide Special Conditions for approval by EOP Architects and the University and for inclusion in bidding and contract documents.
7. Identify and recommend the most cost-effective work categories and provide the methods and means to clearly identify and define these cost effective construction categories, and their responsibilities to be included in the specifications and drawings.
7.6 **Bid and Award Phase Services**

1) The CM shall assist the Owner’s Capital Construction Procurement Division to insure that all bidding activities result in qualified contractors for the lowest possible costs.

2) Bids will be solicited by the University in accordance with the Commonwealth of Kentucky Model Procurement Code (KRS 045A). The CM will participate in the post bid evaluation and verification of the qualifications of the firms submitting apparent low bids for each of the bid packages for the project to assist in the determination of the proposals representing the best value to the University.

3) As each trade contract and/or purchase order is executed by the CM, the contract between the CM and the University shall be adjusted by an equal amount so that the total contract sum of the contract between the CM and the University equals the sum of the executed trade contracts and purchase orders, plus the base fee for CM Services previously established during Phase II of the CM selection process.

7.7 **Construction Phase Services**

The CM shall:

1) Enter into direct contracts with all Trade Contractors and Suppliers.

2) Assume the responsibility for the overall administration of construction contracts.

3) Provide full-time staff throughout construction for the purpose of monitoring, managing, inspecting, scheduling, and coordinating the timely progress, performance, quality and contract compliance of the trade contractors and suppliers.

4) Schedule and conduct meetings, as necessary, and prepare and distribute meeting minutes.

5) Develop and maintain a detailed master construction schedule in a format compatible with Primavera P6 scheduling software.

6) Request pricing, review and negotiate costs, and make recommendations on all necessary changes to the contracts and/or purchase orders. The contract between the CM and the University shall be amended by change order so that the total sum of the contract between the CM and the University equals the sum of the executed trade contracts and purchase orders, plus approved change orders to the trade contracts and purchase orders, plus the base fee previously established and described in Section 7.3.2, Par. 4, Bid and Award Phase Services, above.

7) Coordinate construction interfaces, methods, techniques, and sequences. The Design Team is utilizing Building Imaging Modeling (B.I.M.) to coordinate building systems and to help minimize space conflicts. To that end, the selected Construction Management Firm shall also use B.I.M. for coordination of the construction work, for conflict resolution and in conjunction with the design consultants. Any B.I.M. application used must be compatible with Revit Architecture as manufactured by Autodesk.

8) Institute and administer requirements and procedures for the electronic review and approvals of all submittals.
9) Prepare and administer all cost control procedures, including monthly pay requests, change order logs, etc. Prepare Budget Cost Summary Reports as required but no less frequently than monthly.

10) Coordinate all requirements of project commissioning and close-out procedures including but not limited to: inspections, Owner’s orientation and familiarization, training of Owner’s personnel, and collection of all electronic close-out documents. Develop with Owner an occupancy schedule.

11) Represent the owner, moderate, seek solutions, make recommendations or take other appropriate actions in matters relating in disputes between contractors, work stoppages, labor disputes, or other disruptions that may occur during the construction of this project.

12) Develop and maintain electronic systems for reporting and retrieval of project information.

Note: Construction Phase Services as noted above should assume the durations listed in the enclosed schedule (Attachment “E”) as well as the staffing levels dictated by the Staffing Matrix.

The University intends to conduct a reassessment of the schedule with full participation and agreement of the entire team. Should that effort alter these durations then the CM’s Construction Phase Services will be amended accordingly and agreed to prior to start of the construction phase.

7.8 Post Construction Phase Services

The CM shall:

1) Warrant to the Owner and the Consultant that all materials and equipment furnished under the Trade Contracts and Purchase Orders 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.

2) Guarantee that labor, material, and equipment shall 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.

3) Warrant that the work performed under the contract between the CM and the Owner, when completed, will conform to the Contract Documents.

7.9 Compliance With State Laws

Any contract resulting from this solicitation shall be governed under, and the rights and obligations of the parties hereto, shall be determined in accordance with the laws of the Commonwealth of Kentucky. The firm selected shall provide equal job opportunity and prohibit discrimination based on race, creed, color, sex, age, religion or national origin as required by Kentucky Revised Statutes 45:550 through 45:640. All contractors and subcontractors are required to comply with Federal Executive Order 11246 entitled "Equal Employment Opportunity" as amended by the Department of Labor regulations (41CFR, Part 60). The successful firm will be required to provide certificates of insurance showing proof of general, vehicle liability and Worker's Compensation insurance and a
100% Performance and Payment Bond for the full amount of the fee negotiated during Phase II of the selection process, adjusted to equal the total contract sum as described above. The CM fee should reflect bonding and insuring the project for the full stipulated amount of $4,425,000, however the actual bonds will not be required until the trade/work categories are awarded. For example, if the CM fee is $1 million, then the University requires a bond for $1 million and as each trade/work category is awarded the bonds shall be increased to cover the awarded amount up to the stipulated amount.
8.0 FINANCIAL OFFER SUMMARY FORM

The Financial Offer is not required with the first Phase submittal. It will be requested from the firms that are moved to Phase 2 of the process based on the Evaluation Criteria Process defined in Section 5.0 of this RFP.

Please provide a lump sum firm fixed fee quotation to perform the Construction Management services required for the design, bidding, construction and post construction phases of the project.

The “Financial Score” used in the selection process will be based on the “Total Cost for the Project” (see below) although an initial contract will be awarded for Design Phase Services only. Bidding, construction and post-construction phase services will later be added by amendment to the initial contract (also ref. Article 5.0, EVALUATION CRITERIA PROCESS, Phase 2 Step 3).

Design Phase Services (to include detailed cost estimates, constructability and interdisciplinary coordination reviews for each design phase).

Bid and Award Phase Services (The CM shall provide a breakdown estimate for each bid package as determined by the agreed upon master schedule.)

Construction Phase Staffing Services (based on the Construction Staffing Standardization Matrix)

Construction Phase jobsite general conditions

Bonds

Insurance

Overhead & Profit

Post Construction Phase Services

Total Cost for the Project

8.1 Additional Cost to Complete

Additional fees for work the Owner requires on the part of the Construction Manager beyond the scope of services of this Request for Proposal shall be negotiated based on the additional services required.
TABLE OF CONTENTS
GENERAL CONDITIONS OF THE CONTRACT
FOR CONSTRUCTION BY A CONSTRUCTION MANAGER AT RISK
University of Kentucky
Capital Construction Division

Contents

ARTICLE 1 - DEFINITIONS ................................................................. 3
ARTICLE 2 - CONSULTANT .............................................................. 5
ARTICLE 3 - CORRELATION AND INTENT OF CONTRACT DOCUMENTS .......... 6
ARTICLE 4 - PRE-CONSTRUCTION CONFERENCE ..................................... 7
ARTICLE 5 - SHOP DRAWINGS ......................................................... 7
ARTICLE 6 - LAYING OUT WORK ...................................................... 8
ARTICLE 7 - PLANS, DRAWINGS, SPECIFICATIONS AND RECORD DRAWINGS .......... 8
ARTICLE 8 - TEMPORARY UTILITIES ................................................ 9
ARTICLE 9 - MATERIALS, EQUIPMENT, APPLIANCES, AND EMPLOYEES ............... 9
ARTICLE 10 - ROYALTIES AND PATENTS .......................................... 10
ARTICLE 11 - SURVEYS, PERMITS, REGULATIONS, AND STANDARD CODES ........... 10
ARTICLE 12 - PROTECTION OF WORK, PROPERTY, AND PUBLIC ..................... 12
ARTICLE 13 - BLASTING ................................................................. 13
ARTICLE 14 - CONSTRUCTION AND SAFETY DEVICES ............................... 13
ARTICLE 15 - HAZARDOUS MATERIALS ............................................. 14
ARTICLE 16 - INSPECTION OF WORK ............................................... 15
ARTICLE 17 - SUPERINTENDENT - SUPERVISION ...................................... 16
ARTICLE 18 - CHANGES IN THE WORK ............................................... 16
ARTICLE 19 - RULES AND MEASUREMENTS FOR EXCAVATION ....................... 18
ARTICLE 20 - CONCEALED CONDITIONS .......................................... 19
ARTICLE 21 - DELAYS AND EXTENSION OF TIME .................................... 20
ARTICLE 22 - CORRECTION OF WORK BEFORE FINAL PAYMENT ...................... 23
ARTICLE 23 - CORRECTION OF WORK AFTER FINAL PAYMENT ..................... 23
ARTICLE 24 - TERMINATION OF CONTRACT FOR CONVENIENCE OF OWNER ........ 23
ARTICLE 25 - OWNER'S RIGHT TO STOP WORK ...................................... 24
ARTICLE 26 - TERMINATION OF CONTRACT FOR DEFAULT ACTION OF CONSTRUCTION MANAGER .......................................................... 24
ARTICLE 27 - SUSPENSION OF WORK ............................................... 25
ARTICLE 28 - TIME OF COMPLETION ............................................... 26
ARTICLE 29 - LIQUIDATED DAMAGES ............................................... 27
ARTICLE 30 - PAYMENT TO THE CONSTRUCTION MANAGER .......................... 27
ARTICLE 31 - AUDITS ..................................................................... 30
ARTICLE 32 - PROGRESS & SCHEDULING .......................................... 31
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

Rev August 2019  3  General Conditions
Construction Manager at Risk
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 Construction Manager 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 Construction Manager 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 Construction Manager 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.

1.1.17.1 The 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 - The term "Sub-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 Construction Manager 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 than 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 Construction Manager 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 Consultant by the Construction Manager. 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 Construction Manager'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 Construction Manager 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 Construction Manager shall be directed to the Consultant.

ARTICLE 3 - CORRELATION AND INTENT OF CONTRACT DOCUMENTS

3.1 Execution of the Contract by the Construction Manager is a representation that the Construction Manager has or shall thoroughly and carefully examine the site of the 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 Subcontractors reflect the results of this investigation and are adequate to complete the Work. It is the responsibility of the Construction Manager 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 Construction Manager shall carefully study and compare the Contract Documents with each other and with other information provided to the Construction Manager by the Consultant or the Owner pursuant to the Contract Documents and shall notify the Owner and the Consultant in writing of any errors, inconsistencies or omissions in the Contract Documents recognized by the Construction Manager. Any failure to properly familiarize itself with the proposed Work shall not relieve the Construction Manager 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 Construction Manager. 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 Construction Manager 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 will condition its acceptance of such Work on the satisfaction of the Owner with the proper execution thereof.
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 Construction Manager shall submit a shop drawing and product sample submittal schedule to the Consultant establishing dates for the submission of Shop Drawings and product samples prior to the submittal of the Construction Manager'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 Construction Manager 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 Construction Manager shall review product samples and Shop Drawings for compliance with the requirements of the Contract Documents, and shall submit them to the Consultant in accordance with submittal procedure and schedule established. The Construction Manager's review and submittal to the Consultant of any Shop Drawing or sample shall constitute a representation to the Owner and Consultant that a) the Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager for corrections as may be required. The Construction Manager 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
Construction Manager 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 Construction Manager 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 Construction Manager from the responsibility for any deviations from the requirements of the Contract Documents unless the Construction Manager 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 Construction Manager from responsibility for errors or omissions in the Shop Drawings.

ARTICLE 6 - LAYING OUT WORK

6.1 The Construction Manager 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 Construction Manager 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 Construction Manager’s Contract amount or stipulated time for completion shall be allowed when due to failure by the Construction Manager to do so.

6.2 The Construction Manager shall be responsible for all lines, levels and measurements of all Work executed under the Contract. The Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall advise Sub-contractors and trades persons performing Work of marked lines and levels provided for their use in layout work. The Construction Manager shall verify layout information shown on drawings as required for the Work.

6.3 The Construction Manager 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 Construction Manager for performance of the Work.

6.4 If any encroachments are made by the Construction Manager or any Sub-contractor on any adjacent property, the Construction Manager shall, at the Construction Manager’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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall record on these documents, from day to day as Work progresses, all changes and deviations from the Contract Documents. Prior to Substantial Completion, 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 Construction Manager 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 Construction Manager, 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall immediately notify the Consultant 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 Construction Manager will not be excused for delays in securing materials specified.

9.4 The Construction Manager 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 Construction Manager that are related to this Project must use the name of the Construction Manager 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 Construction Manager. Any invoices received at the University that are related to this Project will be immediately forwarded to the Construction Manager. Copies of these invoices will be made and placed in the Construction Manager'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 Construction Manager 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 Construction Manager, if required, shall furnish satisfactory evidence as to the kind and quality of materials.

9.7 The Construction Manager 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 Construction Manager. 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 Construction Manager being barred from the Owner's premises. The Construction Manager 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 Construction Manager 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 Construction Manager is responsible for payment of all associated royalties. The Construction Manager 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 Construction Manager’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 Construction Manager, 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 Construction Manager, but no fee shall be charged to or paid by the Construction Manager 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 Construction Manager.

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 (permittee 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 permittee of the KPDES Permit. Any fines or other costs resulting from failure to comply, levied against the Owner will be assessed against the Construction Manager’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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager, 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 Construction Manager 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 Construction Manager 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 Construction Manager utilizes the Owner's fire protection equipment, the Construction Manager shall replace any such materials lost, consumed or misplaced during the Contract period. The Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall provide safety controls for protection of the life and health of employees and visitors. The Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager of any noncompliance with the foregoing provisions. The Construction Manager shall, upon receipt of such notice, immediately correct the cited conditions. Notice delivered to the Construction Manager or the Construction Manager's representative at the site of the Work shall be deemed sufficient for this purpose. If the Construction Manager 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 Construction Manager. 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 Construction Manager.

14.5 The Construction Manager or any Sub-contractor shall immediately contact the University of Kentucky's Department of Occupational Health and Safety through the Owner’s Project 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 Construction Manager.
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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall immediately stop work in the affected area and notify the Owner's Project 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 Construction Manager can continue Work in the affected area.

15.1.3 The Construction Manager shall not be required to perform any Work related to asbestos, lead, polychlorinated biphenyl, or other hazardous material. The Construction Manager 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, and Sub-contractors will be under the requirements of the OSHA Hazard Communication Standard (29) CFR 1910.1200. The Construction Manager 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 Construction Manager's employees may be exposed; (2) Statement of the measures that Construction Manager'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 Construction Manager'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 Construction Manager or any Sub-contractor as they pertain to the Work areas of the Project. Photocopies of the MSDS's may be made by Construction Manager at its expense.

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

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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager should have a question as to the location of a PCB transformer, it should contact the Owner's Project Manager.

15.5 The Construction Manager shall ensure that NO asbestos-containing materials (including but not limited to: drywall, joint compound, roof mastic or floor tile adhesive) will be installed on any University project without prior written approval of the University’s Environmental Health and Safety Division. Additionally, the Construction Manager 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 Construction Manager 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 Construction Manager from performing the Work in full compliance with the Contract Documents, nor relieve the Construction Manager 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 Construction Manager 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 order to 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 Construction Manager 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 Construction Manager shall notify the Owner’s Project 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 Construction Manager shall give the Consultant 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 Construction Manager'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 Construction Manager. 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

Rev August 2019 15 General Conditions Construction Manager at Risk
Order. If such uncovered Work is not in accordance with the Contract Documents, the Construction Manager shall pay all costs for uncovering and replacement of such Work.

ARTICLE 17 - SUPERINTENDENT - SUPERVISION

17.1 The Construction Manager shall completely and thoroughly direct and superintend the Work in accordance with the highest standard of care for the Construction Manager'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 Construction Manager shall be solely responsible for and have control over all construction means, methods, techniques, sequences and procedures. The Construction Manager shall be responsible for the acts and omissions of all Sub-contractors and persons directly or indirectly employed by the Construction Manager in the completion of the Work. The Construction Manager shall be responsible for coordinating and scheduling all portions of the Work unless the Contract Documents give other specific instructions. The Construction Manager 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 Construction Manager.

17.2 The Construction Manager 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 Construction Manager'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 Construction Manager 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 Construction Manager. Immediately after the award of Contract, the Construction Manager shall submit to the Consultant a list of Construction Manager'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 Construction Manager, in which case the Construction Manager shall give timely written notice to the Owner 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 Construction Manager of the grounds. In either case, the Construction Manager 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 Construction Manager 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 Construction Manager 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 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 Construction Manager does not respond promptly, a change may be made by unilateral determination by the 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 Construction Manager shall promptly proceed with the Work involved in the change upon receipt of a written order signed by the Owner. In such case, the Construction Manager 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 overhead and profit.

18.6 The Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager. The Construction Manager shall carry out such orders promptly. If the Construction Manager should claim that an ASI involves additional cost or delay to the completion of the Work, the Construction Manager shall give the Consultant written notice thereof within ten (10) Calendar Days after receipt of the written ASI. If this notification does not occur, the Construction Manager 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 Construction Manager claims that any instructions by the Consultant involve additional cost or time extension, the Construction Manager shall give the Consultant 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 Construction Manager regards as a Change Order. Unless the Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall contact and cooperate with the Consultant to make the required adjustments. Any request for change in the Contract Amount by the Construction Manager 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 Sub-contractor(s) for any reason, the Construction Manager 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 Construction Manager, is interrupted by activities of the Construction Manager or the Construction Manager’s Sub-contractor(s) for any reason, the entire cost to restore service to the satisfaction of the Owner shall be paid by the Construction Manager. Should the Construction Manager 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 Construction Manager pursuant to Article 22 of the General Conditions.

20.3 The Construction Manager 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 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 Construction Manager 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 Construction Manager 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 Construction Manager, 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 Construction Manager'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 Construction Manager 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 Construction Manager 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 Construction Manager shall continue performance of the Contract as directed by the Consultant. No claim by the Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall anticipate this normal seasonal weather in the development of the Project baseline schedule.

<table>
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<tbody>
<tr>
<td>Mean Number of Days When Max Temp 32° or Below</td>
<td>9</td>
<td>6</td>
<td>1</td>
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<tr>
<td>Precip. Is 0.10 Inch or Greater</td>
<td>7</td>
<td>6</td>
<td>9</td>
<td>7</td>
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<td>8</td>
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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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall submit to the Consultant and the Owner 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 Construction Manager 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 Construction Manager and extensions of the time fixed for completion of the Contract shall be the Construction Manager’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 Construction Manager 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 Construction Manager’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 Construction Manager 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 Construction Manager 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 Construction Manager 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 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 Construction Manager 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 Construction Manager fails to commence and continue to correct nonconforming 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 nonconforming 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 Construction Manager or, if no additional payments are due, Construction Manager or the Construction Manager'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 Construction Manager 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 Construction Manager shall correct it promptly after receipt of written notice from the Owner to do so. The Construction Manager 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 Construction Manager under the Contract including, but not limited to, warranties. The obligation of the Construction Manager 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 Construction Manager, 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 Construction Manager 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 Construction Manager 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 Construction Manager, the Owner shall be entitled to recover all amounts for such corrections, including costs and attorney's fees, from Construction Manager or surety.

ARTICLE 24 - TERMINATION OF CONTRACT FOR CONVENIENCE OF OWNER

24.1 The Owner, by written notice to 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 Construction Manager 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 Construction Manager shall not be entitled to profit and overhead on Work not performed.
ARTICLE 25- OWNER'S RIGHT TO STOP WORK

25.1 If the Construction Manager 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 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 Construction Manager 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 Construction Manager 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 Construction Manager or others.

ARTICLE 26 -TERMINATION OF CONTRACT FOR DEFAULT ACTION OF CONSTRUCTION MANAGER

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 Construction Manager 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 Construction Manager fails to complete the Work within such time;

26.1.2 If the Construction Manager is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or if the Construction Manager 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 Construction Manager, or if a trustee or receiver is appointed for the Construction Manager or for any of the Construction Manager's property on account of the Construction Manager's insolvency, and the Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager disregards laws, ordinances, rules, codes, regulations, orders or similar requirements of any public entity having jurisdiction;

26.1.6 If the Construction Manager disregards the authority of the Consultant or the Owner;

26.1.7 If the Construction Manager performs Work which deviates from the Contract Documents, and neglects or refuses to correct rejected Work; or

26.1.8 If the Construction Manager 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 Construction Manager and its Surety three (3) Calendar Days notice by issuing a written Declaration of Default. The Owner shall have the sole discretion to permit the Construction Manager 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 Construction Manager's Surety take over and complete the Work on the Contract. The Owner may require that in so doing, the Construction Manager's Surety not utilize the Construction Manager in performing the Work. Upon the failure or refusal of the Construction Manager'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 Construction Manager'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 Construction Manager from the site. The Owner may take possession of the Work and of all of the Construction Manager'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 Construction Manager, without liability to the Construction Manager. 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 Construction Manager but which are stored elsewhere, and finish the Work as the Owner deems expedient. In such case, the Construction Manager 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 Construction Manager for the cost of the Work it performed and a reasonable allowance for overhead and profit. If such costs exceed the unpaid balance, the Construction Manager or the Construction Manager'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 Construction Manager shall not be eligible for the award of such Contract.

26.3.3 The Construction Manager shall be liable for any damage to the Owner resulting from the termination or the Construction Manager'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 Construction Manager 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 Construction Manager 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 Construction Manager. 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 Construction Manager by the Owner will not release the Construction Manager from liability.

26.3.6 In the event the Contract is terminated under this Article, and it is determined for any reason that the Construction Manager 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 Construction Manager in writing or cause the Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall notify the Consultant 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 (3%) of the current Contract Amount. In the event the Construction Manager 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 Construction Manager considers that all Work required by the Contract is 100% complete, including correction of any remaining punch list work or deficiencies, the Construction Manager shall notify the Consultant 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 and the Construction Manager 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 Construction Manager 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 Construction Manager will be required to pay liquidated damages to the Owner for each 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 Construction Manager 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 Construction Manager from further obligations and liabilities to complete the entire Contract. Permitting the Construction Manager 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 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 Construction Manager 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 Consultant have visited the Construction Manager's place of storage and checked all items listed on the Construction Manager'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 Construction Manager'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 Construction Manager's obligations reflected in prior applications for payment.

30.6 Each payment made to the Construction Manager shall be on account of the total amount payable to the Construction Manager and the Construction Manager 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 Construction Manager 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 Construction Manager shall submit to the Consultant and the Owner 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 Construction Manager'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 Construction Manager.

30.8 Retainage – The Owner will retain ten percent (10%) of the Construction Manager’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 Construction Manager 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 Construction Manager has failed or refused to correct or complete, or

30.8.1.3 Failure of the Construction Manager to perform any of its obligations under the Contract, or

30.8.1.4 Failure of the Construction Manager 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 Construction Manager 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 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 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 Construction Manager shall promptly pay each Sub-contractor and material supplier upon receipt of payment from the Owner the amount to which said Sub-contractor and supplier is entitled, reflecting the percentage actually retained from payments to the Construction Manager on account of such Sub-contractor's
The Construction Manager 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 Construction Manager 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 Construction Manager representations regarding pricing of invoices; and
- Accuracy of Construction Manager 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 Construction Manager to the 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 Construction manager, 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 Construction Manager, 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.

32.2.2 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 Construction Manager 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 Construction Manager shall indemnify and hold harmless the Owner, 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 Construction Manager, 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 Construction Manager shall also indemnify and hold harmless the Owner, 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 Construction Manager, 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 Construction Manager or any Sub-contractor under Worker's Compensation acts, disability benefit acts or other employee benefit acts.

34.4 The obligations of the Construction Manager 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 Construction Manager shall furnish the Owner 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 Construction Manager at the Construction Manager’s expense.
35.2 The Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager.

35.4 The Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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. Construction Manager’s work performed, and materials to be incorporated into the project and stored on the jobsite, will be covered. Builder’s Risk does not include temporary buildings, or Construction Manager or Construction Manager’s tools, equipment, or trailers and contents.

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 Construction Manager 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 Construction Manager’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 Construction Manager’s own forces, Sub-contractors, or by material suppliers, and whether occurring in a new or existing building, shall be repaired by the Construction Manager at the Construction Manager’s expense, and any materials damaged inside the building, including personal property, shall be repaired or replaced at the full replacement cost by the Construction Manager at the Construction Manager’s expense.

37.3 For existing buildings, the Construction Manager, 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 Construction Manager 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 Construction Manager. 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 Construction Manager's claims and disputes shall be referred to the Consultant 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 Construction Manager 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 Construction Manager unless the Construction Manager submits to the Consultant and the Owner’s Project Manager a written notice of appeal within fifteen (15) Calendar Days of the Consultant’s decision. The Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager, the Project Manager shall notify the Construction Manager and the Consultant and direct the Construction Manager to perform the Work about which the claim was made and the Construction Manager shall proceed with such Work in accordance with the Project Manager's instruction. If the Construction Manager disagrees with a decision of the Project Manager concerning a Construction Manager's claim, the Construction Manager shall proceed with the Work as indicated by the Project Manager's decision.

38.4 The Construction Manager 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 Construction Manager. The Director, or designee, shall promptly issue a decision in writing. A copy of the decision shall be mailed or otherwise furnished to the Construction Manager. The decision rendered shall be final and conclusive unless the Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager in which case fees and expenses will be the responsibility of the separate contractor and if any judgment against the Owner arises therefrom, the Construction Manager 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 Construction Manager's Work depends upon the work of any other separate contractor, the Construction Manager shall promptly report to the Consultant 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 of the 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 of Kentucky.

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 or suppliers.

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 Construction Manager 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 Construction Manager shall remove all remaining waste materials, rubbish, Construction Manager'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 Construction Manager fails to clean up as provided in the Contract Documents, the Owner may perform the cleaning tasks and charge the cost to the Construction Manager.

ARTICLE 47 - POINTS OF REFERENCE

47.1 The Construction Manager shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, the Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager assumes responsibility for any changes in systems or modifications required in adjacent or related work to accommodate such substitutions,
48.6 Inclusion of a certain make or type of materials or equipment in the Construction Manager'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 Construction Manager.

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 Construction Manager 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 Construction Manager shall give the Consultant 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 Construction Manager. Unless otherwise provided in the Contract Documents, the cost of all such testing shall be the responsibility of the Construction Manager. 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 Construction Manager.

ARTICLE 50 - WARRANTY

50.1 The Construction Manager 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 Construction Manager shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If the Construction Manager requests approval of a substitution of material or equipment, the Construction Manager warrants that such installation, construction, material, or equipment will equally perform the function for which the original material or equipment was specified. The Construction Manager 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 Construction Manager shall deliver to the Consultant all warranties and operating instructions required under the Contract or to which the Construction Manager 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 Construction Manager to replace defective material and equipment and re-execute defective Work which is disclosed to the Construction Manager 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 Construction Manager or its Sureties of liability with respect to any warranties or responsibilities for faulty materials and workmanship. The Construction Manager or its sureties shall remedy any defects in Work and any resulting damage to Work at the Construction Manager’s own expense. The Construction Manager shall be liable for correction of all damage resulting from defective Work. If the Construction Manager 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 Construction Manager or the surety. The Owner will give notice of observed defects with reasonable promptness.

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

50.5 In addition to the foregoing, the Construction Manager 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 Construction Manager shall, immediately upon notification by or on behalf of the Owner of water penetration, determine the source of water penetration and, at the Construction Manager’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 Construction Manager 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 Construction Manager pursuant to this Article 50 shall be warranted by the Construction Manager, 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 Construction Manager's failure to honor any warranty for the Work shall be paid by or recoverable from the Construction Manager.

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 Construction Manager agrees as follows:

54.1.1 The Construction Manager 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 Construction Manager 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 Construction Manager will, in all solicitations or advertisements for employees placed by or on behalf of the Construction Manager; 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 Construction Manager 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 Construction Manager'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 minorities from within the drawing area to satisfy the agreed upon goals and timetables. Should the union with which the Construction Manager or Sub-contractor have collective bargaining agreements be unwilling to provide sufficient minorities to satisfy the agreed upon goals and timetables, the Construction Manager and Sub-contractors shall hire minorities from other sources within the drawing area;

55.2.2 The equal employment provisions of The Act may be met in part by the Construction Manager contracting to a minority contractor or Sub-contractor. A minority contractor, Sub-contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.

55.2.3 The Construction Manager 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 Construction Manager 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 Construction Manager ineligible to submit proposals on further contracts until such time as the Construction Manager complies in full with the requirements of The Act.

55.4 Any provisions of The Act notwithstanding, the Construction Manager 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
ATTACHMENT “B”

AGREEMENT BETWEEN
UNIVERSITY OF KENTUCKY
AND CONSTRUCTION MANAGER AT RISK

THIS AGREEMENT, made the ________ day of _____________ 2020 by and between ___________________________ ("Construction Manager"), and the UNIVERSITY OF KENTUCKY, ("Owner"), is to bind the parties hereto to the principles and terms set forth herein, and shall be binding upon the parties hereto.

WITNESSETH, that the Construction Manager and Owner for the consideration hereinafter named, agree as follows:

ARTICLE No. 1 SCOPE OF WORK:

PROJECT: Construction Management Services for Addition and Renovation of Alpha Delta Pi Sorority House

The Scope of Work consists of the Request for Proposal, UK-2047-20, dated February 11, 2020; the Construction Managers’s Form of Proposal dated March 4, 2020, including Addendums 1,2,3 etc, the General Conditions, the Special Conditions, the Construction Manager’s Bonds and Insurance and Affidavit, the Specifications, the Drawings including Supplemental Drawings and Change Orders issued after execution of the Contract for the Work described in Article No. 1 of this Agreement, all of which are incorporated in and made a part thereof of reference, and which shall be binding upon the Construction Manager and Owner.

ARTICLE No. 2 TIME OF COMPLETION:

The Construction Manager must begin Work specified by the written Work Order from the Owner. Substantial Completion for Project 2524.0 shall be 365 consecutive calendar days from the date of award of the first trade contract as specified in the Work Order letter and Final Completion shall be thirty (30) calendar days thereafter.

ARTICLE No. 3 LIQUIDATED DAMAGES:

3.1 Should the Construction Manager 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 One Thousand Four Hundred Eighty-Three Dollars ($1,483.00) for each consecutive calendar day that Substantial Completion has not been met.

3.2 Should the Construction Manager 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 **Two Hundred Seventeen Dollars ($217.00)** for each consecutive calendar day until Final Completion is reached. See Article 3 of the Agreement.

**ARTICLE No. 4  THE CONTRACT AMOUNT:**

Subject to additions and deductions for Change Orders made in accordance with the Contract Documents, the Owner shall pay the Construction Manager as full consideration for the Construction Manager’s satisfactory performance of the Contract obligations the sum of ________________________________ Dollars ($______________).

**ARTICLE No. 5  SPECIAL NOTICE:**

The Construction Manager certifies that it is fully informed of the conditions relating to construction and labor under which the Work under this Agreement is to be performed, and agrees that it shall employ, methods and means in carrying out the Work so as not to interfere with or interrupt the Work of any other Contractor working on/or adjacent to the site for this Work.

IN WITNESS WHEREOF this Agreement is executed in two (2) counterparts, each one of which shall be deemed an original and adequate proof of this Agreement, on the date and year first herein before written.

WITNESS: ________________________________

CONSTRUCTION MANAGER: ________________________________

______________________________

Company Name

BY: ________________________________

Title: ________________________________

Recommended By:

APPROVED: ________________________________

Dall Clark
AVP Capital Planning, Design & Construction

UNIVERSITY OF KENTUCKY

By: ________________________________

Eric Monday
Executive Vice President for Finance and Administration
# UNIVERSITY OF KENTUCKY
## SPECIAL CONDITIONS OF THE CONTRACT
### FOR CONSTRUCTION BY A CONSTRUCTION MANAGER AT RISK

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Article</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>GENERAL INFORMATION</td>
</tr>
<tr>
<td>02</td>
<td>PERMITS AND FEES</td>
</tr>
<tr>
<td>03</td>
<td>NOT USED</td>
</tr>
<tr>
<td>04</td>
<td>CONSULTANT</td>
</tr>
<tr>
<td>05</td>
<td>GEOTECHNICAL REPORT</td>
</tr>
<tr>
<td>06</td>
<td>TIME FOR COMPLETION</td>
</tr>
<tr>
<td>07</td>
<td>LIQUIDATED DAMAGES</td>
</tr>
<tr>
<td>08</td>
<td>SUBMITTALS AND SHOP DRAWINGS</td>
</tr>
<tr>
<td>09</td>
<td>PLANS, DRAWINGS, AND SPECIFICATIONS</td>
</tr>
<tr>
<td>10</td>
<td>PROGRESS MEETINGS</td>
</tr>
<tr>
<td>11</td>
<td>CRITICAL PATH METHOD (CPM) SCHEDULE</td>
</tr>
<tr>
<td>12</td>
<td>WALK-THROUGH</td>
</tr>
<tr>
<td>13</td>
<td>OWNER'S CONSTRUCTION REPRESENTATIVE</td>
</tr>
<tr>
<td>14</td>
<td>FIELD OFFICE</td>
</tr>
<tr>
<td>15</td>
<td>TELEPHONE SERVICE</td>
</tr>
<tr>
<td>16</td>
<td>CONSTRUCTION FENCE</td>
</tr>
<tr>
<td>17</td>
<td>PROJECT SIGN</td>
</tr>
<tr>
<td>18</td>
<td>PARKING</td>
</tr>
<tr>
<td>19</td>
<td>SANITARY FACILITIES</td>
</tr>
<tr>
<td>20</td>
<td>RULES OF MEASUREMENT</td>
</tr>
<tr>
<td>21</td>
<td>ALLOWANCES</td>
</tr>
<tr>
<td>22</td>
<td>CONSTRUCTION CONTINGENCY FUNDS</td>
</tr>
<tr>
<td>23</td>
<td>SEQUENCE OF CONSTRUCTION</td>
</tr>
<tr>
<td>24</td>
<td>CRANE &amp; MATERIAL HOIST OPERATIONS</td>
</tr>
<tr>
<td>25</td>
<td>UTILITIES</td>
</tr>
<tr>
<td>26</td>
<td>CLEANING AND TRASH REMOVAL</td>
</tr>
<tr>
<td>27</td>
<td>BLASTING</td>
</tr>
<tr>
<td>28</td>
<td>CUTTING AND PATCHING - NEW AND EXISTING WORK</td>
</tr>
<tr>
<td>29</td>
<td>UNRELATED PROJECTS</td>
</tr>
<tr>
<td>30</td>
<td>OWNER SUPPLIED MATERIALS - Not Used</td>
</tr>
<tr>
<td>31</td>
<td>REMOVED ITEMS</td>
</tr>
<tr>
<td>32</td>
<td>INTERIOR ENCLOSURE AND DUST ENCAPSULATION</td>
</tr>
<tr>
<td>33</td>
<td>UKIT COMMUNICATIONS AND NETWORK SYSTEMS</td>
</tr>
<tr>
<td>34</td>
<td>EMERGENCY VEHICLE ACCESS</td>
</tr>
<tr>
<td>35</td>
<td>SMOKE DETECTORS / FIRE ALARM SYSTEMS - EXISTING AND/OR NEW FACILITIES</td>
</tr>
<tr>
<td>36</td>
<td>SURVEYS, RECORDS, and REPORTS</td>
</tr>
<tr>
<td>37</td>
<td>SMOKING IS PROHIBITED</td>
</tr>
<tr>
<td>38</td>
<td>ALTERNATES - To Be Determined</td>
</tr>
</tbody>
</table>

Rev Feb 2018

010000S01 - Special Conditions - Construction Manager at Risk
ARTICLE 39 FIELD CONSTRUCTED Mock UPS ..............................................................35
ARTICLE 40 PROJECT COORDINATION VIA COMPUTER ......................................36
ARTICLE 41 HOT WORK PERMITS ...........................................................................38
ARTICLE 42 INSURANCE ..........................................................................................38
ARTICLE 43 KEY ACCESS .........................................................................................38
ARTICLE 44 CEILING CLEARANCE ........................................................................39
ARTICLE 45 METAL ANCHORS ..............................................................................39
ARTICLE 46 LOADING DOCK – Not Used .................................................................39
ARTICLE 47 CONSTRUCTION PATH – Not Used .......................................................39
ARTICLE 48 HOSPITAL PROJECT PROCEDURE – Not Used .................................39
ARTICLE 49 WORKING HOURS/ACCESS: FOR MEDICAL CENTER/HOSPITAL – Not Used ..............................................................39
ARTICLE 50 SECURITY BADGES AND MEDICAL CENTER SECURITY – Not Used .........................................................................................39
ARTICLE 51 HOSPITAL CONSTRUCTION CERTIFICATION – Not Used ............39
ARTICLE 52 APPEARANCE – Not Used ..................................................................39
ARTICLE 53 HIPAA (The Health Insurance Portability and Accountably Act) – Not Used .........................................................................................40
ARTICLE 54 SAFETY & FIRE PROCEDURES – Not Used .......................................40
ARTICLE 55 INTERIM LIFE SAFETY MEASURES (ILSM) – Not Used .....................40
ARTICLE 56 TREE PROTECTION STANDARDS .....................................................40
ARTICLE 57 CONTRACTOR/SUPERINTENDENT EXPERIENCE .............................40
010000S01- Special Conditions – Construction Manager at Risk

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 Construction manager.

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 EOP Architects or their duly authorized representatives. (See Article 2 of the General Conditions.)

ARTICLE 05 GEOTECHNICAL REPORT

5.1 The Sub-Surface Geotechnical Report was prepared by CSI. The report is [available in UK E-Communication®] for information purposes only and is not a part of the Contract Documents. The Boring Logs, if any, are included for the Construction Manager's information but do not represent a warranty of subsurface conditions. Neither the Owner nor the Consultant will be responsible for interpretations or conclusions drawn from this report by the Construction Manager. This data is made available solely for the convenience of the Construction Manager.

ARTICLE 06 TIME FOR COMPLETION

6.1 The time for Substantial Completion as further defined in Article 1 of the General Conditions shall be 365 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 Construction Manager 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 **One Thousand Four Hundred Eighty-Three Dollars ($1,483.00)** for each consecutive calendar day that Substantial Completion has not been met. See Article 3 of the Agreement.

7.2 Should the Construction Manager 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 **Two Hundred Seventeen Dollars ($217.00)** 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 Construction Manager 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 Construction Manager. 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 Construction Manager 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. Construction Manager 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 Construction Manager shall be deemed to be making the following representations:

8.3.1.1 The Construction Manager understands and agrees that he shall bear full responsibility for the products furnished. The Construction Manager 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 Construction Manager 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 Construction Manager acknowledges that the Owner will rely on the skill, judgment, and integrity of the Construction Manager 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 Construction Manager shall review, approve, and submit Shop Drawings to 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager's stamp of approval on any shop drawing or sample shall constitute a representation to Owner and Design Consultant that the Construction Manager has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, 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 Construction Manager from his responsibility for any deviations from the requirements of the Contract Documents unless the Construction Manager 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 Construction Manager 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 Construction Manager'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 Construction Manager 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®;
01000S01- Special Conditions – Construction Manager at Risk

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 eCommunication;

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
- Training manuals
- Service Manual
- Parts list
- Reviewed Shop Drawings
- Instruction Manuals
- Calibration manuals
- Operation manuals
- Repair manuals
- 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, eprom, 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 Construction Manager shall submit one (1) electronic copy of As-Built set of drawings in PDF format indicating all deviations of construction as originally specified in the Contract Documents. These As-Built Drawings will compile information from the Construction Manager as well as all Sub-contractors. The Construction Manager 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 Construction Manager shall provide and utilize a camera to photograph the installation of buried utilities and concealed items. The Construction Manager 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 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

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<th>SAP Object Type No.</th>
<th>Component Name</th>
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<td>D3010.0431</td>
<td>Pump, Heating Water</td>
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<td>Pump, Water Booster</td>
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<td>Description</td>
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<td>Water Treatment Equipment</td>
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ARTICLE 8.7.3 Attachment B – Equipment List Spreadsheet Data Categories

<table>
<thead>
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<th>Uniformat</th>
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<tr>
<td>Component ID</td>
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<tr>
<td>Supplier</td>
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<td>Contains Asbestos?</td>
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<td>Contains PCBs?</td>
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<td>Motor RPM</td>
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<td>Fan CFM</td>
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<tr>
<td><strong>Fan RPM</strong></td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------</td>
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<tr>
<td><strong>Fan Static</strong></td>
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<tr>
<td><strong>Fan Type</strong></td>
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<td><strong>Pump Head</strong></td>
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<td><strong>Pump Outlet</strong></td>
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<td><strong>Belts</strong></td>
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<td><strong>Filters</strong></td>
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ARTICLE 8.7.3 Attachment C - Example Preventative Maintenance Procedures

<table>
<thead>
<tr>
<th>Description</th>
<th>Name</th>
<th>Equipment No.</th>
<th>Frequency</th>
<th>Maintenance Procedure</th>
<th>Maintenance Parts &amp; Items</th>
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<tr>
<td>Air Handling Unit</td>
<td>AHU-1</td>
<td>M-12345</td>
<td>Monthly</td>
<td>Check Belts</td>
<td></td>
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<td>Quarterly</td>
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<td>AHU-1</td>
<td>M-12345</td>
<td>Annually</td>
<td>Replace Belts</td>
<td>Belt model abc-123</td>
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<td>Air Handling Unit</td>
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<td>M-98765</td>
<td>Monthly</td>
<td>Check Belts</td>
<td></td>
</tr>
</tbody>
</table>

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

ARTICLE 09 PLANS, DRAWINGS, AND SPECIFICATIONS

9.1 The successful Construction Manager will receive two (2) sets of plans and specifications. Construction Manager will be required to pay for cost of duplication for all sets required over and above this amount. Payments for Plans, Specifications and Official Contract Documents must be made to Lynn Imaging, Lexington, Kentucky (http://www.ukplanroom.com/) or Phone Lynn Imaging @ 1.800.888.0693 or 859.255.1021) before a set of documents will be issued.

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.
(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 Construction Manager, 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 Construction Manager 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 Construction Manager 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 Construction Manager to schedule the walk-through with the Owner’s Project Manager, the Consultant, and other interested parties.

12.2 During the walk-through, Construction Manager 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 Construction Manager 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 Construction Manager 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 CPMD Project Manager will be the University’s sole representative for this project.

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.

ARTICLE 15 TELEPHONE SERVICE

15.1 Construction Manager 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 Construction Manager. (Cell phone/Nextel service in lieu of UKIT Communications and Network Systems phone service may be utilized at Construction Manager’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 Construction Manager’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 Construction Manager shall be responsible for removing and replacing any fence sections and/or posts necessary for access to the site on a daily basis. The Construction Manager 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 Construction Manager fails to comply with the requirements of this Article 16, the Owner may proceed to have the work done and the Construction Manager 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 Construction Manager 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 prorata 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 Construction Manager 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 Construction Manager and be adjusted as before mentioned.

20.2 The Construction Manager 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 Construction Manager 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 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 $_To Be Determined_ 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.

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 Every effort shall be made by the Construction Manager to sequence the project to accommodate the schedule.

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 Construction Manager shall coordinate any road and sidewalk closings, utility disruptions, etc. which will affect the use of the existing building(s) with the 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 Construction Manager 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 Owner's Project Manager.

23.4 The Construction Manager 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. Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager shall be utilized to prevent pedestrian and vehicular traffic from crossing pathway of crane lift. Construction Manager’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. Construction Manager 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

The Construction Manager is responsible for providing all necessary utilities.

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 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 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 Construction Manager 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, Construction Manager shall thoroughly clean and re-sod grass areas damaged to match existing areas.

26.4 The Construction Manager 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.

26.5 Dumpsters will be provided and maintained by the Construction Manager.

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

26.8 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 Construction Manager'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 Construction Manager 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 - Not Used

ARTICLE 31 REMOVED ITEMS

31.1 The following is a list of items to be turned over to the Owner by the Construction Manager after removal by the Construction Manager. 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. To be determined

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 Construction Manager 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 Construction Manager. 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. Construction Manager to review with Consultant ways to provide ventilation for dust generated by demolition and fumes/vapors produced during installation of new materials.

32.2 Construction Manager is responsible for coordinating with the Owner’s Project Manager any equipment to be turned off prior to erecting temporary enclosures.

32.3 Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager may assume existing walls which extend full height of floor shall be deemed appropriate to contain airborne 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 Construction Manager 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 Construction Manager 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 Construction Manager shall protect all smoke detectors in Work areas to prevent false alarms. The Construction Manager 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 Construction Manager 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 Construction Manager. 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 Construction Manager, 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. Construction Manager 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 Construction Manager 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 Construction Manager 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 Construction Manager 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. Construction Manager shall advise Sub-contractors performing Work of marked lines and levels provided for their use in layout of Work.

36.2 Survey Procedures: The Construction Manager 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 Construction Manager or Design Consultant's reference at reasonable times. Surveyor shall record deviations from required lines and levels, and advise Design Consultant or Construction Manager promptly upon detection of deviations exceeding indicated or recognized tolerances. The Construction Manager 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 Construction Manager'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 - To Be Determined

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: To Be Determined.

ARTICLE 39 FIELD CONSTRUCTED MOCK UPS

39.1 Exterior Finishes

39.1.1 After sample selection but prior to ordering exterior finish materials, Construction Manager 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, Construction Manager 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 Construction Manager is mandatory; others as determined by Owner. Participation of Subcontractors and/or Trade Contractors is not mandatory but will be offered at their discretion.

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 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 Construction Manager 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 Construction Manager’s use.

ARTICLE 42 INSURANCE

42.1 Employers' Liability Insurance. The Construction Manager shall acquire and maintain Employers’ Liability insurance with at least $500,000/$500,000/$500,000 limits of liability for all employees who will be working at the Project site.

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 $10,000,000 will be required.

42.2.1.1 The limits of liability shall not be less than $5,000,000 each 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 $5,000,000 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)

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
Contractor will adhere to all provisions outlined in 010000S02 Tree Protection Standards.

ARTICLE 57 CONTRACTOR/SUPERINTENDENT EXPERIENCE
57.1 For those projects impacting patient care the Construction Manager and Superintendent are required to have a minimum of five (5) years of construction experience in the past 10 years with projects with projects of similar scale and complexity. Owner may waive this requirement if sufficient information is provided to confirm competency.
## PROJECT SCHEDULE: CM for ADPi Sorority

### CURRENT DATE: 11-Feb-20

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<tr>
<th>TASK NO.</th>
<th>DATE</th>
<th>ACTIVITY</th>
<th>DAYS TO NEXT TASK</th>
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<td>1</td>
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<td>2</td>
<td>Tue, 18 Feb '20</td>
<td>Pre Proposal Walk-Through with CM's</td>
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<td>Mon, 24 Feb '20</td>
<td>Last Day for questions to be received from CM's</td>
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<td>Wed, 26 Feb '20</td>
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<td>Wed, 4 Mar '20</td>
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<td>Evaluation/Short Listing of CM Proposals</td>
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<td>Post Bid Review</td>
<td>6</td>
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<tr>
<td>23</td>
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<td>Contracts Awarded</td>
<td>7</td>
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<tr>
<td>24</td>
<td>Mon, 6 Jul '20</td>
<td>Construction Begins *</td>
<td>358</td>
</tr>
<tr>
<td>25</td>
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<td>Substantial Completion</td>
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<tr>
<td>26</td>
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<td>Final Completion</td>
<td>365</td>
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<td>27</td>
<td>Fri, 29 Jul '22</td>
<td>Warranty Expires</td>
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</table>

* Duration is contingent upon review by CM and house being unoccupied.
## Construction Phase On-Site Staffing Matrix

<table>
<thead>
<tr>
<th>Position</th>
<th>No.</th>
<th>Months</th>
<th>% of Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Executive</td>
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<td>Project Manager</td>
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<tr>
<td>Superintendent</td>
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<tr>
<td>Engineer</td>
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<tr>
<td>Assistant Superintendent - MRI</td>
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<tr>
<td>Assistant Superintendent - IR</td>
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<tr>
<td>Safety Engineer</td>
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<tr>
<td>Administrative Assistant</td>
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<tr>
<td>MEP Coordinator</td>
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<td>Other</td>
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<tr>
<td>Other</td>
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</table>
UNIVERSITY OF KENTUCKY  
CAPITAL CONSTRUCTION PROCUREMENT SECTION  

PAYMENT BOND

Bond Number: [NUMBER]

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the University of Kentucky (the “Owner”) and [CONTRACTOR’S NAME] (the “Principal”) have entered into a contract for the construction of Project #2524.0 Construction Management Services for Addition and Renovation of Alpha Delta Pi Sorority House, with the contract price or amount of $[AMOUNT] (the “Project”);

WHEREAS, the Principal is required to furnish a payment bond for the protection of all persons performing, supplying, or furnishing labor, materials, equipment, or supplies to the contractor or its subcontractors 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, in an amount equal to one hundred percent (100%) of the original contract price or amount, executed by a surety company authorized to do business in the Commonwealth of Kentucky, and satisfactory to the Commonwealth; and

WHEREAS, [SURETY’S NAME] (the “Surety”), a surety company authorized to do business in the Commonwealth of Kentucky, has agreed to issue such bond.

NOW, THEREFORE, for the value received and intending to be legally bound hereby, the Principal and Surety agree to the following terms and conditions of this obligation:

1. **Recitations:** The recitals above are true and substantive parts of this instrument.

2. **Definitions:** The following terms are defined for the purposes of this instrument:

   (a) **Bond** means this instrument and the terms and conditions of the Contract (as defined herein), both express and implied, which are incorporated herein by reference and constitute a part of this instrument to the same extent and effect as though copied verbatim herein, and are legally binding on the Principal and Surety including the obligations of the Surety provided therein.

   (b) **Claimants** means all persons having just and lawful claims for (i) labor, materials, services, insurance, supplies, machinery, equipment, rentals, fuels, oils, implements, tools, appliances, and any other items of whatever nature, furnished for, used or consumed in the prosecution of the work called for by the Contract, whether lienable or non-lienable and whether or not permanently incorporated in said work; (ii) pension, welfare, vacation, and other supplemental employee benefit contributions payable under collective bargaining agreements with respect to persons employed upon said work; and (iii) federal, state, and local taxes and contributions required by law to be withheld and paid with respect to the employment of persons upon said work.
(c) **Contract** means that certain agreement dated [DATE] for the construction of Project #2524.0 Construction Management Services for Addition and Renovation of Alpha Delta Pi Sorority House, all documents that comprise the agreement, any documents incorporated therein by reference, and any Contract Changes (as defined herein).

(d) **Contract Change** means any change order, change of time, extension of time, amendment, modification, addition, or other alteration, material or otherwise, to the Contract, the contract price or amount, the work to be performed under the Contract, or the specifications accompanying same.

3. **Guaranty:** The Principal and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner, as obligee of the Bond, to pay all Claimants having just and lawful claims (as defined above). The Principal and Surety likewise guarantee the faithful payment of the prevailing hourly wage as set forth in the schedule incorporated into the bid documents unless the Project is exempt from the prevailing wage requirements of KRS 337.505 through 337.550.

4. **Bond Amount:** The bond amount is $[AMOUNT], which shall be increased automatically by Contract Changes to the contract price or amount and shall not limit the Surety’s obligation or liability under the Bond for paying attorney fees, costs, or other legal expenses incurred by the Owner, which may be in excess of the bond amount as increased.

5. **Defeasance:** Except as provided by the Contract, the Principal and Surety shall have no obligations under the Bond if the Principal during the original term of the Contract, any extensions thereof which may be granted by the Owner with or without notice to the Surety, the guaranty period, the warranty period, and other periods limited only by statutes of limitation (a) promptly pays all Claimants; (b) satisfies all claims and demands incurred under the Contract; and (c) fully indemnifies and saves harmless the Owner from all costs, damages, attorney fees, consultant fees, and other expenses that it may suffer by reason of the Principal’s failure to do so. The Bond will otherwise remain in full force and effect.

6. **Amendment:** The Bond, including without limitation the Bond Amount, will be deemed amended, automatically and immediately without separate or written amendments hereto, upon any Contract Changes. The Principal and Surety agree to be bound by any Contract Changes. The Surety waives notice of any Contract Changes.

7. **Interpretation:** The Bond will be interpreted and enforced in accordance with Kentucky law. The Principal and Surety agree that they have taken part in drafting the Bond, which will not be construed against or in favor of any other party on the basis of drafting. To the extent that this instrument contradicts the Contract, the Contract will control.

8. **Beneficiaries:** The Principal and Surety agree that (a) the Bond will insure to the benefit of the Owner and all Claimants having just and lawful claims (as defined above) (collectively the “Beneficiaries”), whether or not they have any direct contractual relationship with the Principal; (b) the Beneficiaries may maintain independent actions upon this Bond in their own names; and (c) no final settlement between the Owner and Principal will abridge the right of other Beneficiaries with unsatisfied claims.
IN WITNESS WHEREOF, the Principal and Surety, by their duly authorized representatives, have executed this instrument, which is effective as of [DATE].

ATTEST:  
WITNESSES:  PRINCIPAL

Witness as to PRINCIPAL
By

Witness as to PRINCIPAL
Title

ATTEST:  
WITNESSES:  SURETY

Witness as to SURETY
By

Witness as to SURETY
Attorney-in-Fact
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION

PERFORMANCE BOND

Bond Number: [NUMBER]

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the University of Kentucky (the “Owner”) and [CONTRACTOR’S NAME] (the “Principal”) have entered into a contract for the construction of Project #2524.0 Construction Management Services for Addition and Renovation of Alpha Delta Pi Sorority House, with the contract price or amount of $[AMOUNT] (the “Project”);

WHEREAS, the Principal is required to furnish a performance bond for the faithful performance of the contract in an amount equal to one hundred percent (100%) of the contract price or amount as it may be increased, executed by a surety company authorized to do business in the Commonwealth of Kentucky, and satisfactory to the Commonwealth; and

WHEREAS, [SURETY’S NAME] (the “Surety”), a surety company authorized to do business in the Commonwealth of Kentucky, has agreed to issue such bond.

NOW, THEREFORE, for the value received and intending to be legally bound hereby, the Principal and Surety agree to the following terms and conditions of this obligation:

1. **Recitations:** The recitals above are true and substantive parts of this instrument.

2. **Definitions:** The following terms are defined for the purposes of this instrument:

   (a) **Bond** means this instrument and the terms and conditions of the Contract (as defined herein), both express and implied, which are incorporated herein by reference and constitute a part of this instrument to the same extent and effect as though copied verbatim herein, and are legally binding on the Principal and Surety including the obligations of the Surety provided therein.

   (b) **Contract** means that certain agreement dated [DATE] for the construction of Project #2524.0 Construction Management Services for Addition and Renovation of Alpha Delta Pi Sorority House, all documents that comprise the agreement, any documents incorporated therein by reference, and any Contract Changes (as defined herein).

   (c) **Contract Change** means any change order, change of time, extensions of time, amendment, modification, addition, or other alteration, material or otherwise, to the Contract, the contract price or amount, the work to be performed under the Contract, or the specifications accompanying same.

3. **Guaranty:** The Principal and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner, as obligee of the Bond, for the full and faithful performance of the Contract and any Contract Changes. The Principal and Surety likewise guarantee the faithful performance of the prevailing hourly wage as set
forth in the schedule incorporated into the bid documents unless the Project is exempt from the prevailing wage requirements of KRS 337.505 through 337.550.

4. **Bond Amount:** The bond amount is $[AMOUNT], which shall be increased automatically by Contract Changes to the contract price or amount and shall not limit the Surety’s obligation or liability under the Bond for paying attorney fees, costs, or other legal expenses incurred by the Owner, which may be in excess of the bond amount as increased.

5. **Defeasance:** Except as provided by the Contract, the Principal and Surety shall have no obligations under the Bond if the Principal during the original term thereof, any extensions thereof which may be granted by the Owner with or without notice to the Surety, the guaranty period, the warranty period, and other periods limited only by statutes of limitation (a) well, truly, and faithfully performs its duties to the Owner; (b) performs the Contract; (c) satisfies all claims and demands incurred under the Contract; (d) fully indemnifies and saves harmless the Owner from all costs, damages, attorney fees, consultant fees, and other expenses that it may suffer by reason of the Principal’s failure to do so; and (e) reimburses and repays the Owner all such expenses and outlay, without limitation, which the Owner may incur in making good any default. The Bond will otherwise remain in full force and effect.

6. **Amendment:** The Bond, including without limitation the Bond Amount, will be deemed amended, automatically and immediately without separate or written amendments hereto, upon any Contract Changes. The Principal and Surety agree to be bound by any Contract Changes. The Surety waives notice of any Contract Changes.

7. **Interpretation:** The Bond will be interpreted and enforced in accordance with Kentucky law. The Principal and Surety agree that they have taken part in drafting the Bond, which will not be construed against or in favor of any other party on the basis of drafting. To the extent that this instrument contradicts the Contract, the Contract will control.

**IN WITNESS WHEREOF,** the Principal and Surety, by their duly authorized representatives, have executed this instrument, which is effective as of [DATE].

**ATTEST:**

**WITNESSES:**

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<tr>
<td>Witness as to PRINCIPAL Title</td>
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</table>

**SURETY**

**WITNESSES:**

| Witness as to SURETY By |
| Witness as to SURETY Attorney-in-Fact |

**ATTEST:**

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<tr>
<td>Witness as to SURETY By</td>
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<tr>
<td>Witness as to SURETY Attorney-in-Fact</td>
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</tbody>
</table>
AFFIDAVIT

Comes the affiant and after having been duly sworn states as follows:

1. That affiant is the contractor awarded a contract by the University of Kentucky on Project #2524.0 Construction Management Services for Addition and Renovation of Alpha Delta Pi Sorority House

2. That all contractors and subcontractors employed, or that will be employed, under the provisions of this contract are in compliance with Kentucky requirements for Workers' Compensation Insurance according to KRS Chapter 342 and Unemployment Insurance according to KRS Chapter 341.

Further, the affiant sayeth naught.

By: ________________________________

Title: ______________________________

Contractor: _________________________

State of ________________)

County of ________________)

Subscribed and sworn to before me by _________________________ on this __________ day of ________________, 2020.

My commission expires ________________________________

________________________________________
Notary Public, State at Large
MBE/WBE Participation Goals

PART 1 - GENERAL

1.1 The University of Kentucky requests all potential contractors to make a concerted effort to include Minority-Owned (MBE) and Woman-Owned (WBE) Business Enterprises as subcontractors or suppliers in their bids.

1.2 Toward that end, the University of Kentucky has established 10% of total procurement costs as a Goal for participation of Minority-Owned and Woman-Owned Businesses on this contract.

1.3 **It is therefore a request of each Bidder to include in its bid, 10% for MBE/WBE participation and other requirements as outlined in this section.**

PART 2 - PROCEDURES

2.1 The successful bidder will be required to report to the University of Kentucky, the dollar amounts of all purchase orders submitted to Minority-Owned or Woman-Owned subcontractors and suppliers for work done or materials purchased for this contract.

2.2 Replacement of a Minority-Owned or Woman-Owned subcontractor or supplier listed in the original submittal must be requested in writing and must be accompanied by documentation of Good Faith Efforts to replace the subcontractor / supplier with another MBE/WBE Firm; subject to approval by the University of Kentucky.

2.3 For assistance in identifying qualified, certified businesses to solicit for potential contracting opportunities, bidders may contact:

A. The University of Kentucky, Facilities Management Contractor/Supply chain Coordinator (859-257-3204)

B. Tri-State Minority Supplier Development Council in Louisville, KY (502-625-0135)

C. The Kentucky Cabinet for Economic Development, Small & Minority Business Division in Frankfort, KY (502-564-2064)

D. The Office of Equal Employment Opportunity, Contract Compliance Division in Frankfort, KY (502-564-2874)

2.4 The University of Kentucky will make every effort to notify interested MBE/WBE subcontractors and suppliers of each Bid Package, including information on the scope of work, the pre-bid meeting time and location, the bid date, and all other pertinent information regarding the project.
PART 3 - DEFINITIONS

3.1 A Minority-Owned Business Enterprise (MBE) is defined as a business which is certified as being at least 51% owned and operated by persons of Hispanic or Latino ethnicity (Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin), or Black or African American, American Indian or Alaska Native, Asian, or Native Hawaiian or Other Pacific Islander race.

3.2 A Woman-Owned Business Enterprise (WBE) is defined as a business which is certified as being at least 51% owned and operated by one or more Non-Minority Females.

PART 4 - OBLIGATION OF BIDDER

4.1 The bidder shall make a Good Faith Effort to achieve the Participation Goal for MBE/WBE subcontractors/suppliers. The failure to meet the goal shall not necessarily be cause for disqualification of the bidder; however, bidders not meeting the goal are required to furnish with their bids written documentation of their Good Faith Efforts to do so.

4.2 Award of Contract shall be conditioned upon satisfaction of the requirements set forth herein.

4.3 The Form of Proposal includes a section entitled “Identification of Minority Subcontractors and Material Suppliers”. The Advertisement for Bid includes a section entitled “Minority Business Participation”. The Determination of Responsibility includes a section entitled “Participation of Minority and Women owned contractors and businesses”. The applicable information must be completed and submitted as outlined.

4.4 Failure to submit this information as requested may be cause for rejection of the bid.

PART 5 - DOCUMENTATION REQUIRED

5.1 The prime contractor must provide the University of Kentucky with a “MBE/WBE percent of contract report” detailing subcontracting activity within 90 days of prime contract award. Projects containing multiple bid packs will update reports within 90 days of contract award throughout project duration. The report shall reflect the total dollar amount awarded to all MBE/WBE subcontractors (including suppliers) utilized under this contract.

a. Prime Contractors will report the following items individually to satisfy reporting requirements
   i. Project Name, UK Project Number, and UK CPMD Project Manager assigned to the project
   ii. Total dollar value of the prime contract with the University of Kentucky
   iii. Total dollar value of all contracts assigned to MBE firms
   iv. Total dollar value of all contracts assigned to WBE firms

5.2 Bidders not reaching the Goal must submit both the “MBE/WBE percent of contract report “ and a written statement documenting their Good Faith Effort to do so (If bid includes no MBE/WBE participation, bidder shall enter “None” on the subcontractor / supplier form). In addition, the bidder may submit the following as proof of Good Faith Efforts to meet the Participation Goal:

A. Advertisement by the bidder of MBE/WBE Contracting opportunities associated with this bid in at least two (2) of the following:
1. A periodical in general circulation throughout the region
2. A Minority-Focused periodical in general circulation throughout the region
3. A Trade periodical aimed at the MBE/WBE community in general circulation throughout the region
4. Bidder shall include copies of dated advertisement with his submittal

B. Evidence of written notice of contracting opportunities to at least five (5) MBE/WBE firms serving the construction industry at least seven (7) days prior to the bid opening date.

C. Copies of quotations submitted by MBE/WBE firms which were not used due to uncompetitive pricing or other factors and/or copies of responses from firms that were contacted indicating that they would not be submitting a bid.

D. Documentation of Bidder’s utilization of the agencies identified to help locate potential MBE/WBE firms for inclusion on the contract including responses from agencies.

E. Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement. “Record of MBE/WBE Solicitation” and other required documentation of Good Faith Efforts are to be submitted with the bid, if participation Goal is not met.
1) Identification of Participating MBE/WBEs

Project Name / Number: ____________________________________________
UK Project Manager: _______________________________________________
Total Contract Value: ______________________________________________

<table>
<thead>
<tr>
<th>MBE/WBE Name, Address &amp; Phone</th>
<th>MBE or WBE</th>
<th>Work to be Performed</th>
<th>Dollar Value of Work</th>
<th>% Value of Total Contract</th>
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The undersigned submits the above list of MBE/WBE firms to be used in accomplishing the work contained in this Bid.

Company: ___________________________ By: ___________________________
Date: _____________________________ Title: ___________________________
University of Kentucky

Tree Protection Standards

Dated: 05/2017
Applies to: All Projects
University of Kentucky
010000S02 Tree Protection Standards

Article 56 is in addition to, and takes precedence over the provisions of the Special Conditions for the Project.

ARTICLE 56
PART 1 – GENERAL

56.1.1 SUMMARY

A. The scope of work includes all labor, materials, tools, equipment, facilities, transportation and services necessary for, and incidental to performing all operations in connection with protection of existing trees and other plants as shown on the drawings and as specified herein.

2. Provide tree and plant protection fencing.
3. Provide protection of root zones and above ground tree parts and plants.
4. Provide pruning of existing trees and plants.
5. Provide all insect and disease control.
6. Provide maintenance of existing trees and plants including irrigation during the construction period as recommended by the Arborist Report.
7. Provide maintenance of existing trees and plants including irrigation during the post construction plant maintenance period.
8. Remove tree protection fencing and other protection from around and under trees and plants.
9. Clean up and disposal of all excess and surplus material.

56.1.2 CONTRACT DOCUMENTS

A. Shall consist of specifications, general conditions and the drawings. The intent of these documents is to include all labor, materials, and services necessary for the proper execution of the work. The documents are to be considered as one. Whatever is called for by any parts shall be as binding as if called for in all parts.

B. It is the intent of this section that the requirements apply to all sections of the project specification such that any subcontractor must comply with the restrictions on work within designated Tree and Plant Protection Areas.
56.1.3 RELATED DOCUMENTS AND REFERENCES

A. Related Documents:

1. Drawings and general provisions of contract including general and supplementary conditions and Division I specifications apply to work of this section.
2. Section -Planting Soil
3. Section -Irrigation
4. Section -Planting
5. Section –Lawn

B. References: The following specifications and standards of the organizations and documents listed in this paragraph form a part of the specification to the extent required by the references thereto. In the event that the requirements of the following referenced standards and specification conflict with this specification section the requirements of this specification shall prevail. In the event that requirements of any of the following referenced standards and specifications conflict with each other the more stringent requirement shall prevail.

3. ANSI Z133 Safety Requirements for Arboricultural Operations.

56.1.4 VERIFICATION

A. All scaled dimensions on the drawings are approximate. Before proceeding with any work, the Contractor shall carefully check and verify all dimensions and quantities, and shall immediately inform the Owner’s Representative of any discrepancies between the information on the drawings and the actual conditions, refraining from doing any work in said areas until given approval to do so by the Owner’s Representative.
56.1.5 PERMITS AND REGULATIONS

A. The Contractor shall obtain and pay for all permits related to this section of the work unless previously excluded under provision of the contract or general conditions. The Contractor shall comply with all laws and ordinances bearing on the operation or conduct of the work as drawn and specified. If the Contractor observes that a conflict exists between permit requirements and the work outlined in the contract documents, the Contractor shall promptly notify the Owner’s Representative in writing including a description of any necessary changes and changes to the contract price resulting from changes in the work.

B. Wherever references are made to standards or codes in accordance with which work is to be performed or tested, the edition or revision of the standards and codes current on the effective date of this contract shall apply, unless otherwise expressly set forth.

C. In case of conflict among any referenced standards or codes or between any referenced standards and codes and the specifications, the more restrictive standard shall apply or Owner’s Representative shall determine which shall govern.

56.1.6 PROTECTION OF WORK, PROPERTY AND PERSON

A. The Contractor shall protect the work, adjacent property, and the public, and shall be responsible for any damages or injury due to his/her actions.

56.1.7 CHANGES IN THE WORK

A. The Owner’s Representative may order changes in the work, and the contract sum should be adjusted accordingly. All such orders and adjustments plus claims by the Contractor for extra compensation must be made and approved in writing before executing the work involved.
56.1.8 DEFINITIONS

All terms in this specification shall be as defined in the “Glossary of Arboricultural Terms” or as modified below.

A. Owner’s Representative: The person appointed by the Owner to represent their interest in the Tree and Plant Protection and approval of the work and to serve as the contracting authority with the Contractor. The Owner’s Representative may appoint other persons to review and approve any aspects of the work.

B. Reasonable and Reasonably: When used in this specification is intended to mean that the conditions cited will not affect the establishment or long term stability, health or growth of the plant. This specification recognizes that plants are not free of defects, and that plant conditions change with time. This specification also recognizes that some decisions cannot be totally based on measured findings and that professional judgment is required. In cases of differing opinion, the Owner’s Representative expert shall determine when conditions within the plant are judged as reasonable.

C. Shrub: Woody plants with mature height approximately less than 25 feet.

D. Tree and Plant Protection Area: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and defined by a circle centered on the trunk with each tree with a radius equal to the crown dripline unless otherwise indicated by the owner’s representative.

E. Tree: Single and multi-stemmed plants with anticipated mature height approximately greater than 25 feet or any plant identified on the plans as a tree.
56.1.9 SUBMITTALS

A. ARBORIST REPORT: Prior to the start of construction, submit, for approval by the Owner’s Representative, the report of a consulting arborist who is a Registered Consulting Arborist® (RCA) with American Society of Consulting Arborists or an ISA Board Certified Master Arborist, which details the following information for all trees to remain within the area designated on the drawings as the Tree and Plant Protection Area. The report shall include the following:

1. A description of each tree to protect indicating the following:
   a. Genus and species
   b. Condition including any visible damage to the root system or soil within the root zone
   c. Tree diameter at 4.5 feet above grade
   d. Tree height
   e. Crown width
   f. Any visible disease and/or insect infestations
   g. Branch and/or trunk structural deficiencies.
   h. Appraisal of value
   i. Appraisal of benefits (storm water interception, heating/cooling, carbon sequestration)

2. The report shall note all trees or parts of trees, which are considered a hazard or significant or extreme risk level. Include the International Society of Arboriculture Tree Risk Assessment evaluation sheet for each tree, which may reasonably be identified as a potential hazard tree.

3. Recommendations as to treatment of all insect, disease and structural problems encountered.

4. Recommendations for fertilizer treatments, if any.

5. A plan of the site showing the location of all trees included in the report.

B. PRODUCT DATA: Submit manufacturer product data and literature describing all products required by this section to the Owner’s Representative for approval. Provide submittal four weeks before the start of any work at the site.

C. QUALIFICATIONS SUBMITTAL: For each applicable person expected to work on the project, provide copies of the qualifications and experience of the Consulting Arborist, proof of either the registered Consulting Arborist® (RCA) with American Society of Consulting Arborists or an ISA Board Certified Master Arborist and any required Herbicide/Pesticide license to the Owner’s Representative, for review prior to the start of work.

56.1.10 OBSERVATION OF THE WORK

A. The Owner’s Representative may inspect the work at any time.
56.1.11 PRE-CONSTRUCTION CONFERENCE

A. Schedule a pre-construction meeting with the Owner’s Representative at least seven (7) days before beginning work to review any questions the Contractor may have regarding the work, administrative procedures during construction and project work schedule.

1. The following Contractors shall attend the preconstruction conference:
   a. General Contractor.
   b. Consulting Arborist.
   c. Subcontractor assigned to install Tree and Plant Protection measures.
   d. Earthwork Contractor.
   e. All site utility Contractors that may be required to dig or trench into the soil.
   f. Landscape subcontractor.
   g. Irrigation subcontractor

B. Prior to this meeting, mark all trees and plants to remain and or be removed as described in this specification for review and approval by the Owner’s Representative.

56.1.12 QUALITY ASSURANCE

A. Contractor qualifications:

1. All pruning, branch tie back, tree removal, root pruning, and fertilizing required by this section shall be performed by or under the direct supervision of an ISA Certified Arborist. Submit aforementioned individual’s qualifications for approval by the Owner’s Representative.

2. All applications of pesticide or herbicide shall be performed by a person maintaining a current state license to apply chemical pesticides valid in the jurisdiction of the project. Submit copies of all required state licensing certificates including applicable chemical applicator licenses.

56.1.13 DAMAGE OR LOSS TO EXISTING PLANTS TO REMAIN

A. Specimen trees within or adjacent to construction areas will be identified by the Owner’s Representative and the Architect, and marked with green tags. Loss of any of these trees will result in fines assessed at a minimum of $10,000 (or higher appraised amount that may be determined by the University prior to construction) per tree. Damage to all other trees on the property will be assessed at the rate of $200 per diameter inch of the tree measured 4.5’ above grade.

B. Any trees or plants designated to remain and which are damaged by the Contractor shall be replaced in kind by the Contractor at their own expense in addition to fines and penalties.
Tree(s) shall be replaced with a tree(s) of similar species and equivalent trunk diameter to the tree(s) being replaced. For example, if a 20” diameter tree is to be replaced, the Contractor can provide ten (10) two inch diameter trees. Depending on site accommodations and landscape design, the replacement trees may be installed outside of the project site as directed by the Owner’s Representative. Shrubs shall be replaced with a plant of similar species and equal size or the largest size plants reasonably available whichever is less. Where replacement plants are to be less than the size of the plant that is damaged, the Owner’s Representative shall approve the size and quality of the replacement plant.

1. All trees and plants shall be installed per the requirements of Specification Section Planting.

C. Plants that are damaged shall be considered as requiring replacement or appraisal in the event that the damage affects more than 25% of the crown, 25% of the trunk circumference, or root protection area, or the tree is damaged in such a manner that the tree could develop into a potential hazard. Trees and shrubs to be replaced shall be removed by the Contractor at his own expense.

1. The Owner’s Representative may engage an independent arborist to assess any tree or plant that appears to have been damaged to determine their health or condition.

D. Any tree that is determined to be dead, damaged or potentially hazardous by the Owner’s arborist and upon the request of the Owner’s Representative shall be immediately removed by the Contractor at no additional expense to the owner. Tree removal shall include all clean-up of all wood parts and grinding of the stump to a depth sufficient to plant the replacement tree or plant, removal of all chips from the stump site and filling the resulting hole with topsoil.

E. Any remedial work on damaged existing plants recommended by the Consulting Arborist shall be completed by the Contractor at no cost to the owner. Remedial work shall include but is not limited to: soil compaction remediation and vertical mulching, pruning and or cabling, insect and disease control including injections, compensatory watering, additional mulching, and could include application tree growth regulators (TGR). Any remedial work is to be performed by an ISA Certified Arborist, ISA Board Certified Master Arborist or a Registered Consulting Arborist.

F. Remedial work may extend up to two years following the completion of construction to allow for any requirements of multiple applications or the need to undertake applications at required seasons of the year.

56.1.14 LOSS OF TREES DUE TO CONSTRUCTION FOOT PRINT

A. Any trees or plants designated as removals to accommodate construction shall be replaced. Tree(s) shall be replaced with a tree(s) of similar species and equivalent trunk diameter to the tree(s) removed. For example, if a 20” diameter tree is removed, the Contractor can provide ten (10) two inch diameter trees. Depending on site accommodations and landscape design, the replacement trees may be installed outside of the project site as
PART 2 – PRODUCTS

56.2.1 MULCH

The coarse grade Mulch specified here is considered superior for its water retention and soil building properties in areas of tree and shrub roots when irrigation is drip, bubblers or flood methods.

A. Mulch shall be coarse, ground, from tree and woody brush sources. The minimum range of fine particles shall be 3/8 inch or less in size and a maximum size of individual pieces shall be approximately 1 to 1-1/2 inch in diameter and maximum length of approximately 4 to 8 inches. No more that 25% of the total volume shall be fine particles and no more than 20% of total volume be large pieces. Mulch will be applied to a depth of 3 to 5 inches. Mulch shall not come into contact with the tree trunk.

1. It is understood that Mulch quality will vary significantly from supplier to supplier and region to region. The above requirements may be modified to conform to the source material from locally reliable suppliers as approved by the Owner’s Representative.

B. Submit supplier’s product data that product meets the requirements and two-gallon sample for approval.

56.2.2 WOOD CHIPS

A. Wood Chips from an arborist chipping operation with less than 20% by volume green leaves. Chips stockpiled from the tree removal process may be used. Mulch will be applied to a depth of 5 to 8 inches. Mulch shall not come into contact with the tree trunk.

56.2.3 TREE PROTECTION FENCING

A. Chain link fencing shall be installed around all existing trees to remain. Fencing shall be 6’ tall galvanized nine gauge, with 3” end and line post and 1” minimum top rails, and bottom tension wire a maximum of 3” off the ground. Post shall be driven into the ground and spacing shall not exceed 8 feet.

6 feet tall metal chain link fence set in metal frame panels on movable core drilled concrete blocks of sufficient size to hold the fence erect in areas of existing paving to remain.

B. Orange plastic fencing shall be installed on the outside of the chain link fencing to provide high visibility.
C. GATES: For each fence type and in each separate fenced area, provide a minimum of one 3-foot-wide gate. Gates shall be lockable. The location of the gates shall be approved by the Owner’s Representative.

D. Submit supplier’s product data that product meets the requirements for approval.

56.2.4 TREE PROTECTION SIGN

A. Heavy-duty laminated or all weather signs, 11 inches x 17 inches, white colored background with black 2 inch high or larger block letters. The signs shall be attached to the tree protection fence every 50 feet. The tree protection sign shall read:

“Tree Protection Area - Keep Out”

The following information shall also be included on the sign:

i. Genus and species  
ii. Tree diameter  
iii. Tree height  
iv. Appraised value of tree  
v. Benefits provided  
   1. Storm water interception in gallons  
   2. Carbon sequestration in pounds  
   3. Energy Savings

56.2.5 TREE (Plant) GROWTH REGULATOR (TGR/PGR)

A. Active ingredient Paclobutrazol i.e. (ShortStop, Cambistat 2SC, Profile 2SC or other)  
B. Submit supplier’s product data that product meets the requirements for approval.

56.2.6 SOIL & ROOT PROTECTION

On projects where the tree protection fencing cannot be installed to create the desired protection zone.

A. Matting for vehicle and work protection shall be heavy duty matting designed for vehicle loading over tree roots, Alturnamats as manufactured by Alturnamats, Inc. Franklin, PA 16323 or approved equal.  
B. 1/2“Steel plates - Following the recommendations of the project arborist steel plates shall be installed to protect the roots from Construction activities.  
C. Submit suppliers’ product data that product meets the requirements for approval.

56.2.7 GEOGRID

A. Geogrid shall be woven polyester fabric with PVC coating, Uni-axial or biaxial geogrid, inert to biological degradation, resistant to naturally occurring chemicals, alkalis, acids.  
   Manufacturers: GSE Environmental, TenCate, Terram  
B. Submit suppliers’ product data that product meets the requirements for approval.
56.2.8 GEOTEXTILE

A. Geotextile shall be nonwoven polypropylene fibers, inert to biological degradation and resistant of naturally occurring chemicals, alkalis and acids.

Manufacturers: GSE Environmental, TenCate, Terram

B. Submit supplier’s product data that product meets the requirements for approval.

PART 3 –EXECUTION

56.3.1 SITE EXAMINATION

A. Examine the site, tree, plant and soil conditions. Notify the Owner’s Representative in writing of any conditions that may impact the successful Tree and Plant Protections that is the intent of this section.

56.3.2 COORDINATION WITH PROJECT WORK

A. The Contractor shall coordinate with all other work that may impact the completion of the work.

B. Prior to the start of Work, prepare a detailed schedule of the work for coordination with other trades.

C. Coordinate the relocation of any irrigation lines currently present on the irrigation plan, heads or the conduits of other utility lines or structures that are in conflict with tree locations. Root balls shall not be altered to fit around lines. Notify the Owner’s Representative of any conflicts encountered.

56.3.3 TREE AND PLANT PROTECTION AREA

A. The Tree and Plant Protection Area is defined as all areas indicated on the tree protection plan. Where no limit of the Tree and Plant Protection area is defined on the drawings, the limit shall be the drip line (outer edge of the branch spread) of each tree.

56.3.4 PREPARATION

A. Prior to the preconstruction meeting, layout the limits of the Tree and Plant Protection Area and then alignments of required Tree and Plant Protection Fencing and root pruning. Obtain the Owner’s Representative’s approval of the limits of the protection area and the alignment of all fencing and root pruning.

B. Flag all trees and shrubs to be removed by wrapping blue plastic ribbon around the trunk and obtain the Owner’s Representative’s approval of all trees and shrubs to be removed prior to the start of tree and shrub removal. After approval, mark all trees and shrubs to be removed with blue paint in a band completely around the base of the shrub(s) and around the trunk of the tree(s) 4.5 feet above the ground.
C. Flag all trees and shrubs to remain with green plastic ribbon tied completely around the trunk or each tree and on a prominent branch for each shrub. Obtain the Owner’s Representative's approval of all trees and shrubs to remain prior to the start of tree and shrub removal.

D. Prior to any construction activity at the site including utility work, grading, storage of materials, or installation of temporary construction facilities, install all tree protection fencing, Geotextile Fabric, silt fence, tree protection signs, Geogrid, Mulch and or Wood Chips as shown on the drawing.

56.3.5 SOIL MOISTURE

A. Volumetric soil moisture level, in all soils within the Tree and Plant Protection Area shall be maintained above permanent wilt point to a depth of at least 8 inches. No soil work or other activity shall be permitted within the Tree and Plant Protection Area when the volumetric soil moisture is above field capacity. The permanent wilt point and field capacity for each type of soil texture shall be defined as follows (numbers indicate percentage volumetric soil moisture).

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Permanent wilt point v/v</th>
<th>Field Capacity v/v</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand, Loamy sand, Sandy Loam</td>
<td>5-8%</td>
<td>12-18%</td>
</tr>
<tr>
<td>Loam, Sandy clay, Sandy clay loam</td>
<td>14-25%</td>
<td>27-36%</td>
</tr>
<tr>
<td>Clay loam, Silt loam</td>
<td>11-22%</td>
<td>31-36%</td>
</tr>
<tr>
<td>Silty clay, Silty clay loam</td>
<td>22-27%</td>
<td>38-41%</td>
</tr>
</tbody>
</table>

1. Volumetric soil moisture shall be measured with a digital, electric conductivity meter. The meter shall be the Digital Soil Moisture Meter, DSMM500 by General Specialty Tools and Instruments, or approved equivalent meter.

B. The Contractor shall confirm the soil moisture levels with a moisture meter. If the moisture is too high, suspend operations until the soil moisture drains to below field capacity.

56.3.6 ROOT PRUNING

A. Prior to any excavating into the existing soil grade within 25 feet of the limit of the Tree and Plant Protection Area or trees to remain, root prune all existing trees to a depth of 24 inches below existing grade in alignments following the edges of the Tree and Plant Protection Area or as directed by the Owner’s Representative. Root pruning shall be in conformance with ANSI A300 Root Management Standard (part 8) latest edition.

1. Using an air excavation tool to expose roots within 2 feet of the limit of grading.
2. After completion of excavation, make clean cuts with a lopper, saw or pruner to sever roots so they will not be torn, ripped or damaged by the excavation, and backfill the trench immediately with existing soil, filling all voids.

56.3.7 INSTALLATION OF GEOGRIDS, GEOTEXTILE FABRICS, MATTING, WOOD CHIPS AND OR MULCH

A. Install geogrids, geotextile fabric, matting, wood chips and or mulch in areas and depths shown on the plans and details or as directed by the Owner's representative. In general, it is the intent of this specification to provide the following levels of protection:

1. All areas within the Tree and Plant Protection area provide a minimum of 5 inches of wood chips or mulch.

2. Areas where foot traffic or storage of lightweight materials is anticipated to be unavoidable provide a layer of Filter Fabric under the 5 inches of wood chips or mulch.

3. Areas where occasional light vehicle traffic is anticipated to be unavoidable, provide approved matting or a layer of geogrids under 8 inches of wood chips or mulch.

4. Areas where heavy vehicle traffic is unavoidable provide approved matting or a layer of geogrids under 8 -12 inches of wood chips or mulch and a layer of matting over the wood chips or mulch.

B. The Owner's Representative shall approve the appropriate level of protection.

C. In the above requirements, light vehicle is defined as a track skid steer with a ground pressure of 4 psi or lighter. A heavy vehicle is any vehicle with a tire or track pressure of greater than 4 psi. Lightweight materials are any packaged materials that can be physically moved by hand into the location. Bulk materials such as soil, or aggregate shall never be stored within the Tree and Plant Protection Area.

56.3.8 PROTECTION

A. Protect the Tree and Plant Protection Area at all times from compaction of the soil; damage of any kind to trunks, bark, branches, leaves and roots of all plants; and contamination of the soil, bark or leaves with construction materials, debris, silt, fuels, oils, and any chemicals substance. Notify the Owner’s Representative of any spills, compaction or damage and take corrective action immediately using methods approved by the Owner’s Representative.
56.3.9 GENERAL REQUIREMENTS AND LIMITATIONS FOR OPERATIONS WITHIN THE TREE AND PLANT PROTECTION AREA:

A. The Contractor shall not engage in any construction activity within the Tree and Plant Protection Area without the approval of the Owner’s Representative including: operating, moving or storing equipment; storing supplies or materials; locating temporary facilities including trailers or portable toilets and shall not permit employees to traverse the area to access adjacent areas of the project or use the area for lunch or any other work breaks. Permitted activity, if any, within the Tree and Plant Protection Area may be indicated on the drawings along with any required remedial activity as listed below.

B. In the event that construction activity is unavoidable within the Tree and Plant Protection Area, notify the Owner’s Representative and submit a detailed written plan of action for approval. The plan shall include: a statement detailing the reason for the activity including why other areas are not suited; a description of the proposed activity; the time period for the activity, and a list of remedial actions that will reduce the impact on the Tree and Plant Protection Area from the activity. Remedial actions shall include but shall not be limited to the following:

1. In general, demolition and excavation within the drip line of trees and shrubs shall proceed with extreme care either by the use of hand tools, directional boring and or air excavation where indicated or with other low impact equipment that will not cause damage to the tree, roots or soil.

2. When encountered, exposed roots, 1 inches and larger in diameter shall be worked around in a manner that does not break the outer layer of the root surface (bark). These roots shall be covered in Wood Chips and shall be maintained above permanent wilt point at all times. Roots one inch and larger in diameter shall not be cut without the approval of the Owner’s Representative. Excavation shall be tunneled under these roots without cutting them. In the areas where roots are encountered, work shall be performed and scheduled to close excavations as quickly as possible over exposed roots.

3. Tree branches that interfere with the construction may be tied back or pruned to clear only to the point necessary to complete the work. Other branches shall only be removed when specifically indicated by the Owner’s Representative. Tying back or trimming of all branches and the cutting of roots shall be in accordance with accepted arboricultural practices (ANSI A300, parts 1 and 8) and be performed by or direct under supervision of an ISA Certified Arborist.

4. Matting: Install temporary matting over the Wood Chips or Mulch to the extent indicated. Do not permit foot traffic, scaffolding or the storage of materials within the Tree and Plant Protection Area to occur off of the temporary matting.

5. Trunk Protection: Protect the trunk of each tree to remain by covering it with a ring of 8-foot-long 2-inch x 6-inch planks loosely banded onto the tree with 3 steel bands.
Staple the bands to the planks as necessary to hold them securely in place. Trunk protection may be kept in place no longer than 12 months. If construction requires work near a particular tree to continue longer than 12 months, the steel bands shall be inspected every six months and loosened if they are found to have become tight.

6. Air Excavation Tool: If excavation for footings or utilities is required within the Tree and Plant Protection Area, air excavation tool techniques shall be used where practical or as designed on the drawings.

   a. Remove the Wood Chips from an area approximately 18 inches beyond the limits of the hole or trench to be excavated. Cover the Wood Chips for a distance of not less than 15 feet around the limit of the excavation area with Filter Fabric, tarp plastic sheeting to protect the Wood Chips from silt. Mound the Wood Chips so that the plastic slopes towards the excavation.

   b. Using a sprinkler or soaker hose, apply water slowly to the area of the excavation for a period of at least 4 hours, approximately 12 hours prior to the work so that the ground water level is at or near field capacity at the beginning of the work. For excavations that go beyond the damp soil, rewet the soil as necessary to keep soil moisture near field capacity.

   c. Using an air excavation tool specifically designed and manufactured for the intended purpose, and at pressures recommended by the manufacturer of the equipment, fracture the existing soil to the shape and the depths required. Work at rates and using techniques that do not harm tree roots. Air pressure shall be a maximum of 90-100 psi.

      i. The air excavation tool shall be either the “Air-Spade” as manufactured by Division of Guardair Corporation 47 Veterans Drive Chicopee, MA 01022 (800)-482-7324, or Supersonic Air Knife as manufactured by Easy Use Air Tools, Inc. Allison Park, Pa (866) 328-5723 or approved equal.

   d. Using a commercial, high-powered vacuum truck if required, remove the soil from the excavation produced by the Air Knife excavation. The vacuum truck should generally operate simultaneously with the hose operator, such that the soil produced is picked up from the excavation hole, and the exposed roots can be observed and not damaged by the ongoing operation. Do not drive the vacuum truck into the Tree and Plant Protection Area unless the area is protected from compaction as approved in advance by the Owner’s Representative.

   e. Remove all excavated soil and excavated wood chips, and contaminated soil at the end of the excavation.
f. Schedule the work so that foundations or utility work is completed immediately after the excavation. Do not let the roots dry out. Mist the roots several times during the day. If the excavated area must remain open overnight, mist the roots and cover the excavation with black plastic.

g. Dispose of all soil in a manner that meets local laws and regulations.

h. Restore soil within the trench as soon as the work is completed. Utilize soil of similar texture to the removed soil and lightly compact with hand tools. Leave soil mounded over the trench to a height of approximately 10% of the trench depth to account for settlement.

i. Restore any geogrids, filter fabric, wood chips or mulch and or matting that was required for the area.

56.3.10 GRADING AND FILLING AROUND TREES

A. Maintain existing grade within drip line of trees. Any variance to this will be executed only after consultation and recommendation from the Campus Arborist.

B. Where existing grade is above new finish grade shown around trees, carefully hand excavate within drip line to new grade. Cut exposed roots approximately 3" below elevation of new finish grade. Engage an ISA certified Arborist to recommend procedures to compensate for loss of roots and to provide initial services such as pruning of branches and stimulation of root growth. Provide subsequent maintenance during contract period as recommended by the arborist. Provide Grounds Superintendent with typed instructions for recommended long range maintenance procedures to be followed after completion of construction operations.

C. For minor fills where the existing grade is 4" or less below elevation of finish grade shown, use a topsoil type fill material rich in organic matter and loamy in texture. Place in single layers not more than two inches at a time and do not compact.

D. Fills greater than four inches shall only be attempted after consultation with the Campus Arborist. Detailed shop drawings of proposed work shall be submitted and approved by the Campus Arborist prior to any work. A progress schedule shall be established to monitor the work.

56.3.11 TREE REMOVAL:

A. Tree removals shall be performed by ISA Certified Arborists and companies shall have appropriate licenses and insurance for tree removal operations.

B. Remove all trees indicated by the drawings and specifications, as requiring removal, in a manner that will not damage adjacent trees or structures or compacts the soil.
C. Remove trees that are adjacent to trees or structures to remain, in sections, to limit the opportunity of damage to adjacent crowns, trunks, ground plane elements and structures.

D. Do not drop trees with a single cut unless the tree will fall in an area not included in the Tree and Plant Protection Area and there are no underground utilities that may be damaged. No tree to be removed within 50 feet of the Tree and Plant Protection Area shall be pushed over or up-rooted using a piece of grading equipment.

E. Protect adjacent paving, soil, trees, shrubs, ground cover plantings and understory plants to remain from damage during all tree removal operations, and from construction operations. Protection shall include the root system, trunk, limbs, and crown from breakage or scarring, and the soil from compaction.

F. Remove stumps and immediate root plate from existing trees to be removed. Grind trunk bases and large buttress roots to a depth of the largest buttress root or at least 18 inches below the top most roots whichever is less and over the area of three times the diameter of the trunk (DBH).

1. For trees where the stump will fall under new paved areas, grind roots to a total depth of 18 inches below the existing grade. If the sides of the stump hole still have greater than approximately 20% wood visible, continue grinding operation deeper and or wider until the resulting hole has less than 20% wood. Remove all wood chips produced by the grinding operation and back fill in 8 inch layers with controlled fill of a quality acceptable to the site engineer for fill material under structures, compacted to 95% of the maximum dry density standard proctor. The Owner’s Representative shall approve each hole at the end of the grinding operation.

2. In areas where the tree location is to be a planting bed or lawn, remove all woodchips and backfill stump holes with planting soil as defined in Specification Section Planting Soil, in maximum of 12 inch layers and compact to 80-85% of the maximum dry density standard proctor.

G. Wood salvaged for up cycling will be identified by the Owner’s Representative.

1. Sections of salvaged wood shall have a clean, flat cut across both ends.

2. Ends of wood sections shall be sealed with AnchorSeal after being cut and before being loaded. Branch cuts on the length of wood sections shall be sealed with AnchorSeal.

3. Care shall be taken when loading wood and logs not to damage the bark connection to the wood.

4. Wood and logs shall be stored so there is no contact with the ground. Wood and logs should be elevated from the ground by placing on cross beams of wood, concrete or steel. Wood and logs may also be stored on a gravel, concrete or asphalt pad.
56.3.12 PRUNING:

   A. Within six months of the estimated date of substantial completion, prune all dead or hazardous branches larger than 2 inch in diameter from all trees to remain.

   B. Implement all pruning recommendations found in the Arborist Report.

   C. Prune any low, hanging branches and vines from existing trees and shrubs that overhang walks, streets and drives, or parking areas as follows:

      1. Walks - within 7 feet vertically of the proposed walk elevation.

      2. Parking areas - within 10 feet vertically of the proposed parking surface elevation.

      3. Streets and drives - within 12 feet vertically of the proposed driving surface elevation.


   E. Perform other pruning task as indicated on the drawings or requested by the Owner’s Representative.

   F. Where tree specific disease vectors require, sterilize all pruning tools between the work in individual trees.

56.3.13 TREE (Plant) GROWTH REGULATOR APPLICATION (TGR/PGR)

   A. At the start of, or prior to, the construction contract period, treat all trees indicated on the Plan with Tree Growth Regulator at the recommended rates, time of year and methods indicated by the product distributor.

56.3.14 WATERING

   A. The Contractor shall be fully responsible to ensure that adequate water is provided to all plants to be preserved during the entire construction period. Adequate water is defined to be maintaining soil moisture above the permanent wilt point to a depth of 8 inches or greater.

   B. The Contractor shall adjust the automatic irrigation system, if available, and apply additional water, using hoses or water tanks as required.

   C. Periodically test the moisture content in the soil within the root zone to determine the water content.

56.3.15 TURF AND WEED MAINTENANCE

   A. Turf areas within the Tree and Plant Protection area shall be maintained in a manner that is consistent with University turf maintenance standards. This includes mowing, weed eating, edging, fertilization, weed control and leaf collection.
B. During the construction period, control any plants that seed in and around the fenced Tree and Plant Protection area at least three times a year.

1. All plants that are not shown on the planting plan or on the Tree and Plant Protection Plan to remain shall be considered as weeds.

C. At the end of the construction period provide one final mowing and weeding of the Tree and Plant Protection Area.

56.3.16 INSECT AND DISEASE CONTROL

A. Monitor all plants to remain for disease and insect infestations during the entire construction period. Provide all disease and insect control required to keep the plants in a healthy state using the principles of Integrated Plant Management (IPM). All pesticides shall be applied by a certified pesticide applicator.

56.3.17 CLEAN-UP

A. During tree and plant protection work, keep the site free of trash, pavements reasonably clean and work area in an orderly condition at the end of each day. Remove trash and debris in containers from the site no less than once a week.

1. Immediately clean up any spilled or tracked soil, fuel, oil, trash or debris deposited by the Contractor from all surfaces within the project or on public right of ways and neighboring property.

B. Once tree protection work is complete, wash all soil from pavements and other structures. Ensure that Mulch is confined to planting beds.

C. Make all repairs to grades, ruts, and damage to the work or other work at the site.

D. Remove and dispose of all excess Mulch, Wood Chips, packaging, and other material brought to the site by the Contractor.

56.3.18 REMOVAL OF FENCING AND OTHER TREE AND PLANT PROTECTION

A. At the end of the construction period or when requested by the Owner’s Representative remove all fencing, Wood Chips or Mulch, Geogrids and Geotextile Fabric, trunk protection and or any other Tree and Plant Protection material.

END OF SECTION
Report of Geotechnical Exploration

for

ADPi Sorority House Addition

Lexington, Kentucky

January 10, 2020

Prepared for

EOP Architects

Lexington, Kentucky

CSI Project Number LX190201
January 10, 2020

EOP Architects  
201 W. Short Street Suite 200  
Lexington, Kentucky 40507

ATTN: Ms. Rachel Hinson

Subject: Report of Geotechnical Exploration  
ADPi Sorority House Addition  
Lexington, Kentucky  
CSI Project No. LX190201

Dear Ms. Hisnon:

Consulting Services Incorporated of Kentucky (CSI) is pleased to present our report for the geotechnical services completed for your ADPi Sorority House Addition project. We provided our services in general accordance with CSI’s proposal number 6450 dated November 14, 2019.

Our report represents information provided to us, readily available published data relevant to the site and site area, our observations and subsurface conditions encountered and our opinion of primary geotechnical conditions (discussion and recommendations) affecting design, construction and performance of the proposed earth supported portions of the project.

We appreciate the opportunity to provide our geotechnical services to you and the design team. Please do not hesitate to contact us for questions or comments about the information contained herein.

Cordially,

Carole H. Gibbs  
Staff Engineer

Bruce L. Hatcher, PE  
Chief Engineer  
Licensed KY 14,527
TABLE OF CONTENTS

INTRODUCTION 1

1 SCOPE OF THE GEOTECHNICAL EXPLORATION 1
2 PROVIDED INFORMATION 1

3 AREA/SITE INFORMATION 2
   3A AREA TOPOGRAPHY/PHYSIOGRAPHY 2
   3B SITE GEOLOGY 2
   3C PUBLISHED SITE SOIL CONDITIONS 4
   3D OTHER PUBLISHED SITE INFORMATION 5

4 SITE SURFACE OBSERVATIONS 7

5 SUBSURFACE CONDITIONS 8
   5A SOIL CONDITIONS 8
   5B GROUNDWATER CONDITIONS 10
   5C BEDROCK INFORMATION 10

6 LABORATORY TESTING 10

GEOTECHNICAL DISCUSSION AND RECOMMENDATIONS 11

7 DISCUSSION-GEOTECHNICAL ISSUES 11
   7A previous site improvements 11
   7B PREVIOUSLY PLACED (OLD) FILL 11
   7C HIGH PLASTICITY (FAT) CLAY SOILS 12
   7D KARST GEOLOGY 13

8 DESIGN TEAM DISCUSSION 13

9 EARTHWORK 13
   9A SITE PREPARATION (WORK PRIOR TO FILLING) 14
   9B NEW FILL OPERATIONS 14
   9C BACKFILL OPERATIONS (FOUNDATION WALLS, UTILITIES, ETC.) 15
   9D GENERAL NOTES 16

10 SITE DRAINAGE 16

11 FOUNDATIONS 16
   11A SHALLOW SPREAD FOUNDATIONS ON SOIL 17
   11B SHALLOW FOUNDATIONS ON SOIL - CONSTRUCTION NOTES 17

12 SEISMIC SITE CLASSIFICATION 18

13 CONCRETE SLABS-ON-GRADE 18

14 NOTES ON THE REPORT AND RECOMMENDATIONS 19
APPENDICES, FIGURES, PHOTOS AND TABLES

APPENDICES:
- Site Location Plan
- Boring and Test Pit Location Plan
- Boring Logs
- Test Pit
- Field Testing Procedures
- Summary of Laboratory Tests
- Specific Laboratory Test Tables
- Laboratory Testing Procedures

List of Figures

Figure 1. Kentucky Physiographic Map ..........................................................2
Figure 2. Site Geology ..................................................................................3
Figure 3. Karst Areas Map, KGS .................................................................4
Figure 4. USDA Soil Survey Map ..................................................................5
Figure 5. Site Aerial dated April 1993 ..........................................................6
Figure 6. Site Aerial dated April 2018 ..........................................................6

List of Photos

Photo 1. .......................................................................................................7
Photo 2. ......................................................................................................8

List of Tables

Table 1. Anticipated Conditions .................................................................1
Table 2. General Subsurface Strata ..............................................................9
Table 3. Atterberg Limits Testing Results ..................................................12
INTRODUCTION

1 SCOPE OF THE GEOTECHNICAL EXPLORATION

We conducted a geotechnical exploration which is summarized in the following report. Our services included a review of the project information provided, conducting a geotechnical exploration that utilized soil test borings, test pits, and rock coring to obtain samples for modeling the soil and rock conditions at the subject site, an analysis of the data and information obtained, and providing recommendations for the soil supported portions of the project site as listed in our proposal.

2 PROVIDED INFORMATION

Project information was provided to us via e-mail and telephone correspondence from Ms. Hilary Vittitow, PE of Brown & Kubican Structural Engineers. We were provided the following documents:


Based on the information obtained, the following is our understanding of the project:

- The project site is located in the eastern quadrant at the intersection of Rose Street and Columbia Avenue in Lexington, Kentucky. Reference the Site Location Plan in the Appendix for further details.
- The project will consist of a two-story addition with a footprint of approximately 990 square feet. We understand this addition will have a crawl space.

We have based our report on the following information:

<table>
<thead>
<tr>
<th>Table 1: Anticipated Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site Grading - Building Pad</strong></td>
</tr>
<tr>
<td>Finished Floor Elevation</td>
</tr>
<tr>
<td>Maximum anticipated cut</td>
</tr>
<tr>
<td>Maximum anticipated fill</td>
</tr>
</tbody>
</table>

| **Anticipated Foundation Loading Conditions** |
| Load Type | Load |
| Column (if any) | 75 kips |
| Wall | 6 kips/LF |
| Floor Slab | <100 pounds/SF |

If any of the aforementioned information is in error or if the information changes during the course of the project, please contact our office so that we can re-evaluate the new information with respect to our proposed scope of work.
3 AREA/SITE INFORMATION

3A AREA TOPOGRAPHY/PHYSIOGRAPHY

The site is located in the Inner Blue Grass Region of the Blue Grass Physiographic Region of Kentucky. This area consists of gently rolling topography and rich, fertile soils. Published mapping reviewed indicates elevations in the site vicinity range from 980 feet to 1,000 feet. Below is a figure of the location of the site with respect to the regional physiography.

![Kentucky Physiographic Map](image)

Figure 1. Kentucky Physiographic Map (site vicinity shown in the circle)

3B SITE GEOLOGY

A review of the USGS Geologic Map of the Lexington West and Lexington East Quadrangles, Fayette and Scott Counties, Kentucky quadrangle (dated 1967 and 1968, respectively) indicates that the project site is underlain by the Grier Limestone Member of Middle Ordovician aged rock deposits. The Grier Limestone Member consists of limestone. The limestone is generally described as very light to dark gray, rubbly, with irregular medium and coarse grained limestone nodules and shale partings.

The geologic dip in the area is less than 1 percent to the northwest. The Bryan Station Fault and other small faults are mapped approximately 2 miles southeast of the project site.
As with most of the geology of this portion of Kentucky, Karst (sinkholes, weathered bedrock, caverns, erratic bedrock, etc.) is associated with the site geology. A closed depression is mapped south of the project site. Further, the W.T. Young Library “bowl” is one of the largest sites in Lexington overlying cave systems. The surrounding areas have been developed; therefore, obvious signs of sinkholes may have been filled. The Karst Occurrence in Kentucky map published by the Kentucky Geological Survey (KGS) indicates that the project site is in an area underlain by rock with very high potential for Karst development. No obvious indications of a sinkhole or near-surface cave were observed by CSI.

Figure 2. Site Geology USGS Lexington West and Lexington East Quadrangles, dated 1967 and 1968, respectively (site vicinity indicated by circle)
According to the USDA Soil Survey of Fayette County (NRCS website), information regarding the soils and their characteristics underlying the project site vicinity are not available and are listed as “NOTCOM” (No Digital Data Available). Due to the previous site regrading, soil survey information may not have been useful since the site soils have been altered. Figure 4 is the soils map from the USDA website.
We have reviewed several available aerial photographs, dated as far back as April 1993. The April 1993 aerial photograph indicates the project site was occupied by the existing Alpha Delta Pi Sorority House and parking lot. Between April 1993 and April 2018, minimal to no changes are indicated within the project vicinity. Please reference the following aerial photographs for further details.

Figure 4: USDA Soil Survey Map of Project Site (site vicinity shown in circle)
Figure 5: Aerial photograph, dated April 1993 from Google Earth (site vicinity shown in circle)

Figure 6: Aerial photograph, dated April 2018 from Google Earth (site vicinity shown in circle)
4 SITE SURFACE OBSERVATIONS

Mrs. Carole Gibbs of CSI conducted a site visit, performed a field reconnaissance, logged soil borings, rock coring and test pits, and directed drilling/ excavation operations within the proposed project area on December 18, 2019.

The project site is located in the eastern quadrant of the intersection at Rose Street and Columbia Avenue. The proposed building addition area is relatively flat to moderately sloping downward toward Columbia Avenue. Based on our top of boring elevations, the site has approximately 2 feet of vertical relief.

The proposed building addition area is currently asphalt covered. The project site is surrounded by Rose Street to the north, Columbia Avenue to the west, Columbia Terrace to the south and multiple buildings to the east.

Several existing underground utility lines (i.e.- electric, gas, and water) were indicated near the project vicinity. Specifically, water lines were marked near the northeast corner and electric lines were marked near the northwest corner of the existing sorority house. Gas lines were indicated along the eastern side and extended to Rose Street. Additionally, overhead electric lines were observed in the parking lot. No other marked utility lines were observed within the project site area. The following photos depict the site conditions as they existed at the time of our geotechnical exploration.

Photo 1. View looking northwest across the project site.
5 SUBSURFACE CONDITIONS

The subsurface conditions encountered at each of our soil boring and test pit locations are shown on the Boring and Test Pit Logs in the Appendix. It should be noted that our soil borings were sampled according to the procedures presented in the Appendix. The Boring and Test Pit Logs represent our interpretations of the subsurface conditions based on field logs, visual examination of field samples by an engineer, visual examination of auger cuttings, and tests of the samples collected. The letters in parentheses following the soil descriptions are the soil classifications in accordance with the Unified Soil Classification System. It should be noted that the stratification lines shown on the logs represent approximate transitions between material types. In-situ stratum changes could occur gradually or at slightly different depths. Water levels shown on the Boring and Test Pit Logs represent the conditions only at the time of our exploration.

5A SOIL CONDITIONS

We performed 2 soil borings and 2 test pits for the proposed building addition. The borings (labeled B-1 and B-2) were advanced within the proposed building addition footprint. Test pit TP-1 was excavated on the southwestern side of the existing building (non-basement area). Our other test pit, TP-2 was excavated near the northeastern corner of the building (basement area). Please reference the Boring and Test Pit Location Plan in the Appendix for the approximate locations.
In general, we encountered the following in our soil borings and test pits: a layer of topsoil or asphalt, overlying gravel, overlying previously placed fill, overlying residual soils (where encountered), overlying bedrock.

Asphalt was encountered at the surface of both of our borings. The asphalt ranged in thickness from approximately 2 to 3 inches. Underlying the surficial asphalt, gravel was encountered. The gravel was approximately 3 inches thick. Topsoil was encountered at both of our test pit locations and was approximately 4 inches thick.

Previously placed fill was encountered at both of our boring and test pit locations beneath the gravel or topsoil. The fill material generally consisted of reddish-brown clay with black oxide nodules and trace chert. The fill ranged in thickness from at least 4 to 5 feet. Please note one of our test pits (TP-1) was terminated while still in the old fill material. The old fill was generally sampled as firm to stiff. Please note, the stiffness of previously placed fill may have been inflated due to the inclusion of chert fragments. Thus, the previously placed fill may actually be softer than indicated.

Residual soils were encountered at both borings and one test pit location beneath the previously placed fill. The residual soils generally consisted of orangish-brown and reddish-brown to tan and gray fat clay (CH), with black oxide nodules, some chert and some sand. The residual soil ranged in thickness from at least 3 feet to approximately 15 feet. The residual soil was generally sampled as firm to very stiff and extended to the top of weathered rock. Please note, the stiffness of residual soil may have been inflated due to the inclusion of chert fragments. Thus, the residual soil may actually be softer than indicated.

Weathered rock was encountered in both of our soil borings. The weathered rock was approximately 12 to 14 inches thick.

Table 2 summarizes the general subsurface conditions encountered in our soil borings and test pits.

<table>
<thead>
<tr>
<th>Strata</th>
<th>Thickness</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Cover: Asphalt</td>
<td>2 to 3 inches</td>
<td>Present in both borings</td>
</tr>
<tr>
<td>Gravel</td>
<td>3 inches</td>
<td>Present in both borings beneath the asphalt</td>
</tr>
<tr>
<td>Surface Cover: Topsoil</td>
<td>4 inches</td>
<td>Present in both test pits</td>
</tr>
<tr>
<td>Fill - reddish-brown clay, with black oxide nodules and trace chert</td>
<td>At least 4 feet to approximately 5 feet</td>
<td>Present in both borings and test pits</td>
</tr>
<tr>
<td>Residual Soil - orangish-brown to tan and gray clay, with black oxide nodules, some chert and some sand</td>
<td>At least 3 feet to approximately 15 feet</td>
<td>Present in both borings and 1 test pit</td>
</tr>
<tr>
<td>Weathered Rock</td>
<td>Approximately 12 to 14 inches</td>
<td>Present in both borings</td>
</tr>
</tbody>
</table>
5B  GROUNDWATER CONDITIONS

Groundwater was not encountered in any of our borings or test pits upon completion of soil augering/excavation. Please note that a final groundwater reading was not taken in our core hole location since water was used to cool the coring bit. Both borings were immediately backfilled with auger cuttings and patched with cold patch asphalt upon the completion of soil augering (due to safety concerns). Both test pits were immediately backfilled with excavated soils to surrounding grades.

Water conditions that usually affect construction and performance of projects consist of trapped/perched water zones which occur in various areas in the soil mass, at or near the bedrock bedding planes, or at or near the soil/rock interface. Perched water sources are often not linked to the more continuous relatively stable groundwater table that typically occurs at greater depths. Also, the site is in a relatively “higher” Karst risk area. This area can include springs and other water features. Site excavation activities or ground disturbance can expose these features and the resulting seepage can vary greatly. Finally, water issues are also dependent upon recent rainfall activity and surface and subsurface drainage patterns in the area.

5C  BEDROCK INFORMATION

Auger refusal was encountered in both of our borings at depths of 21.3 feet and 19.1 feet. Both of our test pits were terminated at depths of 4 feet and 9 feet, prior to encountering bedrock. We have interpreted auger refusal to be the top of the bedrock surface.

Rock coring was performed at boring B-1. Two, five foot runs were obtained. The recovered cores consisted of hard, light to medium gray, medium grained limestone with some interbedded shale and few vugs. Our rock cores had a recoveries of 100 percent. The rock quality designation (RQD) for our recovered rock cores were of poor and very poor engineering quality with RQD values of 42 percent and 8 percent. No voids or core water loss were observed.

6  LABORATORY TESTING

Laboratory tests were performed on selected recovered samples from our borings. Detailed descriptions of these tests and the results of our testing are included in the Appendix. Tests performed included:

- Natural moisture contents
- Atterberg limits
- Grain size analyses
- Standard Proctor test
- Remolded swell test
GEOTECHNICAL DISCUSSION AND RECOMMENDATIONS

7 DISCUSSION-GEOTECHNICAL ISSUES

Based on our experience with similar projects and the conditions observed during our subsurface exploration, we believe the site can be adapted for the proposed development. However, this site will be more difficult (and more expensive) to develop when compared to a virgin site due to the previous development in the area and the old fill encountered in our borings. The primary geotechnical concerns are:

- Previous Site Improvements
- Previously Placed (Old) Fill
- High Plasticity (Fat) Clay Soils
- Karst Geology

The following sections discuss each issue. However, recommendations to address the issues are contained in later sections of the report.

7A PREVIOUS SITE IMPROVEMENTS

The proposed project area is currently occupied by the Alpha Delta Pi Sorority House, a parking lot, patios and some sidewalks. Expect that previous construction may have left old fill or buried deleterious material within the project boundaries. Your project budget should include a contingency for remediation of any encountered buried deleterious material or structures.

7B PREVIOUSLY PLACED (OLD) FILL

Previously placed fill was encountered at both of our boring and at both of our test pit locations. We expect this fill is from the construction of the existing sorority house. Old fill materials are often improperly compacted, commonly contain organics and debris, and can be poor bearing materials. Fills placed in an uncontrolled manner have proven to be problematic. The problems generally arise not from settlement, but from erratic differential settling of the fill. The settlement of old fill masses is dependent upon several factors such as fill thickness, degree of compaction, fill contents, and age of the fill mass. Please note that we cannot accurately predict the settlement of old fill.

We recommend complete removal of any encountered previously placed fill within the proposed site improvements. We can provide recommendations to reduce (but not eliminate) the risk associated with construction over old fill if any of the existing fill remains in-place. If any old fill is left in-place beneath the proposed site improvements, the Owner must be aware of the risk of construction over old fill material and hold CSI harmless for poor performance of the site improvements due to construction over the old fill.
7C HIGH PLASTICITY (FAT) CLAY SOILS

Atterberg limits testing was performed on three representative samples taken from two split-spoon samples and a bulk sample. Our laboratory testing indicated that all three of the tested soil samples were fat clay (CH) with a maximum PI of 44 percent. Soils with a PI above 30 percent can have a tendency to shrink/swell with changes in moisture content. Soils with a PI greater than 50 are generally highly susceptible to volume change. Soils with a PI between these limits have moderate volume change potential. Thus, we believe the on-site soils present a moderate risk of volume change potential. Please reference Table 3 for further details.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth (ft)</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Soil Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>4.0 - 5.5</td>
<td>56</td>
<td>26</td>
<td>30</td>
<td>CH</td>
</tr>
<tr>
<td>B-2</td>
<td>6.5 - 8.0</td>
<td>79</td>
<td>35</td>
<td>44</td>
<td>CH</td>
</tr>
<tr>
<td>Bulk 1</td>
<td>2.0 - 4.0</td>
<td>68</td>
<td>26</td>
<td>42</td>
<td>CH</td>
</tr>
</tbody>
</table>

Table 3: Atterberg Limits Testing Results

Shrinking and swelling of bearing soils are generally not as severe in the central Kentucky area as in other areas because long periods of excessively wet or dry weather do not normally occur. Where the soil moisture fluctuates, movement may be ongoing throughout the building’s life, resulting in deterioration and building distress. Strength loss may also affect building components, but is more likely to adversely affect parking lots - especially flexible asphalt pavements. Accumulation of water beneath pavement followed by repeated traffic loads, may result in the failure of both pavement and the subgrade materials.

Due to the fat clay (CH) soils encountered on-site, one remolded swell test was performed to model the on-site soil characteristics and general soil behavior. A bulk sample was obtained from boring B-1. Laboratory testing indicated a Maximum Dry Density (MDD) of 90.5 pcf and an Optimum Moisture Content (OMC) of 29.6%. Laboratory testing also indicated a remolded swell pressure of 625 psf. This swell pressure indicates a moderate risk to slab-on-grade concrete and possible risk to foundations bearing on soil.

Methods to control the adverse effects of these soils include soil modification methods (i.e.- undercut/replace, lime stabilization, etc.), providing efficient drainage around the building and pavements, installation of foundation components at depths below levels where moisture contents are subject to significant fluctuation, and implementing more stringent fill specifications for new fill placement. Please reference the later sections of this report for specific details pertaining to these fat clay soils.
7D  KARST GEOLOGY

Karst is common in Central Kentucky and typically includes, sinkholes, caverns, erratic/irregular (pinnacle and rock channels) bedrock surfaces, and “floater” type boulders or rock cobbles in the native soil overburden. The prominent topographic feature of Karst regions in Central Kentucky is the sinkhole. This is defined as areas underlain by carbonate rocks that are characterized by closed surface depressions and internal drainage systems. No obvious signs of Karst activity were denoted in our recovered soil samples, auger cuttings, excavated materials, or rock core. However, there is still an inherent risk associated with Karst-related issues for this project site.

Based on our knowledge of the area geology, sinkholes could be exposed during grading activities and foundation and utility construction. Detailed site proofrolling and foundation observations are frequently utilized in an attempt to locate incipient soil dropouts. Sinkholes, mud seams, or slots in bedrock must be evaluated and treated on an individual basis. A CSI geotechnical engineer must be retained for remediation recommendations if any of these features are exposed during construction. Where the soil overburden is relatively thick, treatment of depressions will likely involve monitoring by a CSI geotechnical engineer during earthwork operations to observe indications of sinkhole throats and conduits after soil cutting activities are complete.

8  DESIGN TEAM DISCUSSION

On January 6, 2020, we discussed our geotechnical findings and the project in general with you and Ms. Hilary Vitatow, PE (of Brown + Kubican Structural Engineers) during a short teleconference. Since our initial findings had been published, a standard Proctor test and remolded swell test had been performed. The swell pressure of 625 psf indicates a moderate risk to slab-on-grade concrete for this project. Thus, we recommend the use of 2 feet of crushed stone beneath exterior concrete.

The remainder of this report presents our recommendations based on the aforementioned discussion. If any of the information is in error, the information changes during the course of the project, please contact our office so that we can re-evaluate the new information with respect to our findings and recommendations.

9  EARTHWORK

Historically, more change orders (in total number and costs) occur during the earthwork portion of construction than in almost any other part of the project. Further, the site preparation phase of construction always affects the future performance of project structures and pavements. Add into this, the fact that earthwork is the portion of work most influenced by wet weather and unknown conditions and time-wise, this section of the report could be the most important to prevent and minimize delays and costs during construction and for the life of the project.
Please review the concerns listed in section 7 prior to reading the following recommendations. If problems occur that the recommendations do not address or do not adequately remedy, please contact CSI as soon as possible.

9A SITE PREPARATION (WORK PRIOR TO FILLING)

- When ready to commence construction, remove/relocate all underground/overhead utilities as required by the construction plans.
- Remove any existing asphalt or concrete from within the proposed building addition area. These materials should be wasted off-site.
- Remove all existing fill material to stiff residual soil. Excavated fill material can be re-used as new fill material provided that it meets the requirements for new fill presented later in this report.
- Areas ready to receive new fill should be proofrolled with a heavily loaded dump truck (GWW of 80,000 pounds) or similar equipment judged acceptable by a CSI geotechnical engineer.
- The level of proofroll for any site area should be determined by a CSI geotechnical engineer on a case-by-case basis.
- Perform the proofrolling after a suitable period of dry weather to avoid degrading the subgrade.
- Areas which pump, rut, or wave during proofrolling may require undercutting, depending on the location of the area and the use of the area, so the geotechnical engineer should be contacted for guidance.
- Backfill of undercut areas should be performed in accordance with sections 9B and 9C.
- Retain CSI to observe the proofrolling operations and make recommendations for any unstable or unsuitable conditions encountered. This can save time on the construction schedule and save unnecessary undercutting.

We recommend that site grading should take place between about late April to early November. Earthwork taking place outside this time period will likely encounter wet conditions and weather conditions that will provide little to no assistance with drying the soils.

9B NEW FILL OPERATIONS

Our laboratory tests indicate that the tested on-site soils are suitable for use as structural fill material provided the material is placed and compacted in accordance with the following
guidelines and specifications. Off-site fill soils with a plasticity index (PI) greater than 25 percent should not be used for new fill.

After the subgrade has been approved to receive new fill, the fill may commence with the following procedures and guidelines recommended:

- Place fill in maximum 8-inch thick loose lifts.
- Fill lifts should be compacted to at least 98 percent of the soil’s maximum dry density (ASTM D698) and maintain the moisture content of compacted fill within 2 percent of optimum moisture.
- Off-site fill soils with a plasticity index (PI) of greater than 25 should not be used as new fill.
- Maximum particle size of the soil should be limited to 4 inches in any dimension with no large concentrations of large fragments.
- Density testing should be performed as a means to verify percent compaction and moisture content of the material as it is being placed and compacted.
- Observation of fill “stability” is also critical, so it is recommended to observe the operation of the filling equipment traversing over the new fill to document movement (similar to proofrolling).
- Soils should not be “overcompacted” and construction traffic should be kept to minimum to assure compaction is achieved and that the soil is not allowed to “break down”.
- Retain a representative of CSI to observe and document fill placement and compaction operations.

9C BACKFILL OPERATIONS (FOUNDATION WALLS, UTILITIES, ETC.)

These materials are placed in more confined areas than mass earthwork materials or pavement materials and therefore cannot be placed in full compliance with sections 9A or 9B. The following are general recommendations for backfill areas:

- Fill lift thicknesses will vary dependent on compaction equipment available and material types, but in no case should exceed 8 inches.
- For crushed stone/aggregate backfills in trenches or wall backfill and when using smaller compaction equipment (such as a plate compactor or trench compactor or similar) the lift thickness should not exceed 4 inches.
• Compaction/moisture percentages and density testing requirements should be the same as in section 9B.

• CSI should be retained to provide additional recommendations for backfill (if necessary).

9D GENERAL NOTES

• For all earthwork operations, positive surface drainage is prudent to keep water from ponding on the surface and to assist in maintaining surface stability.

• The surface should be sealed prior to expected wet weather. This can usually be accomplished with rubber-tired construction equipment or a steel-drum roller.

• If any soil placement problems occur, CSI should be retained to provide additional recommendations, as needed.

10 SITE DRAINAGE

During construction, water should not be allowed to pond in excavations or undercutting will likely be required. Additionally, allowing water to pond in excavations greatly increases the risk for activating latent Karst features. During the life of the project, slope the subgrade and other site features so that surface water flows away from the site structures. Structure roof drains should be piped away to proper storm drainage systems. Diversion ditches should be used to keep surface water from accumulating at or near site structures. We do not recommend the use of irrigation systems (due to the encountered fat clay soils on-site).

For excavations during construction, most free water (not observed in our soil borings or test pits) could likely be removed via sump pumps and open channel flow (ditches) at or near the source of seepage. Based on our experience with similar projects, we expect that perched (trapped) water within the existing fill material and/or utility trench backfill/bedding will be encountered. Typically, these pockets of trapped water dissipate rather quickly but can produce considerable amounts of water that will require removal. If normal dewatering measures prove insufficient due to shallow water conditions, CSI should be retained to provide recommendations on the issue.

11 FOUNDATIONS

Based on the existing footings of the adjacent building bearing on soil, this addition may also utilize shallow spread footings bearing on soil. If there are any changes in the project criteria, foundation types, or building addition location, CSI should be allowed to review the recommendations to determine if any modifications are required.
11A SHALLOW SPREAD FOUNDATIONS ON SOIL

Shallow spread footings may be sized using a maximum allowable bearing pressure of 2,000 pounds per square foot (psf). Foundations should bear on the stiff or better residual soil, or newly placed engineered fill. Foundations should not bear on existing fill.

If rock is encountered within 2 feet of the design bottom of foundation (BOF) elevation (not expected), then the rock should be undercut to at least 2 feet below the design BOF. The undercut area should then be backfilled with compacted soil fill or sand. The use of DGA (dense graded aggregate) or No. 57 crushed stone as backfill material is not recommended.

A detailed settlement analysis was beyond the scope of this exploration. However, based on the estimated structural loads, the anticipated behavior of soil types encountered during field activities, and our experience with similar projects, we expect that total settlements will not exceed 1 inch, and that differential settlements will not exceed ½ inch along continuous footing distances of 30 feet or less. We recommend the structure be designed to accommodate these magnitudes of total and differential settlements.

Additional design considerations for spread foundations bearing on soil are outlined as follows:

- Design all footings with a minimum 24 inches width;
- Exterior footing bottoms should bear at least 36 inches below finished exterior grading (due to the encountered fat clay soils);
- Interior footings (those not exposed to freezing) may be placed at nominal depths.

11B SHALLOW FOUNDATIONS ON SOIL - CONSTRUCTION NOTES

Any soils can lose strength if they become wet, so we recommend the foundation subgrades be protected from exposure to water. For foundations construction, we also recommend the following procedures.

- For soils that will remain exposed overnight or for an extended period of time, place a "lean" concrete mudmat over the bearing areas. The concrete should be at least 4 inches thick. Flowable fill concrete or low-strength concrete is suitable for this cover, as conditions allow.
- Disturbed soil should be removed prior to foundation concrete placement.
- Foundation bearing conditions should be benched level.
- Areas loosened by excavation operations should be recompacted prior to reinforcing steel placement.
• Loose soil, debris, and excess surface water should be removed from the bearing surface prior to concrete placement.

• Retain a CSI geotechnical engineer to observe all foundation excavations and provide recommendations for treatment of any unsuitable conditions encountered.

12 SEISMIC SITE CLASSIFICATION

The latest edition of the Kentucky Building Code (KBC) was reviewed to determine the Site Seismic Classification. Based on our review of geologic data, our experience and subsurface conditions encountered and the use of soil bearing foundations, we recommend a Seismic SITE CLASS "D" for foundation design purposes.

A detailed geotechnical earthquake engineering analysis was not performed since it was beyond the scope of our authorized work. However, based on a review of published literature and our experience with similar subsurface conditions, we believe the potential for slope instability, liquefaction, and surface rupture due to faulting or lateral spreading resulting from earthquake motions is low. However, this potential could be elevated during wet periods of the year unless adequate drainage is provided.

13 CONCRETE SLABS-ON-GRADE

We understand that this addition will use a crawlspace, thus a concrete floor slab is not planned. However, patios, sidewalks, etc. may be part of this project. Slab-on-grade concrete bearing on soil is feasible for this project - provided the subgrade is prepared according to the recommendations in this report. Due to the encountered fat clay soils, we recommend that 2 feet of crushed stone be used beneath all slab-on-grade concrete.

Based on the depth to rock in our borings, rock is not expected to be encountered beneath the project concrete slabs. If rock is encountered within 1 foot of the slab subgrade elevation, we recommend that the rock be undercut at least 1 foot below slab subgrade elevation and the excavation be backfilled with compacted select soil fill or crushed stone up to the design slab subgrade elevation.

The following features are recommended as part of the concrete slab construction:

• Provide isolation joints between the concrete and adjoining structure.

• Adequate joint patterns (ACI and ICC guidelines) should be used to permit slab movement due to normal soil settlement, normal subgrade disturbance and material expansion/contraction.
• Place a minimum of 4 inches of clean, compacted gravel or crushed stone beneath the slab to provide a working base. The actual thickness of the gravel layer should be based on design requirements.

• Keep the crushed stone or gravel moist, but not wet, immediately prior to slab concrete placement to minimize curling of the slab due to differential curing conditions between the top and bottom of the slab.

• Retain CSI to review the actual subgrade conditions prior to slab construction and make recommendations for any unsuitable conditions encountered.

Note: Slab subgrade conditions are also considered earthwork areas and the recommendations contained in the Earthwork section of the report.

14 NOTES ON THE REPORT AND RECOMMENDATIONS

We recommend that this complete report be provided to the various design team members, the contractors and the project Owner. Potential contractors should be informed of this report in the “Instructions to Bidders” section of the bid documents. A geotechnical exploration, such as the one we performed, uses widely spaced borings to attempt to model the subsurface conditions at the site. Because no exploration contains complete data or a complete model, there is always a possibility that conditions between borings will be different from those at specific boring locations. Thus, it is possible that some subsurface conditions will not be as anticipated by the project team or contractor. If this report is included or referenced in the actual contract documents, it shall be explicitly understood that this report is for informational purposes only. CSI shall not be responsible for the opinions of, or conclusions drawn by, others.

It has been our experience that the construction process often disturbs soil conditions and this process, no matter how much experience we use to anticipate construction methodology, is not completely predictable. Therefore, changes or modifications to our recommendations are likely needed due to these possible variances. Experienced CSI geotechnical personnel should be used to observe and document the construction procedures and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to solve the problems created. We recommend that the Owner retain CSI to provide this service based upon our familiarity with the project, the subsurface conditions and the intent of our recommendations.

This report is based on the supplied project information, the subsurface conditions observed at the time of the report, and our experience with similar conditions. As such, it cannot be applied to other project sites, types, or combinations thereof. If the Project Information section in this report contains incorrect information or if additional information is available, you should convey the correct or additional information to us and retain us to review our recommendations. Our recommendations may then require modification.
No section or portion of this report (including Appendix information) can be used as a stand alone article to make distinct changes or assumptions. The entire report and Appendix should be used together as one resource.

While this report deals with samples of subsurface materials and some comments on water conditions at the site, no assessment of site environmental conditions or the presence of contaminants were performed.

We wish to remind you that our exploration services include storing the soil and rock core samples collected and making them available for inspection for 30 days. The soil and rock core samples are then discarded unless you request otherwise. Please inform us if you wish to keep any of the obtained samples.
APPENDIX

Site Location Plan
Boring and Test Pit Location Plan
Key to Symbols and Descriptions
  Boring Logs
  Test Pit Logs
Field Testing Procedures
Summary of Lab Testing Table(s) and Lab Testing Sheets
Laboratory Testing Procedures
Site Location Plan adapted from USGS Lexington East, Kentucky dated 1993 and Lexington West, Kentucky dated 1993 Topographic Quadrangle maps, with further adaptation by CSI personnel.

FOR ILLUSTRATION PURPOSES ONLY
Boring and Test Pit Location Plan adapted from provided aerial imagery undated, with further adaptation by CSI personnel. Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

FOR ILLUSTRATION PURPOSES ONLY
Sample Type Symbols | Definitions
--- | ---
Splitspoon (SPT) | SPT—“Splitspoon” or standard penetration test. Blow counts are number of drops required for a 140 lb hammer dropping 30 inches to drive the sampler 6 inches.
Shelby Tube | N-value is the addition of the last two intervals of the 18-inch sample.
Grab | Shelby tubes are often called “undisturbed samples”. They are directly pushed into the ground, twisted, allowed to rest for a small period of time and then pulled out of the ground. Tops and bottoms are cleaned and then sealed.
Rock Core | Sample classification is done in general accordance with ASTM D2487 and 2488 using the Unified Soil Classification System (USCS) as a general guide.
Auger Cuttings |

Surface Symbols
---
Topsoil
Asphalt
Concrete
Lean Clay
Fat Clay
Glacial Till
Sandy Clay
Silt
Elastic Silt
Lean Clay to Fat Clay
Gravelly Clay
Sandy Silt
Gravelly Silt
Sand
Gravel
Fill
Limestone
Sandstone
Shale/Siltstone
Weathered Rock

Soil moisture descriptions are based on the recovered sample observations. The descriptors are dry, slightly moist, moist, very moist and wet. These are typically based on relative estimates of the moisture condition of a visual estimation of the soil's optimum moisture content (EOMC). Dry is almost in a “dusty” condition usually 6 or more percent below EOMC. Slightly moist is from about 6 to 2 percent below EOMC at a point at which the soil color does not readily change with the addition of water. Moist is usually 2 percent below to 2 percent above EOMC and the point at which the soil will tend to begin forming “balls” under some pressure in the hand. Very moist is usually from about 2 percent to 6 percent above EOMC and also the point at which it's often considered “muddy”. Wet soil is usually 6 or more percent above EOMC and often contains free water or the soil is in a saturated state.

Silt or Clay is defined at material finer than a standard #200 US sieve (<0.075mm) Sand is defined as material between the size of #200 sieve up to #4 sieve. Gravel is from #4 size sieve material to 3”. Cobbles are from 3” to 12”. Boulders are over 12”.

Rock hardness is classified as follows:
- Very Soft: Easily broken by hand pressure
- Soft: Ends can be broken by hand pressure; easily broken with hammer
- Medium: Ends easily broken with hammer; middle requires moderate blow
- Hard: Ends require moderate hammer blow; middle requires several blows
- Very Hard: Many blows with a hammer required to break core

Rock Quality Designation (RQD) is defined as total combined length of 4’ or longer pieces of core divided by the total core run length; defined in percentage.

Water or cave-in observed in borings is at completion of drilling each boring unless otherwise noted.

Strata lengths shown on borings represents a rough estimate. Transition may be more abrupt or gradual. Soil borings are representative of that estimated location at that time and are based on recovered samples. Conditions may be different between borings and between sample intervals. Boring information is not to be considered stand alone but should be taken in context with comments and information in the geotechnical report and the means by which the borings are logged, sampled and drilled.
<table>
<thead>
<tr>
<th>Elev. (ft)</th>
<th>Depth (ft)</th>
<th>Symbol</th>
<th>Description</th>
<th>Blow Counts (N Value)</th>
<th>Recov. (in)</th>
<th>Water Level</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>988</td>
<td>2</td>
<td></td>
<td>FILL - sampled as STIFF, reddish-brown clay, with black oxide nodules, with trace chert, moist</td>
<td>3-5-4 (9)</td>
<td>14</td>
<td></td>
<td>Dry upon completion of soil augering</td>
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<tr>
<td>986</td>
<td>4</td>
<td></td>
<td>FAT CLAY (CH) - STIFF to FIRM, orangish-brown, with black oxide nodules, with some red oxide nodules,</td>
<td>5-4-5 (9)</td>
<td>18</td>
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<tr>
<td>984</td>
<td>6</td>
<td></td>
<td></td>
<td>4-5-7 (12)</td>
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<tr>
<td>982</td>
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<td></td>
<td></td>
<td>3-4-4 (8)</td>
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<td></td>
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<tr>
<td>980</td>
<td>10</td>
<td></td>
<td>FAT CLAY (CH) - VERY STIFF, tan, with trace black oxide nodules, with sand, with some weathered rock</td>
<td>5-8-13 (21)</td>
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<tr>
<td>978</td>
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<td>5-11-50/3''</td>
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<tr>
<td>976</td>
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*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.*

Contractor: Strata Group
Drill Rig: Diedrich D-50
Method: SFA
Hole Size (in): 4"
### BORING LOG

**BORING:** B-2

<table>
<thead>
<tr>
<th>Elev. (ft)</th>
<th>Depth (ft)</th>
<th>Symbol</th>
<th>Description</th>
<th>Blow Counts (N Value)</th>
<th>Recov. (in)</th>
<th>Water Level</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>986</td>
<td>2</td>
<td>CH</td>
<td>ASPHALT - 3 inches</td>
<td>3-4-3 (7)</td>
<td>17</td>
<td></td>
<td>Dry upon completion of soil augering</td>
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<tr>
<td>984</td>
<td>4</td>
<td>CH</td>
<td>GRAVEL - 3 inches</td>
<td>3-3-5 (8)</td>
<td>18</td>
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<tr>
<td>982</td>
<td>6</td>
<td>CH</td>
<td>FILL - sampled as FIRM, reddish-brown clay, with black oxide nodules, wet</td>
<td>4-5-5 (10)</td>
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<td></td>
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<tr>
<td>980</td>
<td>8</td>
<td>CH</td>
<td>FAT CLAY (CH) - FIRM, reddish-brown, with black oxide nodules, with trace chert, wet</td>
<td>4-5-9 (14)</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>978</td>
<td>10</td>
<td>CH</td>
<td>FAT CLAY (CH) - STIFF, orangish-brown, with black oxide nodules, with chert, wet to moist</td>
<td>6-7-14 (21)</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>976</td>
<td>12</td>
<td>CH</td>
<td>FAT CLAY (CH) - VERY STIFF, tan and brown, with some sand, with some black oxide nodules, moist</td>
<td>50/1”</td>
<td>0</td>
<td></td>
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</tr>
<tr>
<td>974</td>
<td>14</td>
<td></td>
<td>WEATHERED ROCK</td>
<td>Auger Refusal at 20.0 feet</td>
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</table>

*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.*
**Test Pit: TP-1**

**Elevation (ft): 987.7**

<table>
<thead>
<tr>
<th>Elev. (ft)</th>
<th>Depth (ft)</th>
<th>Description</th>
<th>DCP</th>
<th>Remarks</th>
<th>Photos</th>
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<tbody>
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<td>987</td>
<td>0</td>
<td>TOPSOIL - 4 inches</td>
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<td>986</td>
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<td>FILL - reddish-brown clay, with black oxide nodules, with some sand, with some chert, moist</td>
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<tr>
<td>985</td>
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<td>984</td>
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<td></td>
</tr>
<tr>
<td>983</td>
<td>4</td>
<td>Test Pit Terminated at 4.0 feet</td>
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<td></td>
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</tr>
</tbody>
</table>

*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.*

**Notes:**
- Top of Footing = 987.7
- Bottom of Footing = 986.9
- Existing Footing is soil bearing
- Width of foundation protrusion from wall = 8 inches

**CLIENT:** EOP Architects  
**PROJECT:** Alpha Delta Pi Soroity House Addition  
**LOCATION:** Lexington, Kentucky  
**JOB NUMBER:** LX190201  
**LOGGED BY:** C. Gibbs  
**APPROVED BY:** B. Hatcher, P.E.  
**CONTRACTOR:** Strata Group  
**EQUIPMENT:** Z-755  
**METHOD:** Bucket  
**DATE STARTED:** 12/18/2019  
**DATE COMPLETED:** 12/18/2019  
**WEATHER:** Cloudy, 30s
### Test Pit: TP-2

**Elevation (ft):** 989.6

<table>
<thead>
<tr>
<th>Elev. (ft)</th>
<th>Depth (ft)</th>
<th>Description</th>
<th>DCP</th>
<th>Samples</th>
<th>Remarks</th>
<th>Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>989</td>
<td>0</td>
<td>TOPSOIL - 2 inches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>988</td>
<td>1</td>
<td>FILL - reddish-brown clay, with some roots, with black oxide nodules, moist</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>987</td>
<td>2</td>
<td>FAT CLAY (CH) - reddish-brown and brown, with black oxide nodules, with some chert, with some sand, moist</td>
<td></td>
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<td></td>
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<tr>
<td>986</td>
<td>3</td>
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<td>981</td>
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<tr>
<td>980</td>
<td>9</td>
<td>Test Pit Terminated at 9.0 feet (Extent of Excavator)</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.*

**CLIENT:** EOP Architects  
**PROJECT:** Alpha Delta Pi Soroity House Addition  
**LOCATION:** Lexington, Kentucky  
**JOB NUMBER:** LX190201  
**LOGGED BY:** C. Gibbs  
**APPROVED BY:** B. Hatcher, P.E.  
**CONTRACTOR:** Strata Group  
**EQUIPMENT:** Z-755  
**METHOD:** Bucket  
**DATE STARTED:** 12/18/2019  
**DATE COMPLETED:** 12/18/2019  
**WEATHER:** Cloudy, 30s
FIELD TESTING PROCEDURES

Field Operations: The general field procedures employed by CSI are summarized in ASTM D 420 which is entitled “Investigating and Sampling Soils and Rocks for Engineering Purposes.” This recommended practice lists recognized methods for determining soil and rock distribution and ground water conditions. These methods include geophysical and in situ methods as well as borings.

Borings are drilled to obtain subsurface samples using one of several alternate techniques depending upon the subsurface conditions. These techniques are:

a. Continuous 2-1/2 or 3-1/4 inch I.D. hollow stem augers;

b. Wash borings using roller cone or drag bits (mud or water);

c. Continuous flight augers (ASTM D 1425).

These drilling methods are not capable of penetrating through material designated as “refusal materials.” Refusal, thus indicated, may result from hard cemented soil, soft weathered rock, coarse gravel or boulders, thin rock seams, or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

The subsurface conditions encountered during drilling are reported on a field test boring record by the chief driller. The record contains information concerning the boring method, samples attempted and recovered, indications of the presence of various materials such as coarse gravel, cobbles, etc., and observations between samples. Therefore, these boring records contain both factual and interpretive information. The field boring records are on file in our office.

The soil and rock samples plus the field boring records are reviewed by a geotechnical engineer. The engineer classifies the soils in general accordance with the procedures outlined in ASTM D 2488 and prepares the final boring records, which are the basis for all evaluations and recommendations.

The final boring records represent our interpretation of the contents of the field records based on the results of the engineering examinations and tests of the field samples. These records depict subsurface conditions at the specific locations and at the particular time when drilled. Soil conditions at other locations may differ from conditions occurring at these boring locations. Also, the passage of time may result in a change in the subsurface soil and ground water conditions at these boring locations. The lines designating the interface between soil or refusal materials on the records and on profiles represent approximate boundaries. The transition between materials may be gradual. The final boring records are included with this report.

The detailed data collection methods using during this study are discussed on the following pages.

Soil Test Borings: Soil test borings were made at the site at locations shown on the attached Boring Plan. Soil sampling and penetration testing were performed in accordance with ASTM D 1586.

The borings were made by mechanically twisting a hollow stem steel auger into the soil. At regular intervals, the drilling tools were removed and soil samples obtained with a standard 1.4 inch I.D., 2 inch O.D., split tube sampler. The sampler was first seated 6 inches to penetrate any loose cuttings, then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot was recorded and is designated the “penetration resistance”. The penetration resistance, when properly evaluated, is an index to the soil strength and foundation supporting capability.

Representative portions of the soil samples, thus obtained, were placed in glass jars and transported to the laboratory. In the laboratory, the samples were examined to verify the driller’s field classifications. Test Boring Records are attached which graphically show the soil descriptions and penetration resistances.
Core Drilling: Refusal materials are materials that cannot be penetrated with the soil drilling methods employed. Refusal, thus indicated, may result from hard cemented soil, soft weathered rock, coarse gravel or boulders, thin rock seams or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

Prior to coring, casing is set in the drilled hole through the overburden soils, if necessary, to keep the hole from caving. Refusal materials are then cored according to ASTM D 2113 using a diamond-studded bit fastened to the end of a hollow double tube core barrel. This device is rotated at high speeds, and the cuttings are brought to the surface by circulating water. Core samples of the material penetrated are protected and retained in the swivel-mounted inner tube. Upon completion of each drill run, the core barrel is brought to the surface, the core recovered is measured, the samples are removed and the core is placed in boxes for storage.

The core samples are returned to our laboratory where the refusal material is identified and the percent core recovery and rock quality designation is determined by a soils engineer or geologist. The percent core recovery is the ratio of the sample length obtained to the depth drilled, expressed as a percent. The rock quality designation (RQD) is obtained by summing up the length of core recovered, including only the pieces of core which are four inches or longer, and dividing by the total length drilled. The percent core recovery and RQD are related to soundness and continuity of the refusal material. Refusal material descriptions, recoveries, and RQDs are shown on the "Test Boring Records".

Hand Auger Borings and Dynamic Cone Penetration Testing: Hand auger borings are performed manually by CSI field personnel. This consists of manually twisting hand auger tools into the subsurface and extracting “grab” or baggie samples at intervals determined by the project engineer. At the sample intervals, dynamic cone penetration (DCP) testing is performed. This testing involves the manual raising and dropping of a 20-pound hammer, 18 inches. This “driver” head drives a solid-13/4 inch diameter cone into the ground. DCP “counts” are the number of drops it takes for the hammer to drive three 13/4 inch increments, recorded as X-Y-Z values.

Test Pits: Test pits are excavated by the equipment available, often a backhoe or trackhoe. The dimensions of the test pits are based on the equipment used and the power capacity of the equipment. Samples are taken from the spoils of typical buckets of the excavator and sealed in jars or “Ziploc” baggies. Dynamic Cone Penetration or hand probe testing is often performed in the upper few feet as OSHA standards allow. Refusal is deemed as the lack of advancement of the equipment with reasonable to full machine effort.

Water Level Readings: Water table readings are normally taken in conjunction with borings and are recorded on the "Test Boring Records". These readings indicate the approximate location of the hydrostatic water table at the time of our field investigation. Where impervious soils are encountered (clayey soils) the amount of water seepage into the boring is small, and it is generally not possible to establish the location of the hydrostatic water table through water level readings. The ground water table may also be dependent upon the amount of precipitation at the site during a particular period of time. Fluctuations in the water table should be expected with variations in precipitation, surface run-off, evaporation and other factors.

The time of boring water level reported on the boring records is determined by field crews as the drilling tools are advanced. The time of boring water level is detected by changes in the drilling rate, soil samples obtained, etc. Additional water table readings are generally obtained at least 24 hours after the borings are completed. The time lag of at least 24 hours is used to permit stabilization of the ground water table, which has been disrupted by the drilling operations. The readings are taken by dropping a weighted line down the boring or using an electrical probe to detect the water level surface.

Occasionally the borings will cave-in, preventing water level readings from being obtained or trapping drilling water above the caved-in zone. The cave-in depth is also measured and recorded on the boring records.
## Summary of Laboratory Results

<table>
<thead>
<tr>
<th>Borehole</th>
<th>Depth</th>
<th>Sample Type</th>
<th>Liquid Limit</th>
<th>Plastic Limit</th>
<th>Plasticity Index</th>
<th>Classification</th>
<th>Water Content (%)</th>
<th>Unconfined Compressive Strength (ksf)</th>
<th>Dry Density (pcf)</th>
<th>Wet Density (pcf)</th>
<th>Max. Dry Density (pcf)</th>
<th>Opt. Water Content (%)</th>
<th>Swell (psf)</th>
<th>CBR</th>
<th>RQD</th>
<th>Percent Recovery</th>
<th>k (cm/sec)</th>
<th>% Finer #200</th>
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<tbody>
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<td>B-1</td>
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<td>SS</td>
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<td>30</td>
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</tbody>
</table>

**SS** - Split Spoon Sample  
**GRAB** - Bulk Grab Sample  
**k** - Coefficient of Permeability  
- See Attached test Results

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**PROJECT INFORMATION**

Client: EOP Architects  
Project Name: Alpha Delta Pi Sorority House  
Project Number: LX190201  
Project Location: Lexington, Kentucky
### Liquid and Plastic Limits Test Report

<table>
<thead>
<tr>
<th>Boring</th>
<th>Depth (ft)</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Water Content</th>
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<th>% &lt; #200</th>
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<td>86.1</td>
<td>CH</td>
<td>brown FAT CLAY</td>
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</table>
MOISTURE-DENSITY RELATIONSHIP

Sample Location:
Depth/Elevation:
Description of Material:
Test Method

TEST RESULTS
Maximum Dry Density 90.5 PCF
Optimum Water Content 29.6 %
Natural Moisture Content 36.1 %
Percent Finer Than No. 200 86.1 %

ATTERBERG LIMITS
LL 68
PL 26
PI 42

Curves of 100% Saturation for Specific Gravity Equal to:
2.80
2.70
2.60

PROJECT INFORMATION
Client: EOP Architects
Project Name: Alpha Delta Pi Sorority House
Project Number: LX190201
Project Location: Lexington, Kentucky
LABORATORY TESTING PROCEDURES

Soil Classification: Soil classifications provide a general guide to the engineering properties of various soil types and enable the engineer to apply past experience to current problems. In our investigations, samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The soils are classified according to consistency (based on number of blows from standard penetration tests), color and texture. These classification descriptions are included on our “Test Boring Records.”

The classification system discussed above is primarily qualitative and for detailed soil classification two laboratory tests are necessary: grain size tests and plasticity tests. Using these test results the soil can be classified according to the AASHTO or Unified Classification Systems (ASTM D 2487). Each of these classification systems and the in-place physical soil properties provides an index for estimating the soil’s behavior. The soil classification and physical properties obtained are presented in this report.

Rock Classification: Rock classifications provide a general guide to the engineering properties of various rock types and enable the engineer to apply past experience to current situations. In our explorations, rock core samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The rock cores are classified according to relative hardness and RQD (see Guide to Rock Classification Terminology), color, and texture. These classification descriptions are included on our Test Boring Records.

Atterberg Limits: Portions of the samples are taken for Atterberg Limits testing to determine the plasticity characteristics of the soil. The plasticity index (PI) is the range of moisture content over which the soil deforms as a plastic material. It is bracketed by the liquid limit (LL) and the plastic limit (PL). The liquid limit is the moisture content at which the soil becomes sufficiently ‘wet’ to flow as a heavy viscous fluid. The plastic limit is the lowest moisture content at which the soil is sufficiently plastic to be manually rolled into tiny threads. The liquid limit and plastic limit are determined in accordance with ASTM D 4318.

Moisture Content: The Moisture Content is determined according to ASTM D 2216.

Percent Finer Than 200 Sieve: Selected samples of soils are washed through a number 200 sieve to determine the percentage of material less than 0.074 mm in diameter.

Rock Strength Tests: To obtain strength data for rock materials encountered, unconfined compression tests are performed on selected samples. In the unconfined compression test, a cylindrical portion of the rock core is subjected to increasing axial load until it fails. The pressure required to produce failure is recorded, corrected for the length to diameter ratio of the core and reported.

Compaction Tests: Compaction tests are run on representative soil samples to determine the dry density obtained by a uniform compactive effort at varying moisture contents. The results of the test are used to determine the moisture content and unit weight desired in the field for similar soils. Proper field compaction is necessary to decrease future settlements, increase the shear strength of the soil and decrease the permeability of the soil.

The two most commonly used compaction tests are the Standard Proctor test and the Modified Proctor test. They are performed in accordance with ASTM D 698 and D 1557, respectively. Generally, the Standard Proctor compaction test is run on samples from building or parking areas where small compaction equipment is anticipated. The Modified compaction test is generally performed for heavy structures, highways, and other areas where large compaction equipment is expected. In both tests a representative soil sample is placed in a mold and compacted with a compaction hammer. Both tests have three alternate methods.
The moisture content and unit weight of each compacted sample is determined. Usually 4 to 5 such tests are run at different moisture contents. Test results are presented in the form of a dry unit weight versus moisture content curve. The compaction method used and any deviations from the recommended procedures are noted in this report.

**Laboratory California Bearing Ratio Tests:** The California Bearing Ratio, generally abbreviated to CBR, is a punching shear test and is a comparative measure of the shearing resistance of a soil. It provides data that is a semi-empirical index of the strength and deflection characteristics of a soil. The CBR is used with empirical curves to design pavement structures.

A laboratory CBR test is performed according to ASTM D 1883. The results of the compaction tests are utilized in compacting the test sample to the desired density and moisture content for the laboratory California Bearing Ratio test. A representative sample is compacted to a specified density at a specified moisture content. The test is performed on a 6-inch diameter, 4.58-inch-thick disc of compacted soil that is confined in a cylindrical steel mold. The sample is compacted in accordance with Method C of ASTM D 698 or D 1557.

CBR tests may be run on the compacted samples in either soaked or unsoaked conditions. During testing, a piston approximately 2 inches in diameter is forced into the soil sample at the rate of 0.05 inch per minute to a depth of 0.5 inch to determine the resistance to penetration. The CBR is the percentage of the load it takes to penetrate the soil to a 0.1 inch depth compared to the load it takes to penetrate a standard crushed stone to the same depth. Test results are typically shown graphically.

**Consolidation Tests:** Consolidation tests are conducted on representative soil samples to determine the change in height of the sample with increasing load. The results of these tests are used to estimate the settlement and time rate of settlement of structures constructed on similar soils. A consolidation test is performed according to ASTM D2435 on a single section of an undisturbed sample extruded from a sample tube. The sample is trimmed into a disc 2.5 inches in diameter and 0.75 inch thick. The disc is confined in a stainless steel ring and sandwiched between porous plates. It is then subjected to incrementally increasing vertical loads, and the resulting deformations are measured with a micrometer dial gauge. Void ratio are then calculated from these deformation readings. The test results are typically provided in tabular form or in the form of plots of void ratio versus applied stress (e-log p curves).
Organic Content: The Organic Content is determined according to ASTM D2974. The moisture content is first determined by drying portions of the sample at 105 degrees Celsius. The ash content is then determined by igniting the oven-dried sample from the moisture content determination in a muffle furnace at 440 degrees Celsius. The substance remaining after ignition is the ash. The organic content is expressed as a percentage by subtracting the percent ash from one hundred.

Direct Shear Tests: Direct shear tests are performed according to ASTM D3080 to determine the shear strength parameters of the soil. The specimen of soil is placed in a rigid box that is divided horizontally into two frames. The specimen is then confined under a vertical or normal stress and horizontal force is applied to fail the specimen along a horizontal plane at its mid-height.

Because drainage of the soil specimen cannot be easily controlled, undrained tests (i.e., UU and CU tests) are possible only on impervious soils and pore pressure measurements cannot be made. Drained tests (i.e., CD tests), however, are possible on all soil types. Since the drainage paths through the specimen are short and pore water pressures are dissipated fairly rapidly, the direct shear test is well suited to the CD test.

A minimum of three test specimens are required to establish the strength envelope of a soil. The soil parameters obtained are the cohesion and angle of internal friction.

Unconfined Compression Tests: The unconfined compression test is an unconsolidated-undrained triaxial shear test with no lateral confining pressure. This test is used to determine the shear strength of clayey soils. An unconfined compression test is performed according to ASTM D2166 on a single section of an undisturbed sample extruded from a sampling tube. The sample is trimmed to a length-to-diameter ratio of about 2 and placed in the testing device. Incrementally increasing vertical loads are applied until the sample fails. Test results are provided in the form of a stress-strain curve or a value representing the unconfined compressive strength of the sample.

Grain Size Tests: Grain Size Tests are performed to determine the soil classification and the grain size distribution. The soil samples are prepared for testing according to ASTM D421 (dry preparation) or ASTM D2217 (wet preparation). The grain size distribution of soils coarser than a number 200 sieve (0.074 mm opening) is determined by passing the samples through a standard set of nested sieves. Materials passing the number 200 sieve are suspended in water and the grain size distribution calculated from the measured settlement rate. These tests are conducted in accordance with ASTM D422.

Triaxial Shear Tests: Triaxial shear tests are used to determine the strength characteristics and friction angle of a given soil sample. Triaxial tests are also used to determine the elastic properties of the soil specimen. Triaxial shear tests are performed on several sections of a relatively undisturbed sample extruded from the sampling tube. The samples are trimmed into cylinders 1.4 to 2.8 inches in diameter and encased in rubber membranes. Each is then placed in a compression chamber and confined by all around water pressure. Samples are then subjected to additional axial and/or lateral loads, depending on the soil and the field conditions to be simulated. The test results are typically presented in tabular form or in the form of stress-strain curves and Mohr envelopes or p-q plots.

Three types of triaxial tests are normally performed. The most suitable type of triaxial test is determined by the loading conditions imposed on the soil in the field and the soil characteristics.

1. Consolidated-Undrained (designated as a CU or R Test).
2. Consolidated-Drained (designated as a CD or S Test).
3. Unconsolidated-Undrained (designated as a UU or Q Test).