

The University of Chicago  
Guide for Professional Consultants

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# About This Guide

## Introduction

The purpose of this Guide is to:

- delineate the working relationship and operational details between The University of Chicago and those Architects and Engineers (A/Es), and other professionals commissioned by the University for its planning, design, construction, and maintenance projects;
- define the responsibility and requirements incumbent on both parties, particularly where they may differ from common practice, or where they may be affected by project size and scope; and
- encourage clear communications and professional attitudes resulting in superior projects.

The terms and conditions of this University of Chicago Guide for Professional Consultants constitute an integral part of the contract between the Owner and A/E.

## Objectives

The design and construction of all Projects for The University of Chicago will normally be guided by the following objectives:

- Fulfill the needs of the University's Planning Policies as included in the contract documents.
- Develop design solutions that comply with the program scope, budget, and schedule as included in the contract documents.
- Attain economic balance, commensurate with available funds and design objectives, between initial construction costs, building permanence and operation maintenance costs.
- Incorporate maintainability, energy efficiency and environmental sustainability into the design solution.
- Comply with all applicable codes, including those pertaining to accessibility, environmental conditions and safety, and the requirements of participating governmental agencies.
- Meet all defined review and authorization procedures at each stage of the Project and provide the required deliverables at each stage and at the conclusion of the Project.
- Deliver documentation and training required to support the operation and maintenance of the completed Project through its life cycle.

## Terminology

“**A/E**” refers to that consultant hired by Owner, and named in the accompanying Agreement.

“**A/E’s Services**” means all duties and responsibilities imposed upon the A/E pursuant to the Agreement.

“**Additional Services**” indicates mutually agreed upon compensation to the A/E in the event any revisions to the Schematic Design Drawings, the Design Development Drawings or the Construction Documents are required as a result of changes requested by the Owner after such documents have been approved, in writing, by the Owner.

“**Additional Services Fee**” indicates the fee to be paid to the A/E for performance of Additional Services and shall be calculated pursuant to the terms of this Agreement.

“**Agency**” means the foundation, government agency(s), or similar organization that is participating in the control, use, or financing of the Project.

“**As-Built Documents**” means the one working set of documents maintained and updated by the Contractor on a daily basis to reflect the as-built conditions at the Project.

“**Basic Services**” indicates the services described herein, exclusive of Additional Services and include normal structural, mechanical and electrical engineering services.

“**Basic Services Fee**” indicates the fee to be paid to the A/E for performance of Basic Services.

“**Bidder**” refers to any individual or entity submitting an approved proposal for Work contemplated.

“**CAD**” refers to computer-aided design and for purposes of the Agreement and this Guide shall refer to design and design documentation that is compliant with the University of Chicago’s CAD Standard, attached as Exhibit H to the Agreement.

The “**Contractor**” is that party engaged by the Owner to perform the construction services associated with the construction of the Project, including, without limitation, a general contractor or construction manager.

“**Consultant**” or “**Professional Consultant**” means any person or entity (other than an employee of the A/E) with whom the A/E has contracted to perform any of the A/E’s Services.

“**Customer**” is the Division, Department, Office, or affiliate of the University that will occupy and use the Project upon its completion.

“**Final Completion**” occurs when the Project is fully complete in accordance with the Construction Documents and such certifications thereof by A/E are accepted in writing by Owner (which shall not be unreasonably withheld) and Contractor has delivered all items required hereunder and pursuant to the Construction Services Agreement, including, but not limited to, the As-Built Documents.

**“Final Program Report”** is the final version of the Interim Program Report reflecting Owner’s comments and requested revisions and is subject to the approval of the Owner prior to completion of the A/E’s Programming Phase services.

**“Interim Program Report”** is an all encompassing document, prepared by the A/E, subject to periodic review and revision by the Owner, setting forth the parameters of the Project in sufficient detail to allow creation of Schematic Design Drawings and to facilitate Owner’s evaluation of the Project.

**“Owner”** and **“University”** mean The University of Chicago or its representatives authorized to act in its behalf.

**“Owner’s Construction Budget”** is that sum set forth by the Owner as the total amount of money to be allocated to the construction of the Project.

**“Owner’s Representative”** is a firm hired by the University to assist the Project Manager in the planning and execution of the Project.

**“Permit Set”** refers to a set of construction documents that provide sufficient detail to obtain a building permit.

**“Pre-Construction Consultant”** Owner may engage a firm to perform the pre-construction services on the Project. The Pre-Construction Consultant may also be engaged to perform the necessary cost consulting services in accordance with the requirements set forth in the Agreement and herein to be performed by the Cost Control Consultant, as well as consult on value engineering options, constructability issues, phasing, scheduling, and site staging.

**“Program”** is an all-encompassing document that describes the parameters of the Project.

**“Project Manager”** is the designee of the University with responsibility for the planning and execution of the Project.

**“Record Documents”** are those documents that incorporate all changes made to the Project during construction, including all notations made by the A/E’s field representative, and include information furnished by the Contractor on the As-Built Documents submitted to the A/E by the Contractor at the close of the Project.

**“Shop Drawings”** are drawings, diagrams, schedules and other data specifically prepared for the Work by the Contractor or a subcontractor, sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

**“Substantial Completion”** occurs when construction is sufficiently complete so Owner may reasonably and legally occupy and use the Project as originally intended after receipt of a certificate of occupancy from the City of Chicago and all others having jurisdiction and no uncompleted Work precludes Owner from moving in and fully conducting all uses intended for the Project. As per the University of Chicago’s Standard General Conditions, Substantial Completion shall not be achieved until all training of Owner’s personnel has been completed and all O & M manuals received by the Owner.

# Overview of Services

## Basic Services

1. The A/E's Basic Services shall include design and specification of all Project disciplines and requirements necessary for the successful execution of the project scope, including for the following areas, as applicable:
  - a building and site infrastructure coordination and existing condition verification
  - b architectural
  - c structural
  - d foundation
  - e sub grade waterproofing
  - f fire protection and life safety
  - g vertical transportation
  - h parking and transportation
  - i civil (including necessary City and campus utilities, extensions, public and campus street improvements, site development)
  - j mechanical (heating, cooling, ventilation, plumbing, fire protection, temperature control systems, utilities metering, campus and building mechanical utilities, campus mechanical utilities coordination, campus and building automation network and building automation systems)
  - k electrical (including standard and special voltage systems, security and/or life safety systems, electrical metering, ComEd and Campus electrical utilities)
  - l process systems (if any) such as natural gas, compressed air, vacuum, "pure" water systems
  - m built-in equipment (including storage racks, built in casework, carpeting, and other fixed items)
  - n food service
  - o graphics and signage
  - p acoustical
  - q lighting
  - r vibration
  - s landscaping
  - t interior design
  - u fixtures, furnishings and equipment
  - v specifications and documents for permitting purposes and project turnover and close out
  - w all applicable codes, including accessibility and occupancy

- x security
  - y information technology and communications including building automation systems
  - z audiovisual
  - aa. cost estimating
  - bb. lab planner
  - cc. overall design coordination
  - dd. sustainability considerations
2. The A/E project team shall include a licensed professional engineer with extensive experience in construction to continuously coordinate spatial location of all discipline teams (including architectural, structural and MEP) throughout the design period so that all design items are constructable and maintainable with no interferences. The A/E project team shall include personnel experienced in incorporating sustainability features into the design in a cost-effective manner, irrespective of whether the project intends to pursue LEED certification or not. The A/E is responsible for confirming that all design documents prepared by its consultants are coordinated at each phase of the design process and coordinated prior to completion of the Construction Document phase so that all interface between system components and equipment is clearly shown in design drawings and is cohesive without exception. For projects with a large project team and/or multiple firms, meetings will be held as frequently as reasonably necessary to demonstrate that this intention is accomplished. All such services shall be included within the scope of the A/E's Basic Services.
  3. Basic Services do not include the services of an Environmental Consultant, investigation of existing facilities for the presence of asbestos containing building materials (ACBM), Polychlorinated Biphenyl (PCB), underground storage tanks (UST) or any other environmental or health hazard, preparation of reports or recommendations pursuant thereto or the preparation of documents for dealing with, re-working, encapsulation, or removal of such materials and hazards.
  4. Basic Services of the A/E shall be performed in eight phases as outlined herein (the "Project Phases"). **Each phase shall be approved by the Owner in writing prior to commencement by the A/E of the subsequent phase.** Phases shall be deemed completed upon written approval by the Owner of the Phase documents. Phases for the services and documents which the A/E shall provide are as listed below. Detailed descriptions of these basic services are contained in this Guide. If this Project employs a Guaranteed Maximum Price delivery method, the traditional Design Phases set forth herein shall be modified such that the services to be performed during the Bidding Phase shall take place concurrent with the Construction Documents Phase during which time the Guaranteed Maximum Price will be established.
    - a. Programming
    - b. Schematic Design
    - c. Design Development

- d. Construction Documents
  - e. Bidding
  - f. Construction Administration
  - g. Acceptance
  - h. Project Close Out
5. The remainder of the Guide describes detailed Basic Services. All Services described in this Guide are included in the Basic Services Fee unless explicitly stated otherwise.
6. Throughout the Project Phases, and at the conclusion of the Schematic Design, Design Development and Construction Documents Phases, the A/E shall meet with the Contractor for purposes of evaluating design alternatives proposed by the Contractor or Owner. The review at the conclusion of the Schematic Design, Design Development and Construction Documents Phases shall take place after the Contractor has prepared the cost estimates in relation thereto. The A/E shall cooperate with the Contractor in its efforts to analyze design alternatives and shall provide Contractor with all requested information relating thereto. The A/E shall evaluate any design alternatives proposed by the Contractor for compliance with Laws (as defined herein) and shall provide the Contractor with information regarding the maintenance and operational implications and costs of any alternative design proposals. If requested by the Owner, the A/E shall provide an independent cost estimate of any such design alternative.
- a. A/E shall incorporate any design alternatives that are approved by the Owner into the project design as part of its Basic Services and shall receive no additional compensation for such services.

### **Payment of Basic Services Fee**

Payment of the Basic Services Fee shall be made on submission of approved invoices, not more frequently than once a month and in accordance with the payment schedule included in the Agreement. Owner shall be entitled to withhold compensation in the event the A/E fails to deliver design documents, including drawings and specifications in hard copy and electronic CDs in accordance with the deadlines established by the Owner in an amount equivalent to the monetary consequences of such late delivery.

### **Personnel**

Upon request by the University, the A/E shall provide resumes of the Project team. The University shall have, in its sole discretion, complete authority over the A/E's personnel decisions. At any time, the University may originate, review, reject and/or change all personnel assignments, whether direct employees of A/E or its Consultants, including project management staff. The A/E shall not relocate or reassign any member of its Project team without the consent of the Owner. Key Employees shall not be removed from the Project team by the A/E until the completion of the Project unless the removal of such individual is either requested by the Owner or the individual leaves the employ of the A/E.

## **Existing Condition Survey**

1. The University shall furnish surveys to describe physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. However, the accuracy of such information is not guaranteed by the University. It is the A/E's responsibility to visit the site and confirm the existence and accuracy of building elements shown on the existing documents, including walls, shafts, columns, pilasters, windows, mechanical, electrical, plumbing, and fire alarm systems. To the extent the A/E identifies the need for additional information regarding the physical characteristics, legal limitations and utility locations for the site of the Project, the A/E shall advise the Owner, in writing, of its determination and shall cooperate with the University in developing the scope of work for a surveying consultant and shall assist the University in soliciting such consultant.
2. The A/E is responsible for verification that a design can be implemented, including the availability, relocation, extension and modification of all necessary utilities. The A/E is responsible for verifying the accuracy of available record documents in a manner consistent with the standard of care set forth in the Agreement. The A/E will advise when the Owner needs to uncover concealed work for investigative reasons. Appointments to view existing conditions should be set up in advance by contacting the Owner.

## **Project Budget**

1. The Owner's Construction Budget shall be established by the Owner at the beginning of the Project and shall not be changed unless so authorized by the Owner. A/E is aware of the Owner's Construction Budget and acknowledges the feasibility of designing the Project within the Owner's Construction Budget.
2. The A/E shall prepare estimates of the cost of the work at the end of the Schematic Design Phase, the end of the Design Development Phase, and at 60% completion of the Construction Document Phase. The A/E will cooperate with the Owner and the party preparing an independent cost estimate for the Owner, whether the Pre-Construction Consultant or an independent consultant retained by the Owner, (the "Cost Control Consultant") in reconciling the A/E's cost estimate with the cost estimate prepared by the Cost Control Consultant
3. The A/E shall cooperate with the Owner and the Cost Control Consultant and shall coordinate its services with the Cost Control Consultant and shall supply any requested documentation or information, including reports, drawings, and specifications required for cost estimation.
4. The A/E shall review the accuracy of the estimates prepared by the Cost Control Consultant. In the event that the A/E does not agree with the accuracy of an estimate, or is unable to reconcile the Cost Control Consultant's cost estimate with the estimate prepared by its own cost estimator, the A/E shall meet with the Cost Control Consultant and attempt to resolve all issues concerning the accuracy of the Cost Control Consultant's cost estimate. If the A/E is unable to resolve its differences with the Cost Control Consultant concerning the estimate, the A/E shall submit a cost estimate prepared by its own cost estimator for the Owner's review. Cost estimates by the A/E shall be itemized in detail, especially in divisions 15 and 16 of the contract specifications to the fullest extent. The Owner shall determine whether the estimate submitted by the Cost Control Consultant or

the estimate submitted by the A/E's cost estimator shall be utilized for purposes of evaluating the A/E's potential obligation to modify the design to bring the design within the Owner's Construction Budget. The Owner's decision in this regard shall be final. Alternatively, in the event that the A/E and Cost Control Consultant are unable to reconcile their cost estimates and such inability to reconcile the cost estimates is, in the opinion of the Owner, resulting in a materially adverse impact on either the design or construction schedule, the Owner shall determine whether the estimate prepared by the Cost Control Consultant or the estimated prepared by the A/E shall be utilized for purposes of evaluation of the A/E's potential obligation to modify the design to bring the design within the Owner's Construction Budget. The Owner's decision in this regard shall be final. In the event the A/E is obligated to modify the design to bring its cost within the Owner's Construction Budget, the redesign shall be evaluated by the Cost Control Consultant for purposes of preparation of an updated cost estimate. In the event that the revised cost estimate still exceeds the Owner's Construction Budget, the A/E must continue to modify the design until the Cost Control Consultant's cost estimate no longer exceeds the Owner's Construction Budget and the Owner has approved the design in writing.

5. If the Owner's Construction Budget is exceeded by the aggregate of the lowest bona fide bids or negotiated proposals for the Project, the Owner shall:
  - i. Give written approval of an increase in the Owner's Construction Budget; or
  - ii. Authorize re-bidding or renegotiating of the Project within a reasonable time; or
  - iii. Terminate in accordance with this Guide for Professional Consultants; or
  - iv. Cooperate in revising the Project scope and quality as required to reduce the Cost of the Work.
6. If the Owner chooses to proceed under Clause 5(iv) above, the A/E, without additional compensation, shall modify the documents for which the A/E is responsible under this Agreement as necessary to comply with the Owner's Construction Budget.

## **Project Schedule**

1. Each of the above phases of the work shall be completed in accordance with the Project Schedule (refer to Project Schedule included in the Agreement), setting forth the A/E's schedule for the performance of each of the phases of A/E's work as well as the Milestone Dates, as set forth in Exhibit E to the Professional Services Agreement.
2. The Owner shall issue a Preconstruction Schedule, inclusive of Milestone Dates applicable to A/E's Services, which may modify and/or supplement the requirements set forth in the Design Schedule. The A/E shall meet with the Owner and Contractor as often as necessary to ensure the establishment in the Preconstruction Schedule of Milestone Dates applicable to the A/E's Services that are consistent with the A/E's ability to provide such services. In the event that the A/E and the Contractor are unable to arrive at mutually agreeable Milestone Dates applicable to the A/E's Services, the Owner shall, after reviewing the positions of both the Contractor and the A/E, establish such dates. The A/E

agrees that the Preconstruction Schedule will supercede the requirements of the Design Schedule and the A/E agrees to perform the A/E Services in accordance with the Preconstruction Schedule.

3. Owner may, as the Project proceeds, issue proposed modifications, additional requirements and updated schedules to supplement and/or supplant the Preconstruction Schedule and Milestone Dates. If, within 7 days of receipt, the A/E does not give Owner written notice of objections to such proposed modifications, additional requirements and updated schedules, they shall be incorporated into the Project Schedule and Milestone Dates.
4. The “Milestone Dates” applicable to the A/E Services are as follows: (a) the date of inception of the Schematic Design Phase; (b) the approval by Owner of the Schematic Design Documents; (c) the date of inception of the Design Development Phase; (d) the approval by Owner of the Design Development Documents; (e) the date of inception of the Construction Documents Phase; (f) the delivery of 60% complete Construction Documents; (g) the approval, by Owner of the Construction Documents; and (h) the approval, by Owner, of the Issued For Bid Documents.
5. Time limits stated in the Design Schedule, the Preconstruction Schedule and the Milestone Dates are of the essence.
6. The A/E shall (a) complete performance of the A/E’s services by the dates set forth in the Project Schedule, and (b) perform the A/E’s services in such a manner so as to achieve the Milestone Dates of the Preconstruction Schedule, or so as not to impede or prevent the achievement of such Milestone Dates.
7. The A/E shall advise Owner, in writing, as well in advance as reasonably possible, when decisions, approvals, acceptance, or other actions are required on the part of the Owner (“Due Date”). The A/E shall not be permitted to contend that failure of Owner to make a timely decision, approval or acceptance or take other action was a cause of delay unless the A/E shall give written advise to Owner of the need for such decision, approval, acceptance or other action at least fourteen business days in advance of the Due Date with a second notice four business days before such Due Date.
8. The A/E shall not be entitled to a modification of the Design Schedule, the Preconstruction Schedule or the Milestone Dates on account of any delay, hindrance, or obstruction of or to performance of the A/E’s services, regardless of the cause therefore, unless the A/E is delayed in performance of the A/E’s services by events for which the A/E and its consultants are not responsible.
9. In the case of delay caused by events for which the A/E and its consultants are not responsible, the A/E will receive no modification of the Design Schedule, the Preconstruction Schedule or the Milestone Dates unless the A/E has complied with the immediately preceding Paragraph 7 of this Agreement and, on the date that any decision, approval, acceptance or other action is due from Owner, advised Owner by written notice of the A/E’s claim of delay and allowed Owner seven (7) business days to cure such delay.
10. If the A/E fails to meet the Design Schedule, exceeds the Preconstruction Schedule, or fails to achieve or impedes or prevents achievement of the Milestone Dates as a result of

A/E's failure to perform its obligations under this Agreement for any reason except those set forth in the immediately preceding Paragraph 8 of this Agreement (and only insofar as the A/E has satisfied the conditions of Paragraph 7 hereto), then A/E shall provide such services, including any Additional Services, to the extent necessary to cure or recover the delay with no additional compensation or reimbursement hereunder.

11. If, in performing the A/E's Services, the A/E:
  - i. fails to complete A/E's Services in compliance with the Design Schedule; or
  - ii. fails to complete A/E's Services in compliance with the Preconstruction Schedule;  
or
  - iii. fails to achieve or impedes or prevents achievement of the Milestone Dates; or
  - iv. fails to perform A/E's Services in a manner consistent with the standard of care as set forth in the Agreement

to the extent that the Contractor fails to obtain Substantial Completion by the Date of Substantial Completion, then the A/E shall be liable for and reimburse the Owner for all damages and sums the Owner is required to pay resulting therefrom.

### **City of Chicago and other Code Authorities**

1. The A/E shall provide the Owner with a strategy for expeditiously securing permitting for the Project and shall cooperate with the Owner in its efforts to secure permitting for the Project in a manner that clearly demonstrate knowledge and understanding of the City of Chicago permitting process.
2. The A/E shall notify the Owner prior to all communications with code or governmental authorities and shall record all proceedings.
3. University projects are zoned and permitted under City of Chicago Zoning Ordinance Planned Development Ordinance #43. The Owner maintains responsibility for the assignment of building addresses and all additions and changes to the Planned Unit Development and shall be responsible for all such communications with governmental authorities regarding these issues.
4. The A/E shall be responsible for performing all design revisions necessary to achieve a code-compliant building in the City of Chicago including life/safety, energy, and accessibility requirements.
5. Where applicable, the A/E shall be responsible for certifying that its design meets or exceeds the state and Federal regulatory codes and standards related to the operation and use of the facility including all codes applicable to assembly, instruction, and research activities to be housed in the facility.

## **Correspondence, Meeting Minutes, and Reports**

1. The A/E shall submit written reports of site visits, meetings, and copies of written clarifications at frequent intervals and in a format as reasonably requested by the Owner. Also, A/E shall submit reports covering general progress, factors affecting progress, and describing any problems noted.

2. Minutes

A draft copy of minutes shall be submitted to the University for its review within three days of the meeting prior to distribution for approval by the Owner. The recording of minutes of Design Phase meetings and their distribution shall be the responsibility of the A/E. The recording and distribution of meeting minutes during the Construction Phase shall be the responsibility of the Contractor.

## **Reviews and Approvals**

The Owner will coordinate reviews and approvals by the Customers or other University offices. The A/E shall not proceed to the subsequent phase without written approval. Approval of documents by the University or its representatives is for design conformance only and does not constitute or imply any attempt to approve technical issues, constructability issues, coordination of documents, budget conformance, errors, or omissions.

## **Submission of Separate Schemes**

During Schematic Design and Design Development Phases, the A/E shall submit separate schemes in such numbers as are reasonably required to produce the designs which satisfy the Program requirements as deemed by the Owner or as mutually agreed.

## **Service Following Project Completion**

After the issuance of a Certificate of Final Completion, the A/E shall, in addition to fulfilling any and all responsibilities pursuant to this Agreement and under the law, as a Basic Service, assist the Owner in the solution of problems with the Project that may have resulted from the A/E's design. At the end of the first year of occupancy (commencing from the date of Substantial Completion), if, under consultation with the A/E, it is determined that such problems for which such assistance has been provided were not the result of the A/E's design, then the A/E shall be paid for such assistance as an Additional Service, at rates per the hourly rate schedule.

## **Standard Document Requirements**

1. In general, document submissions will be governed by (a) the requirements outlined in this section, (b) the University of Chicago CAD Standard and (c) the Project Close Out – Basic Services section of this document.
2. Size  
Unless otherwise directed drawings shall be no larger than 34 inches x 42 inches; reports shall be 8 ½ inches x 11 inches.
3. Title Block

Include Project name and location, University's Property Identification Number and Project number, date of issue, sheet number, sheet title, revisions spaces, A/E's name and any participating agency name.

Submit sample of title block and title page for Owner's approval.

#### 4. Submissions

Include title block information on all drawings, even though the format may not be final; bind all multiple copy submissions and include submission number and date on the first sheet; include north arrow, key plan, location plan, and scale where applicable. Wherever possible, north shall be at the top of the sheet.

The title sheet shall include a key plan and location plan, necessary zoning and building code classification and information, gross and net square footage, directory of abbreviations, symbols, and legends.

#### 5. Abbreviations, Symbols, and Legends

Use industry recognized building standards. Use any standard forms that may be required by participating agencies or by Owner. Submit sample of abbreviations and symbols for Owner's review and approval.

### **CAD and Project Documentation**

1. All drawings, specifications, reports and other deliverables prepared by A/E in connection with the Project shall be delivered to Owner in computerized form. All such submissions shall be compatible with the University's existing equipment and CAD standards. The A/E shall verify all standards and requirements with the Owner prior to beginning the Project. Upon request by the Owner, the A/E shall expeditiously deliver all drawings to a printer of the Owner's choice.
2. The A/E shall provide Contractor with all drawings, specifications, reports and other deliverables prepared by A/E in connection with the Project in computerized and hard copy form and shall endeavor to provide such submissions in a format compatible with the Contractor's computer equipment.
3. The A/E shall take the base plans from the University's computer files (where available) and shall modify the information to reflect any new renovation work. Where computer files for a specific building are not available, the A/E shall take the University's original drawings and generate accurate CAD base floor plans for all floors or spaces where appropriate as part of the Basic Services Fee.
4. Where computer files do not exist, and where there are no original drawings available in the University's Archives, the A/E shall generate the computer files as necessary only for their Project as part of the Basic Services Fee.
5. Where the A/E is required to generate necessary original drawings, the entire floor should be shown on the base drawing, regardless if only a portion of the floor is affected.
6. Delivered drawings shall be routed to all relevant team members for sign-off. A delivery date will be established for final drawings.

7. All drawings and specifications shall be assigned a date of issue for distribution.

## **Record Documents**

1. Throughout the course of the Project, the A/E shall be responsible for confirming that the Contractor fulfills its responsibility to update one working set of documents on a daily basis to reflect the as-built conditions at the Project (the “As-Built Documents”). The As-Built Documents shall include civil, structural, architectural, mechanical, life safety and all other Construction Documents. The A/E shall include such determination in its evaluation of the Contractor’s Applications for Payment and provide a copy of such updated Construction Documents to the Owner in CD format in a timely manner. The A/E shall incorporate the information contained in the As-Built Documents into a working record set of documents maintained by the A/E throughout the course of the construction phase of the Project. If at any time the A/E shall become aware of the Contractor’s failure to fulfill its function of maintaining the As-Built Documents, the A/E shall promptly notify the Owner and shall cooperate with the Owner in its efforts to address such failure.
2. Upon completion of the Project, the A/E shall be provided with one complete set of As-Built Documents by the Contractor. The A/E shall prepare or cause to be prepared drawings based on the As-Built Documents maintained by the Contractor so that the reproductions represent a record determination of the finished Work (the “Record Documents”). The A/E shall document the changes reflected in the As-Built Documents as changes to the construction documents by updating the electronic version of the A/E’s original CAD files. The A/E shall prepare and transmit to the Owner’s Closing Agent the Record Documents for the Project in the quantities and formats outlined in the *Project Close-Out – Basic Services* section herein.
3. The Record Documents shall incorporate all changes made to the Project during construction, including all notations made by the A/E’s field representative, and shall include information furnished by the Contractor on the As-Built Documents submitted to the A/E by the Contractor at the close of the Project. Record drawings prepared by the A/E shall include but not be limited to building floor plans, elevations, sections and building details, mechanical, electrical, plumbing, life/safety, structural and civil drawings, and any other discipline drawings required to fully document the as-built conditions of the project. Information provided on the approved shop drawings shall be incorporated into the construction document set of drawings by way of reference notes if the shop drawings differ from information provided in the construction documents.
4. Copies of updated technical documents, such as programming data sheets, design criteria, calculations and specifications shall be made by the A/E. The Owner shall determine the number of copies to be produced. Such documents shall be updated as design and construction progress, with revision and deletion noted with reference addendum and dates.
5. The A/E shall be entitled to rely on the accuracy of the Contractor’s As-Built Documents. The A/E agrees that these reproductions when so delivered are the property of the Owner and that the Owner shall have full rights and privileges to use and to authorize others to use, such reproductions, in any manner or for any purpose at its sole election, except for reproduction of this building elsewhere, without further permission from, or payment of, any further Basic Services Fee to the A/E. The Owner agrees that the A/E in no way

warrants the suitability of the Record Documents for use on or in connection with any other Project and work, and the A/E assumes and shall have no liability to anyone for any other.

### **Alternates**

The A/E shall provide in the construction documents any reasonable alternatives, as requested by the Owner.

### **Separate Consultants**

The University reserves the right to engage separate consultants to review the work and or add scope to the work of the A/E and its Consultant if such action appears in the best interest of the University. In such instances the A/E shall cooperate with the separate consultant and make available all drawings, calculations, and other documents, or information that reasonably pertain to the matter under review, at no increased cost to the University.

### **Cooperation**

The A/E shall maintain a fully cooperative and professional relationship with any consultant employed by the University, and shall fully coordinate their work with the work of such consultant.

### **Usual and Necessary Services of Consultants Engaged by the A/E**

The following disciplines are considered as usual and necessary to the A/E's services. These disciplines may be on the A/E's staff or engaged as Consultants by the A/E.

1. Structural Engineer
2. Mechanical Engineer
3. Electrical Engineer
4. Civil Engineer
5. Life/Safety Code Consultant

### **Optional Services of Consultants Employed by the A/E**

Consultants for services other than as identified in this Guide will be employed by the A/E as may be required by the Program and complexity of the Project. Their inclusion and fee arrangement shall be stipulated in the Professional Agreement.

### **Consultants Under the A/E's Jurisdiction**

Testing and Balancing Consultant

1. The A/E shall direct a consultant selected by the University to review mechanical systems that require testing and balancing when construction documents are 75% complete.
2. The A/E shall make such modifications as the Testing and Balancing Consultant may recommend for the proper balancing of the system. The A/E shall include in the Technical

Specifications the testing and balancing requirements, to be followed by the Contractor and its Subcontractors in the balancing of the mechanical systems.

3. The Testing and Balancing Consultant shall not have any affiliation with the Contractor or Mechanical Subcontractor, either directly or indirectly. The University shall include an allowance for Owner's testing and balancing in the Owner's budget.

### **Project Representative**

1. The A/E shall provide a Project Representative, either full time or for periodic visits as set forth in the Agreement, but no less than an average of once per week throughout the duration of construction, who shall be acceptable to the University and shall not be removed prior to final completion of the Project unless approved or requested by the University. The Project Representative shall be resident in the City of Chicago metropolitan area and shall maintain an office in the City of Chicago metropolitan area throughout the course of the Project. The A/E may, at its option, choose to retain the services of a Chicago based architectural firm for the purpose of providing a Project Representative. The retention of a Chicago based architectural firm as Project Representative shall not modify, in any manner, the A/E's obligation to participate directly in all aspects of the provision of A/E's Services and A/E shall remain ultimately responsible for all architectural services to be provided pursuant to this Agreement.
2. A/E shall furnish a competent and adequate staff, as necessary for the proper administration, coordination, and supervision of A/E's services. A/E's Project Representative and other designated employees of A/E and its consultants are listed in the Agreement and are "Key Employees." Key Employees shall be assigned to work on the Project for so long as in the employ of the A/E or its consultants and as long as Owner reasonably deems the Key Employees skill necessary to the Project. Key Employees shall not have duties that hinder or detract from their services in connection with the Project. Key Employees shall not be changed without the consent of Owner unless such person leaves the employ of A/E or its consultants, in which event the substitute must first be approved in writing by Owner. Without limitation by the foregoing, A/E agrees that A/E will change A/E's Project Representative or other of A/E's Key Employees at the request of Owner if, in Owner's reasonable opinion, such person's performance does not equal or exceed the level of competence which may be expected of a person performing on behalf of a fully competent, first-class architect or consultant or if the acts or omissions of such person are detrimental to the progress of A/E Services, or to the conduct of Owner's business.
3. The A/E's Key Employees shall be duly licensed to practice in Illinois and all services provided by A/E and its consultants pursuant to this Agreement shall be performed under the direct supervision of a professional licensed to practice under the laws of the State of Illinois.

### **Pipe Testing Consultant**

1. The A/E shall recommend the services of a Pipe Testing Consultant who shall provide radiography of high-pressure piping.

2. The A/E shall specify by allowance that the Pipe Testing Consultant will be assigned to and shall be employed and paid by the affected Subcontractors. There shall be no markup permitted on this fee by the Contractor or the affected Subcontractor.
3. The A/E shall include the testing requirements, to be followed by the Pipe Testing Consultant, in the Technical Specifications.

### **Services Provided by Consultants Employed by the University (when required)**

The Owner may engage the following consultants to perform services on the Project and the A/E will cooperate fully with these consultants in the performance of their work and services:

1. Construction Testing Consultants

Will include, but not be limited to compaction testing, caisson inspection, concrete testing, reinforcing bar inspection, and structural steel and weld testing.

2. Cost Control Consultant

3. The Cost Control Consultant shall provide estimates at the end of the Schematic Design Phase, at the end of the Design Development Phase, after delivery of the 60% Construction Documents, at the end of the Construction Document Phases and, as deemed necessary by Owner. Each of these estimates shall be performed in accordance with the Milestone Dates set forth in the Agreement. The A/E shall prepare estimates of the cost of the work at the end of the Schematic Design Phase, the end of the Design Development Phase, and at 60% completion of the Construction Document Phase. The A/E will cooperate with the Cost Control Consultant in reconciling the A/E's cost estimate with the cost estimate prepared by the Cost Control Consultant and shall fulfill its other obligations as set forth in the Project Budget section of this Guide.

4. Other Consultants

The University may, if the Program and Project scope requires, retain other Consultants whose particular knowledge will further the aims of the Program. Examples of such consultants are Commissioning Agents and LEED consultants to facilitate LEED accreditation.

### **Reviews and Approvals**

The Owner shall coordinate all document review meetings with University personnel. Documents for review shall be provided to the Owner at least three days prior to such review meetings. The A/E shall attend these meetings and shall present the documents and answer questions. The Mechanical, Electrical, Plumbing, and all other Consultants shall attend when requested by the Owner. All comments regarding the Construction Documents generated during each review period shall be recorded in writing by the A/E, along with the A/E's written response to each such comment.

# **Requirements and Existing Information**

## **Governing Facilities Services Building Standards**

The minimum standards for design and construction of all Projects shall be governed by this Guide and the following codes, regulations, and Facilities Services Building Standards (“Laws”), any exceptions will be noted by the University:

1. City of Chicago Zoning Ordinance - Planned Unit Development Ordinance # 43.
2. City of Chicago Building Code.
3. City of Chicago - Fire Prevention Bureau
4. The Americans with Disabilities Act (ADA), ADA Accessibility Guidelines (ADAAG), Illinois Environmental Barriers Act (EBA), and all Government codes and Facilities Services Building Standards relating to facilities for the handicapped.
5. Requirements of the Occupational Safety and Health Act (OSHA).
6. Government codes and Facilities Services Building Standards relating to the handling of asbestos containing materials (ACM’s), including the Environmental Protection Agency (EPA).
7. Any and all applicable laws, rules, regulations, ordinances, codes and/or orders, judgments or decrees of Federal, State, Department, City or local government, court or tribunal and any other governmental entity having jurisdiction over the Work or over the site.

Subject to the standard of care set forth in this Agreement, the A/E acknowledges that it is responsible for compliance with all Laws, including any modifications to Laws that occur during the course of the Project. The A/E shall perform, at its sole cost and expense, those professional services necessary to conform the A/E’s Services to any modifications to Laws that occur on or prior to the issuance of a final certificate of occupancy for the Project.

## **Technical Facilities Services Building Standards**

Design of all Projects shall be governed by all applicable regulatory codes, accepted industry standards, and University of Chicago Facilities Services Building Standards.

A/E acknowledges that it is its contractual obligation to execute the A/E’s Services in compliance with the University of Chicago Facilities Services Building Standards, as well as all other applicable codes and ordinances. A/E shall familiarize itself with the requirements of the University of Chicago Facilities Services Building Standards as it relates to its scope of services. If the A/E discovers, during the design process, that any application of the Building Standards is in conflict with any applicable code and/or ordinance, A/E shall cease design in that area of the Project, notify the Owner immediately of such conflict, and assist the Owner in resolving the conflict. Such assistance shall be considered as a part of the Basic Services. Where the Owner’s building standards vary from the industry standards or current design practices, the A/E may propose an alternative to a requirement in the University of Chicago

Building Standards if the alternative is of the same or better quality, more cost effective, easier to operate or maintain, has lower capital or operating costs or is advantageous for a special or unique condition. All alternatives to the Building Standards must be proposed in writing to the Facilities Services Project Manager outlining the rationale for the change. The alternative must be approved, in writing by the Facilities Services Project Manager for it to be incorporated into the design. All alternatives not deliberately or explicitly approved shall be judged unacceptable and shall not be specified for the Project.

## **Information Provided by the University**

When applicable the University will provide the following information:

### **Site Survey**

Topography and boundary, typically at 1 inch = 20 feet.

### **Existing Drawings and Survey**

Upon request, the Owner will provide a list of existing building drawings, and any available drawings pertaining to the site, traffic, utilities, or the like, which may be of use to the A/E in their work. The A/E shall, in a manner consistent with the standard of care set forth in the Agreement, verify the accuracy of the information contained in such documents. If the information is not available, the A/E shall, in a manner consistent with the standard of care set forth in the Agreement, make field measurements and surveys as required for the accurate execution of the Work, at no cost to the Owner. For further information, refer to the *Existing Condition Survey* paragraph in the *Overview of Services* section herein.

### **Sub-Surface Soil Investigation**

The A/E shall submit a list of requirements, including the location of borings, recommend one or more testing organizations qualified to perform the work, and issue an engineering report. Qualifications of engineers employed by the recommended testing organizations shall be subject to approval by the University. Cost of the borings and the report shall be paid by the University. The University shall provide all geotechnical surveys with building foundation recommendations. Vibration surveys and monitoring shall also be provided by the University.

### **Cost Estimating**

Cost estimating services will be provided by the Cost Control Consultant as well as the A/E and it shall be the A/E's responsibility to reconcile its cost estimates with the estimates provided by the Cost Control Consultant in the manner set forth in this Guide

### **Wind Tunnel Testing**

Any required wind tunnel testing program that may be required to test special building elements will be coordinated by the A/E and provided by the University.

### **Test and Balance Reports**

Existing Test and Balance reports will be provided by the University when available. Neither the A/E nor its Consultants shall assume that an existing testing report is still valid. If it is suspected that the report is no longer accurate, the A/E shall request an updated report. If the

A/E or one of its Consultants requires an updated Test and Balance report, or if a report is not available, the University will contract with a certified Test and Balance Contractor to prepare the necessary information. The A/E shall specify the information to be included in this report.

### **Work Limits**

Work limits for construction will be established jointly by the A/E and the University. [Spatial limitation]

### **Zoning Status**

The University is governed by Planned Development No. 43. The A/E shall provide site drawings and other information, such as floor area ratio charts, as required, to show compliance with the requirements of the PD and shall assist the University in its application process when required. The University will make all necessary applications to the zoning authorities.

### **Building and Room Identification**

The University maintains building and room number identification standards. These standards are used in University data systems to uniquely identify all buildings and spaces on campus to satisfy federal reporting requirements, City of Chicago 911 response requirements and to support operation and maintenance services. The A/E will be provided with applicable standards information and will be required to work with the Facilities Services Project Manager to implement these standards through the design and construction phases of the Project.

### **University Planning Policies**

The design of renovated or new construction must be controlled, unless otherwise authorized, by the intent of the University Planning Policies as outlined below:

1. Provide architectural continuity. Develop in each new building appropriate physical relationships to the character of the earlier buildings and, if so directed, in accordance with the direction of the University Architect. Recognition of this heritage can be expressed in terms of sympathy for, and understanding of, the roots and traditions from which it came, rather than in terms of imitations or copies of existing forms. Relationships between the old and the new should be established through a consistent use of building materials, and the careful design application of scale, color, texture, proportion, and design detail.
2. Physically connect buildings to allow for internal circulation. This type of linkage will improve faculty student access and interaction, and also allow for more flexibility in the servicing of the interconnected buildings. Physical connections will allow several buildings to be serviced from a common loading/unloading area. Primary site design emphasis shall be on the shaping of space by the building mass.
3. The related effect of paragraphs above is intended to emphasize the design of the total campus entity rather than the individual buildings. While each building is required to be designed as a thoughtful, artistic response to its particular Program, budget and site requirements, it must also be compatible with the design fabric of the campus, enriching

- the campus both functionally and aesthetically, relating to adjoining buildings, not competing with them.
4. Separate pedestrian and vehicular traffic and separate service vehicles from automobile traffic. The first priority in circulation shall be ease of unencumbered access for pedestrians and bicyclists within the campus.
  5. The second priority is the provision for service vehicles necessary to maintain the buildings and grounds.
  6. Use of privately owned vehicles will be discouraged. Unimpaired access for emergency vehicles is considered essential in all site development plans. Unimpaired access for the handicapped is considered essential in all site development plans.
  7. Provide for flexibility in new construction. Buildings will, to the extent possible within Program and budget constraints, be designed to allow for future change, thereby extending their usable life of the facility by increasing the opportunity for remodeling, and reducing future renovation costs.

## **Design Criteria and General Requirements**

These provisions are provided to the A/E for implementation into the design details.

*Note: The criteria presented here are basic requirements. The A/E should refer to other divisions within this Guide for more detailed information.*

### **Site Development**

Rough grade to a level 6 inches below finished grade. Unless otherwise directed, walks, paving, curbs, retaining walls, railings, fences, drainage, lighting, and similar site development work shall be designed by the A/E and included in the construction documents. In the event demolition is required, the site is normally cleared to 1 foot below existing grade.

### **Utilities**

Unless the Owner notifies the A/E otherwise, water, sewer, electrical, and natural gas services are provided by the City of Chicago, Metropolitan Water Reclamation District of Greater Chicago, Commonwealth Edison Company, and Peoples Energy. The A/E shall review the adequacy of the distribution capacity and be responsible for extending service to the building. The A/E shall be responsible for notifying the Owner regarding the projected utility usage of the building.

### **Structural**

Select and design the structural systems after consideration of the following theories and techniques:

1. Ultimate strength design for concrete structures.
2. Plastic design for steel structures.
3. Cost optimization of steel grades and types.

4. Selection of floor span-to-depth ratios for acceptable deflection and human response to vibration from dynamic loading. Special considerations for vibration isolation should be given only as required by specific research or scientific needs. These should be handled locally, if practical.
5. Control of movement from thermal effects.
6. New soil borings that may be required for the design of the foundation system shall be specified by the Structural Engineer through the A/E, and shall be contracted for directly by the University.

### **Mechanical**

1. If the building is a new installation, system and equipment selection and operation philosophy must match other similar type buildings on campus.
2. If the installation is a retrofit of the existing system through a remodeling Project, the A/E shall survey the existing equipment and, via the test and balance report, shall certify the acceptability of the existing system for the new design air requirements. Should additional testing and balancing work be required to make such an evaluation, the Engineer shall specify the parameters for the survey work and the University will engage the services of a certified Testing and Balancing General Contractor to prepare the necessary survey information.
3. It is the A/E's responsibility to make themselves aware of the capacities and capabilities of the existing mechanical systems and to insure a properly operating mechanical system upon turn over to the University. A test and balance report is required at the final phase of all projects.

### **Energy**

1. Any new installation shall meet the current edition of ASHRAE standard 90.1 and Chicago Energy Code requirements.
2. Energy usage in BTU/SF/YR shall be established as a target comparable to a similar building.
3. Building simulation for the baseline design and proposed design, using design data, shall be prepared to verify and meet the established energy goal. A report shall be provided at each design phase. The baseline may be the existing building's energy consumption or a new building's consumption, designed to meet the City of Chicago Code's energy requirements.
4. Modification of design to meet this requirement shall be part of Basic Services.
5. A break down of estimated energy usage for each utility shall be provided.

## **Electrical**

1. Select and design the system to satisfy Program requirements. Include 20% spare capacity. Where the requirements of the Program are inconsistent with the requirement of 20% spare capacity, the A/E shall bring such discrepancy to the attention of the Owner before proceeding with the A/E's Services.
2. Base lighting design on a maintenance factor of 70%, unless otherwise directed by the Owner, and on the following electrical system characteristics:
  - a In general, lighting, receptacles, and power source at 120/208 volts, 3 phase, 4 wire.
  - b Provide economic analysis for consideration of lighting, and power source at 277/480 volts, 3 phase, 4 wire.
  - c Lighting levels shall be based on guidelines provided in Illuminating Engineering Society (IES) Handbook, current edition.
3. Follow the source of electrical service as directed by the Owner, in accordance with one of the following methods:
  - a When electrical service is provided by the utility company, commence Project design at the secondary service from the utility company vault; or
  - b When electrical service is provided by the University from its distribution system, commence Project design at the University's secondary distribution system; specify that final connection to the University's secondary distribution switch gear shall be made by the Contractor, under the review of the A/E and the University.
4. Communication and Signal — Intercommunication, paging, clock and special systems, are not required unless directed by the Owner.
5. For Projects within the Medical Center, check with University Facilities Management for requirements relating to the specific Project location.
6. Voice/Data Installation – such installations must comply with the University's Networking Systems and Information Technology (NSIT) unit's University Wiring Plan. Any installation must be approved and coordinated by NSIT.

## **Fire Alarm Systems**

1. Select and design the system to comply with the requirements of the Chicago Fire Prevention Bureau. The classification of the system will be prescribed by the Bureau for the Project and building type. Confirm with the Bureau to ascertain any additional requirements resulting from the inter-relationship between the Project and other University Facilities.
2. Within the Medical Center conform to the requirements of the Medical Center Fire Alarm Master Plan. Coordinate with the Medical Center Facilities Management office.

## **Emergency Systems**

1. Design in accordance with code requirements governing the specific Project type and size.

## **Pollution Control**

Comply with all lawful requirements of the City, State, or Federal Agencies having jurisdiction, to control or abate air, water, and sound pollution.

## **Security**

Provide permanent site and exterior building lighting. Design the site and building entrances to minimize difficult control points and unsafe conditions. Specifications for locks and security systems will be provided by the University.

## **Equipment and Furnishings**

Provide design and layouts as required to demonstrate the architectural design can fulfill the Program requirements; also defined as “proof-of-scheme”.

## **Facilities for the Handicapped**

Incorporate all City, State, and Federally mandated requirements. Follow the requirements of the ADA, ADAAG, and EBA.

## **Signage**

Comply with the University’s signage guidelines. The University of Chicago Signage Manuals for Internal and External signage are available upon request to the University Project Manager.

## **Reviews and Approvals**

For Review and Approval information, refer to the *Overview of Services* section herein.

# Programming

## Programming Deliverables

1. Upon execution of this Agreement, the A/E shall meet with University personnel for the purpose of identifying the general parameters of the Project. The Owner will coordinate attendance of University personnel. Refer to the Agreement for the list of Key Programming Topics.
2. Throughout the Programming Phase, A/E shall meet with University personnel on regular occasion so as to remain fully apprised of Owner's programming objectives and requirements. The Programming Phase shall commence with the execution of the Agreement and conclude with the approval by Owner, in writing, of the Final Programming Report.
3. Throughout the Programming Phase, A/E shall meet with those individuals, committees or institutions associated with the University, as designated by Owner, for purposes of gathering additional information concerning the Owner's programming objectives and requirements or for the purpose of reviewing the A/E's proposed Program.
4. Throughout the Programming Phase, A/E shall meet with those governmental representatives minimally necessary to prepare a program in full compliance with all governmental regulations, rules and requirements applicable to the Project.
5. Throughout the Programming Phase, A/E shall meet with organizations claiming to represent the immediate neighborhood surrounding the Project for purposes of minimizing any difficulties or conflict with neighboring property owners.
6. Throughout the Programming Phase, A/E shall meet with any design consultants, whether retained by A/E or by Owner for purposes of coordinating the design efforts of any and all design professionals concerning the Program.
7. Throughout the Programming Phase, A/E shall meet with those third parties deemed necessary by Owner or A/E, for creation of the Interim or Final Programming Report.
8. As requested by Owner at reasonable intervals, A/E shall provide Owner with Interim Program Reports for the Project. Such Interim Program Reports shall include the following information:
  - a. Cover sheet
  - b. Preface
  - c. Table of contents
  - d. List of illustrations
  - e. Departmental description and information
  - f. Introduction and scope of the project
  - g. Viable alternatives and options
  - h. Background of existing buildings
    - i) Location
    - ii) general building information

- iii) technical information
  - i. Site considerations
    - i) Planned Development
    - ii) circulation
    - iii) parking
    - iv) storm water drainage and retention
  - j. Utilities: Anticipated usage for city and campus provided utilities (connected load and usage profile)
  - k. Infrastructure
    - i) steam
    - ii) water
    - iii) electrical
    - iv) communication
    - v) sewer
    - vi) campus chilled water
    - vii) campus compressed air
    - viii) campus network and building automation systems
  - l. Architectural considerations
 

Building, architectural, mechanical, electrical, structural and civil design criteria, system narrative and operational maintenance requirements
  - m. Energy goal, energy consumption analysis and metering/sub-metering requirements
  - n. Detailed program description sheets, such as room data sheets listing all design requirements: architectural, mechanical, electrical, interior finishing and process requirements.
  - o. Accessibility
  - p. Computer systems and wiring
  - q. Budget
  - r. Schedule
  - s. Appendix
    - i) conceptual planning diagrams
- 9. A/E shall revise the Interim Program Report(s) as required to conform to changes in the Program. Owner's approval of the Interim Program Report(s) and the Final Program Report shall be conditions precedent to the A/E's satisfaction of the requirements of the Program Phase of this Agreement.

## **Reviews and Approvals**

For Review and Approval information, refer to the *Overview of Services* section herein.

# **Schematic Design - Basic Services**

## **Schematic Design Drawings**

The following items are required:

*Note: Scales may be changed if necessary for clarity. All items stated in programming phase shall continue to be updated to SD, DD and CD phases.*

### **Site Drawings**

Include relationships between new and existing structures, existing and proposed topography, landscaping features, roads, walks, and all utility connections. Scale of 1 inch = 20 feet is preferred.

### **Typical Floor Plans**

Scale shall be 1/8 inch. May be single line at this phase.

Plans shall include sufficient space for janitorial needs, trash/recycling, mechanical/electrical equipment, telephone/data.

### **Plans of Special Floors or Areas**

Locations and scales as jointly agreed.

### **Roof Plan**

Scale shall be 1/8 inch.

Provide composite roof plan, showing all anticipated mechanical or electrical items for all disciplines mounted on or penetrating the roof. These items include, but are not limited to: equipment, plumbing vents, roof drains, overflow, steam relief and vents, refrigerant vents, antenna, electrical lines and conduit, lightning rods, window washing equipment attachments, etc.

### **Elevations**

Show building air intake locations, size and appearance, flow diagram, P&ID, equipment room layout, floor plans with general layout, roof plan, under slab plan, equipment schedule, single line diagrams, building automation diagram for building and campus interface.

### **Elevation of each building façade/Diagrammatic Sections**

Scale minimum of 1/8 inch.

### **Structural, Mechanical, Electrical, Plumbing, Fire Protection, Tel/Data, Security and other Engineered Building Systems**

Provide typical layouts, sections, and riser diagrams

### **Equipment and Furnishings**

Show any special equipment that influences the design; show other equipment and furnishings as required for “proof of scheme”.

**Preliminary Perspective (s)**

Optional, sketch form.

**Study Model(s)**

Optional, three dimensional massing studies preferred

## **Schematic Design Reports**

The following reports are required:

### **Material/Systems Outline**

1. Structural System (s)

Describe proposed materials, foundation types, modules, design loads, and design criteria employed.

2. Building Envelope

Describe wall systems, window types, glazing types, provisions for cleaning and thermal characteristics.

3. Principal Interior Finishes

Describe the principal interior finishes for typical areas, areas subject to heavy use traffic, toilet areas, and food service areas.

4. Mechanical and Electrical systems

Describe the various options considered for the mechanical and electrical systems. Conduct a life-cycle cost analysis to justify the chosen option. Present the analysis with an explanation of the assumptions and an interpretation of the results.

### **Performance Narrative**

The Performance Narrative summarizes MEP and other systems performance expectations and operations criteria. Refer to the *Systems Performance Narrative* outline in the Agreement.

### **Pollution Control**

Outline proposed methods of compliance and recommendations for additional controls.

### **Code Analysis**

Provide a written statement describing methods proposed to comply with governing codes and regulations, including zoning, occupancy, life safety, handicapped accessibility, energy, fire resistance, fire protection, and structural adequacy. Describe any instances where governing code requirements have not been met.

### **Program Conformance Analysis**

Provide a general statement describing how the proposed design meets the functional and statistical requirements of the Program. Describe any departures from the Program or any recommended changes and reasons therefore.

### **Area-Volume Statistics**

Prepare using the methods described in the *Overview of Services* section of this Guide. Include tabulation for comparison of proposed versus programmed areas, net and gross areas for each room and floor. Show areas on the plans.

## **Room Name and Number System**

1. Assign each room and space a room name, in general designating the proposed use. As part of the Owner's Schematic Design Phase review, the Owner will assign room numbers and revise room names in accordance with the University's room number assignment policy.
2. Room number designations shall appear thereafter on all drawings and documents throughout completion of the A/E's work, construction and occupancy.

## **Cost of Construction Estimate**

The A/E's Cost Consultant shall prepare cost estimate at the conclusion of Schematic Design. The A/E will cooperate with the Cost Control Consultant in reconciling the A/E's cost estimate with the cost estimate prepared by the Cost Control Consultant and shall fulfill its other obligations as set forth in the Project Budget section of this Guide.

## **Reviews and Approvals**

For Review and Approval information, refer to the *Overview of Services* section herein.

# Design Development - Basic Services

## General Requirements

After approval of the Schematic Design Phase, proceed with the Design Development Phase to fix and illustrate the size and character of the entire Project in all its essentials, by further extension and refinement of the concept, structure, materials, mechanical-electrical systems, site development, and response to the program.

Confer with city code agencies and public utilities to ensure a working understanding between these agencies and the University's project team. Consult with the Owner before contacting any authority.

## Design Development Drawings

The following are required:

*Note: scales may be changed if necessary for clarity.*

### Site Development

Scale shall be 1 inch = 20 feet. Similar information to the Schematic Design submittal plus the following information:

1. Parking layouts, if applicable.
2. All utilities and services.
3. Coordination with landscape design.
4. Compliance with Plan Development Ordinance No. 43
5. Established elevations.
6. Lighting layout.
7. Floor Plans
8. Confirm property lines and set-backs
9. Show detention and retention areas

Scale minimum of 1/8 inch, including University designated room names and numbers, dimensions, door swings, and typical material indications.

### Plans of Special Floors or Areas

Locations and requirements, and scale as jointly agreed.

### Roof Plan(s)

Scale minimum of 1/8 inch, including penthouses, major mechanical equipment, expansion joints, and all projections visible from ground level.

### Reflected Ceiling Plans

Provide reflected ceiling plans for lighting, mechanical coordination and for facilities and City review

## **Elevations**

Scale minimum of 1/8 inch for all exterior walls of the building, including floor elevations and enlargements of special details or wall configurations.

## **Sections**

Scale minimum of 1/8 inch; number as required to reasonably illustrate floor relationships, construction thickness and profiles, vertical circulation, and special features and MEP coordination.

## **Typical Details**

Not smaller than 1/2 inch scale, including exterior wall sections.

## **Preliminary Finish Schedules**

Format as intended for construction documents.

## **Equipment and Furnishings**

1. Expand Schematic Design requirements. Include a furniture and equipment layout and schedule, noting both new and existing equipment to be used. With existing equipment and furniture, note its present location, where it will be stored or how it will be handled during construction, or what, if any, modifications to the equipment will be necessary to adapt it to its new location.
2. All laboratory and scientific equipment shall be noted in schedule for and include make, model number, dimensions, power requirement, plug type, required utilities, and heat rejection requirements.

## **Mechanical-Electrical Provisions**

Scale shall be 1/8 inch single line drawings to illustrate ductwork, principal piping lighting layouts and other typical systems; provide double line drawings in mechanical equipment rooms, and restricted areas at scale as required to illustrate adequacy of area and clearances. Provide 1/8 inch electrical single line diagram and preliminary load study. Show available power and location of source. Show riser diagrams and layout of switchgear, transformers, and equipment rooms.

## **Perspective and Models**

Provide limited detail models and sketches to illustrate appearances and relationships to neighboring structures as required for approval; detailed renderings and models will be reimbursed in accordance with the Agreement when requested by the University.

## **Room Name and Numbering Assignment**

Review room names and numbers assigned during the Schematic Design Phase and confirm or revise previous information, as necessary. If the physical configuration of space has changed,

rooms shall be re-numbered in accordance with the assignment guidelines to reflect the space changes.

### **Communications – Voice/Data Systems**

A/E will work with NSIT to develop provisions for voice/data systems, including provision for voice/data closets and cabling layouts.

## **Design Development Reports**

### **Structural Provisions**

1. Design Data
  - a Design criteria employed
  - b Live and dead loads
  - c Confirm system(s)
  - d Wind load design
  - e Compute tonnage/area efficiency
  - f Optional methods to be permitted during construction
  - g Confirm foundation type
  - h Confirm special provisions for concentrated loads, openings and equipment loads
  - i Provisions for deflection and vibration control
  - j Provisions for thermal movement control
  - k Subsurface waterproofing methods as recommended by geotechnical engineer
2. Outline provisions for effects of new structure on existing, neighboring buildings, and structures.

### **Mechanical-Electrical Provisions**

1. Update the Performance Narrative to reflect any new information. Refer to the *Systems Performance Narrative* outline provided in the Agreement.
2. Confirm systems selection by updating the life cycle analysis conducted during schematic design detailing initial cost, useful life, rate of return, building construction and configuration, building occupancy, utility costs, and maintenance costs.
3. Make analysis in accordance with the format shown in ASHRAE Guides, entitled *Owning and Operating Costs Data and Summary*.

### **Integrated Systems (where applicable)**

Describe interrelationships, efficiency of control, and operating restrictions.

## **Pollution Control**

Describe calculated problems and means and degree of control and abatement. For fume hood exhaust from laboratory buildings kitchens, restrooms, and other odor producing areas, describe disbursement and dilution of fumes and proximity to other air intakes.

## **Lighting Fixtures**

Provide manufacturers names, description, illustration and characteristics for typical lighting fixtures or layouts contemplated.

## **Code Analysis Review**

Review the analysis made during Schematic Design, to confirm or supplement previous conclusions.

## **Program Conformance Analysis**

Review analysis made during Schematic Design, to confirm or supplement previous statements.

## **Acoustical and Vibration Report**

Outline provisions for sound and vibration control and attenuation in typical areas; describe provisions (or Consultant's reports) for severe acoustical and vibration problems; describe provisions for isolation and sound.

## **Area-Volume Statistics**

Check calculations made during Schematic Design and tabulate any significant changes.

## **Alternate Proposals**

Outline recommended alternates to scope or quality which should be considered as bid control methods; unless otherwise directed, all alternate proposals shall be additive.

## **Cost of Construction Estimate**

The A/E's Cost Consultant shall prepare cost estimate at the conclusion of Design Development Phase. The A/E will cooperate with the Cost Control Consultant in reconciling the A/E's cost estimate with the cost estimate prepared by the Cost Control Consultant and shall fulfill its other obligations as set forth in the Project Budget section of this Guide.

## **Changes Since Approved Schematic Design**

Document any other changes not included above.

## **Reviews and Approvals**

For Review and Approval information, refer to the *Overview of Services* section herein.

# Construction Documents - Basic Services

## General Requirements

After approval of the Design Development Phase, proceed with the preparation of construction documents, in such form as is suitable for bidding and construction and as described herein.

## Working Drawings

The University expects clear, comprehensive drawings at appropriate scales, of high professional quality and conducive to narrow range bidding. The following requirements are not comprehensive; only those requirements which are not common practice are listed.

### Civil and Site work Drawings

1. Site Survey  
Incorporate, but qualify that its inclusion is for bidders' convenience only.
2. Landscaping  
Design the landscaping, sprinkler systems, and related site development issues for construction under a separate agreement. The Landscape Consultant shall prepare drawings showing concrete work, electrical, plumbing, etc. which will be incorporated by the A/E into their Contract Documents under the proper trades, to be included in the Contractor's work and bid price.
3. Underground Drainage  
Include invert elevations; show foundations on drainage drawings.

### Structural Drawings

1. Design Loads  
Tabulate on drawings; identify design criteria; avoid duplication of any information or requirements stated in Specifications.
2. Protection  
Show relationship to adjacent structures and identify all necessary means for protection of adjacent structures and improvements.

### Architectural Drawings

1. Fire Protection  
Identify location and extent of fire resistive walls and partitions; identify rated door openings on schedules.
2. Elevators  
Note characteristics on drawings, including speed, capacity, and electrical current requirements.
3. Equipment  
Show all equipment included in the construction contract; show equipment not in the contract when anchorage is required or when advisable to facilitate delivery, location of adjacent or related construction and the like.

## **Food Service Equipment**

1. Base Drawings  
Include for equipment other than freestanding with legs or manufactured bases.
2. Rough-in Drawings  
Include, showing sizes, characteristics and locations of mechanical and electrical services.
3. Mechanical Drawings
  - a Equipment Rooms  
Not less than ¼ inch scale, showing multiple plan levels when required for clarity.
  - b Sections  
Include for equipment, piping, and ductwork in restricted areas.
  - c Schedules  
Include showing various Contractor and Subcontractor responsibilities for equipment involving several trades.
  - d Ductwork  
Show double line on plans, section and details; provide one line riser diagrams.
  - e Supports  
Coordinate hangers, bases, and supports with other discipline drawings, including building structural design for attachment of hangers and supports to building structure.

## **Electrical Drawings**

1. Single Line Diagrams
2. Load Calculations / Short Circuit Calculations
3. Lighting and Panel Schedules
4. Motor Control Schedules
5. Lighting Plans, Receptacle Plans
6. Power Plans
7. Fire Alarm Riser Diagrams
8. Control Schematics
9. Data and Telephone Plans
10. Electrical Service Connection
11. Details

## **Laboratory Equipment**

1. Elevations  
Include wall elevations for equipment in typical and special rooms; include sections for special equipment.
2. Plans

Provide separate plans for laboratory equipment and planning where appropriate for size of Project, otherwise, locate equipment on architectural drawings as noted under the *Architectural Drawings* paragraph - # 3 in the *Construction Documents* section herein.

## **Signage**

Include both interior and exterior. The University of Chicago Signage Manuals for Internal and External signage are available upon request to the University Project Manager.

## **Reports**

The following are required:

Confirmation of reports submitted during Design Development Phase as follows:

1. Code analysis and review.
2. Program Conformance Analysis.
3. Acoustical Report.
4. Area Volume Statistics.

The following reports are required:

1. Cost of Construction Estimate

The A/E's Cost Consultant shall prepare cost estimate at the 60% complete Construction Documents. The A/E will cooperate with the Cost Control Consultant in reconciling the A/E's cost estimate with the cost estimate prepared by the Cost Control Consultant and shall fulfill its other obligations as set forth in the Project Budget section of this Guide. In addition, the A/E will provide the Cost Control Consultant with all documents described in the *Construction Documents* section herein, as available and when approximately 60%, 75%, and 95% or as requested and the A/E shall cooperate with the Cost Control Consultant during the preparation and updating of the final estimate; assist University personnel and the Cost Control Consultant to analyze any significant changes since the Design Development estimate. The A/E shall facilitate any construction cost reconciliation or value engineering as required by the Owner.

2. Changes Since Approval of Design Development  
Document any other changes not included above.

## **Specifications**

The A/E will use the University of Chicago Project Manual for Construction format. This document will be supplied by the Facility Services Project Manager in an electronic format and delivery method compatible with the A/E's preferred delivery method.

1. The A/E will become familiar with all of the requirements of the Project Manual for Construction. The terms of this manual shall not be changed without the approval of the Project Manager. The Project Manual for Construction contains the following information:
  - a Invitation to Bid

- Confer with the Project Manager as to whether a Bid Bond or Labor and Materials/Performance Bond is required.
  - The Invitation to Bid contains a reference to Contractor's or Contractor's liability requirements, which is contained in the General Conditions.
  - The Invitation to Bid contains a reference to the University's tax-exempt status.
- b Bid Form
- c Standard Form of Agreement Between Contractor and Owner for Construction
- The Standard Form of Agreement for Construction Between the Contractor and Owner for Construction is included. No other contract forms are acceptable unless approved in advance by the Project Manager.
- d University of Chicago Standard General Conditions
- The University's Standard General Conditions are included. No other form of General Conditions is allowed. The A/E is responsible for understanding and enforcing the terms and conditions of the Standard General Conditions.
- e Supplementary General Conditions
- The Supplementary General Conditions shall be written by the A/E.
  - The Supplementary General Conditions should contain any Project Manager approved modifications to the Standard General Conditions.
2. Technical Specifications
- a The Performance Narrative from the previous phase shall be updated and incorporated into the technical specifications.
- b Division 1 — General Requirements
- Include any Project specific requirements. The A/E may organize the requirements under different sections if desired.
- Temporary Facilities
- Barricades and barriers
  - Dust partitions and temporary firewall separations
  - Driveways and parking
  - Job sign
  - Field offices and trailers
  - Toilet facilities
  - Hoists
  - Rubbish chutes
  - Temporary use or permanent elevators
  - Security and security lighting
  - Protection of existing site features

### Temporary Utilities and Services

It is the Contractor's responsibility to provide piping and connections to the appropriate mains and to pay for water consumed when supplied by the City. The University will pay for water supplied from its mains.

- Heating during construction
  - Temporary lights and power
  - water supply during construction
- c. Include the testing and balancing requirements to be followed by the Contractor in the balancing of systems. Specify that the Test and Balance Consultant shall be under direct contract with the University.
- d. Coordinate phone and network conduit and raceways with the University of Chicago's Universal Wiring Plan.
- e. Include requirements for systems testing plans for major building components through a one year cycle. The Contractor shall be required to submit testing plans. Follow-up testing is required during the third, sixth, and ninth months. Final payment to the Contractor will not be made until follow-up testing is complete.
- f. Include requirements for systems training plans for major building systems. The Contractor shall be required to submit training plans. Training should address building operations over a one year cycle. Follow-up training is required during the third, sixth, and ninth months. Final payment to the Contractor will not be made until follow-up training is complete.

## **Reviews and Approvals**

For Review and Approval information, refer to the *Overview of Services* section herein.

# **Bidding and Negotiating - Basic Services**

## **General**

Services are outlined below:

### **Authority**

Do not proceed with printing of the final construction documents, release to bidders or undertake any bidding procedure without authority of the University.

### **Bidders**

Pre-qualification and the selection of the approved bidders list will be jointly determined by the A/E, the Contractor and the University.

### **Construction Documents**

The A/E shall arrange for the reproduction and distribution to bidders. Four sets of prints shall be given to each approved bidder at no cost. Additional drawings may be requested by the bidder at its expense.

### **Pre-Bid Meeting**

1. Arrange for and conduct the pre-bid meeting and walk-through.
2. The Project Manager will coordinate attendance of the University's personnel.

### **Addenda**

The A/E shall process all questions and shall prepare, reproduce, and distribute all addenda and required sketches to bidders.

### **Bid Tabulation Form**

When tabulating bids, the Standard University of Chicago Report of Bid Opening form shall be used.

### **Bid Opening**

The A/E shall attend the bid opening. The Owner will determine whether Contractor shall attend.

### **Analysis**

1. In conjunction with the Contractor, the A/E shall analyze the bids and shall conduct a pre-award/scope review meeting when appropriate, to determine whether the low bidder or bidders have fully understood the scope of the Project and have included all items in their bid.
2. The A/E, in conjunction with the Contractor shall then make a recommendation for award.

## **Reviews and Approvals**

For Review and Approval information, refer to the *Overview of Services* section herein.

# Construction Administration - Basic Services

## General

Construction administration services are outlined below.

## Administration of the Contract for Construction

1. The A/E's responsibility to provide Basic Services for the Construction Phase under this Agreement commences with the commencement of Contractor's construction services and terminates at the final Certificate for Payment.
2. The A/E shall provide administration of the Contract for Construction as set forth below and in the General Conditions of the Contract for Construction, for this Project, unless otherwise provided in this Agreement.
3. Duties, responsibilities and limitations of authority of the A/E under this Paragraph shall not be restricted, modified or extended without written agreement of the Owner and A/E with consent of the Contractor, which will not be unreasonably withheld.
4. The A/E shall be a representative of and shall advise and consult with the Owner during the administration of the Contract for Construction. The A/E shall have authority to act on behalf of the Owner only to the extent provided in this Agreement unless otherwise modified by written amendment.
5. The A/E, as a representative of the Owner, shall provide observation of the Contractor's operations to (1) become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine if the Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. This observation shall be performed in a reasonably responsive manner so as not to delay construction. However, the A/E shall neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.
6. The A/E shall report to the Owner known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor. However, the A/E shall not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The A/E shall be responsible for the A/E's negligent acts or omissions, but shall not have control over or charge of and shall not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or for any other persons or entities performing portions of the Work.
7. The A/E shall at all times have access to the Work wherever it is in preparation or progress.

8. Except as otherwise provided in this Agreement or when direct communications have been specially authorized, the Owner shall endeavor to communicate with the Contractor through the A/E about matters arising out of or relating to the Contract Documents. Communications by and with the A/E's Consultants shall be through the A/E.
9. Certificates for Payment
  - a. The A/E shall review and certify the amounts due the Contractor and shall issue certificates in such amounts.
  - b. The A/E's certifications for payment shall constitute a representations to the Owner, based on the A/E's evaluation of the Work and on the data comprising the Contractor's Application for Payment, that the Work has progressed to the point indicated and that, to the best of A/E's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject (1) to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, (2) to results of subsequent tests and inspections, (3) to correction of minor deviations from the Contract Documents prior to completion, and (4) to specific qualifications expressed by the A/E.
  - c. The issuance of a Certificate for Payment shall not be a representation that the A/E has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract sum.
10. The A/E shall have authority to reject Work that does not conform to the Contract Documents. Whenever the A/E considers it necessary or advisable, the A/E shall have authority to require inspection or testing of the work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. However, neither this authority of the A/E nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the A/E to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees or other persons or entities performing portions of the Work.
11. The A/E shall review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The A/E's action shall be taken within 10 days or such reasonable promptness as to cause no delay in the work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the A/E's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the

Contractor as required by the Contract Documents. The A/E's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the A/E, of any construction means, methods, techniques, sequences or procedures. The A/E's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

12. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the A/E shall specify appropriate performance and design criteria that such services must satisfy. Shop Drawings and other submittals related to the Work designed or certified by the design professional retained by the Contractor shall bear such professional's written approval when submitted to the A/E. The A/E shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals.
13. Changes in the Work
  - a. The A/E shall prepare Change Orders and Construction Change Directives, with supporting documentation and data if deemed necessary by the A/E, for the Owner's approval and execution in accordance with the Contract Documents, and may authorize minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time which are consistent with the intent of the Contract Documents.
  - b. The A/E shall review requests (including all supporting documentation and information provided therewith) by the Owner or Contractor for changes in the Work, including adjustments to the Contract Sum and Contract Time. The A/E shall provide a written recommendation and opinion to the Owner indicating either that the requested change be approved, that the requested change be denied or that an order for a minor change in the Work be issued by Architect.
  - c. If the A/E determines that implementation of the requested changes would result in a material change to the Contract Documents that may cause an adjustment in the Contract Time or Contract Sum, the A/E shall provide a written opinion and recommendation to the Owner who may authorize further investigation of such change. Upon such authorization, and based upon information furnished to the A/E, if any, the A/E shall estimate the additional cost and time that might result from such change, including any additional costs attributable to any Additional Services of the A/E. With the Owner's approval, the A/E shall incorporate those estimates into a Change Order or other appropriate documentation for the Owner's execution or negotiation with the Contractor.
14. The A/E shall conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, shall receive from the Contractor and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract Documents and assembled by the Contractor, and shall issue a final Certificate for Payment based upon a final inspection indicating the Work complies with the requirements of the Contract Documents.

- a. The A/E shall issue the Certificate of Substantial Completion and Certificate of Final Completion with the approval of the University.

### **Building Permit**

1. The A/E shall provide the necessary stamped drawings to the Permit Expediter or Contractor or as directed and shall provide the necessary support during the permit process if requested.
2. The A/E shall execute an authorization letter permitting the Permit Expediter to act as a representative of the A/E and make minor modifications to the drawings in order to expedite the permit process.
3. Unless otherwise designated, all construction Projects shall require a building permit.

### **Pre-Construction Meeting**

1. Prior to starting construction, the A/E shall arrange and, along with the University, conduct a pre-construction meeting.
2. The Owner will coordinate attendance of the University personnel.

### **Construction Meeting**

It is the Contractor's responsibility to issue meeting minutes of all construction meetings. The Owner will provide suggested agenda topics.

### **Finish Schedule**

The A/E shall complete the selection of all colors and finishes required for the base contract promptly after start of construction and shall coordinate with other furniture and furnishings as provided under separate interiors contract.

### **Signage Schedule**

The A/E shall develop a signage schedule of all interior and exterior signs including type, location, room numbering, and text using the University of Chicago Signage Standards and shall coordinate the fabrication and installation of signage as provided under a separate signage contract. The signage schedule will be approved by the Owner prior to the execution of the signage contract.

### **Supplemental Drawings**

The A/E shall provide supplemental drawings, revisions to construction drawings, clarifications and other information and instructions as required to record changes whether or not additional costs are involved.

### **Safety and Security**

The A/E shall notify the University immediately should they observe any construction activity that might jeopardize the safety and security of University personnel or property. It will be the Owner's responsibility to address these issues with the Contractor in order to correct any dangerous situation.

## **Test and Balance**

Analyze Test and Balance Reports and enforce any requirements resulting from these reports.

# Acceptance - Basic Services

## General

As part of the A/E's Basic Services of this Agreement, A/E shall perform the following services with respect to the acceptance of the Work.

### Punch List

1. The A/E shall require the Contractor to prepare an initial list of items to be completed or corrected (the "Initial Punch List"). The A/E shall inspect the Project and modify the Initial Punch List in accordance with its inspection. The A/E shall prepare a Punch List that shall incorporate its modifications to the Initial Punch List and shall include a schedule within which the Contractor shall complete the items listed therein, which shall not exceed seventy-five (75) days. The A/E shall present the Punch List to the Owner for its modification and approval. The A/E shall perform sufficient additional inspections required to keep the University informed of the progress of the work set forth in the Final Punch List and to monitor the completion of the Work set forth in the Final Punch List. A/E shall provide qualified personnel to inspect the completion of the structural, mechanical, and electrical portions of the work contained in the Punch List. A/E shall conduct a final inspection for purposes of confirming the completion of the work set forth in the Punch List. A/E shall prepare any additional punch lists necessary to identify all remaining items to be completed or corrected and shall perform inspection services until all such items are completed or corrected.
2. The A/E shall pre-punch the mechanical, electrical and plumbing trades for above ceiling conformance to design prior to the ceiling tile installation. The following issues should also be reviewed by the A/E:
  - a Valves should be easily accessible and operable.
  - b Access panels should be appropriately placed to give easy access where necessary.
  - c Filter boxes are easily accessible and adequate filter pull space is provided.
  - d Make sure all pipes, ducts, electrical conduit and other mechanical devices are suspended properly.
  - e Make sure all valves are tagged and valve tag chart is submitted.
  - f Make sure all panel schedules are in place with copies provided in the close-out documents.

### Certificate of Occupancy

The Contractor shall apply for the Certificate of Occupancy. The A/E shall cooperate and shall provide all necessary assistance with this process.

## **Systems Testing**

The A/E shall provide requirements for a testing plan in the technical specifications and shall assist the Contractor in developing this plan. These testing requirements may be in addition to those provided as part of commissioning specifications and shall be coordinated by the A/E.

## **Systems Training**

The A/E shall provide requirements for a training plan in the technical specifications and shall assist the Contractor in developing this plan.

## **O&M Manuals**

The A/E shall review all O&M manuals, assuring that they are Project specific. Manuals must include equipment cut sheets, valve tag charts, electrical panel charts, etc. and be organized in the formats included in the University Close Out Requirements.

## **Reviews and Approvals**

For Review and Approval information, refer to the *Overview of Services* section herein.

# Project Close Out - Basic Services

## General

The A/E shall be responsible for the review, preparation and submittal of Project Close-Out Documentation as outlined in this section and as stated in the *Overview of Services* and *Construction Administration* sections herein. The A/E's entitlement to final payment of the A/E's Basic Services and Additional Services Fees is subject to completion of all of these requirements.

## Final Payment - Contractors

The A/E shall not approve final payment to the Contractor until the following items are determined by the A/E to be acceptable:

1. Satisfactory completion of all punch list items.
2. Submission and approval of the Operating and Maintenance Manuals.
3. Submission of all As-Built Documents.
4. Satisfactory completion of all required initial and follow-up systems testing.
5. Satisfactory completion of all required initial and follow-up systems training.
6. Submission of all warranties and guarantees
7. Submission of all final waivers of lien.

Required document formats and quantities are described in the following section *Close-Out Document Transmittal, Formats and Quantities*.

## Reviews and Approvals

The Owner will designate a Project Closing Agent who will review all transmittal memos, indices and submitted documentation for adherence to the Close-Out Requirements and inform the A/E within forty-five (45) days of the date of submission of the acceptance or rejection of materials. Documents, including CAD drawings and other electronic files not meeting the Close Out Requirements will be returned to the A/E for revision or modifications at the A/E's expense. Final payment may be withheld or prorated based on the A/E's ability to revise or modify close-out documentation to meet the specifications stated in this Guide.

## Close Out Document Transmittal, Formats and Quantities

### 1. Summary

This section outlines the University's Close-Out document requirements, including transmittal memos, indices and formats and quantities for hard copy and electronic documents.

### 2. Transmittal Memo

All Close-Out Documents will be submitted to the designated Close-Out Agent with three (3) paper copies and one (1) Excel spreadsheet or ASCII format copy of a transmittal memo. The transmittal memo must include the following information:

Date of Conveyance

Name of Project [Assigned by Owner]

Project Number [Assigned by Owner]

University Property ID Number [Assigned by Owner]  
Name of Project Manager [Assigned by Owner]  
Name of University Close-Out Agent [Assigned by Owner]  
Name of A/E, Contractor or Vendor Document Submitter  
Contact Name/Number for Document Submitter  
Index of Document(s) conveyed on that date – per University specified format

### **3. Document Indices**

- a.** A/E's, contractors and other vendors submitting documentation must include an index of all documentation transmitted. This index must be submitted both in paper format (3 copies) with the Transmittal Memo and electronically in either Microsoft Excel or ASCII format.
- b.** Index Format – The index must include the following information:
  - i. Document ID Number, if applicable
  - ii. Document name
  - iii. Document description/content (e.g. file of meeting minutes, equipment manual)
  - iv. Document media (e.g. electronic scan, paper, Mylar, notebook, etc.)
  - v. Number of copies if duplicates conveyed
  - vi. Name of firm or individual submitting documentation
- c.** If Shop Drawings or Record Documents are submitted in either paper/Mylar or CAD formats, the index should also contain, for each plan:
  - i. Plan/CAD File Name (ID Name or label appearing on the file)
  - ii. Title of Drawing
  - iii. Brief description of drawing content (e.g. 4<sup>th</sup> floor furniture plan)
  - iv. Plan media including metadata concerning software application, software version, file size, etc.)
- d.** If scanned materials are conveyed, the index should include:
  - i. Document ID Number, if applicable
  - ii. Document name
  - iii. Document description/content (e.g. file of meeting minutes, equipment manual)
  - iv. Document type (e.g. photograph, scanned text, scanned rendering, etc.)
  - v. Metadata concerning software application, software version, file size, format and dpi

### **4. Formats and Copy Quantities**

The chart shown below outlines the total copies and distribution of various types of the documents. All required copies should be conveyed to the Close-Out Agent who will be responsible for the internal distribution of documents:

If Shop Drawings or As-built plans are submitted in either paper/Mylar or CAD formats,

Materials	Total Copies	Distribution of Copies		
		Archive	O&M Shop	O&M Bldg
<b>Transmittal Summary</b>				
Documents Transmittal Memo, printed on paper	3	1	1	1
Documents Index, printed on paper	3	1	1	1
Documents Index, electronic	1	1	0	0
<b>Project Operations and Maintenance</b>				
Specifications	4	1	2	1
Operation and maintenance manuals	4	1	2	1
Guaranty/warranty materials	4	1	2	1
Testing/inspection certifications	4	1	2	1
<b>Record Documents</b>				
Site survey, CAD files	1*	1	0	0
Site survey, PDF file	1*	1	0	0
Site survey, blacklines, Mylar	1	1	0	0
Site survey, blacklines, paper	1	1	0	0
Contractor Shop/As-Built Drawings, CAD files (optional)	1*	1	0	0
Contractor Shop/As-Built Drawings, PDF files	1*	1	0	0
Contractor Shop/As-Built Drawings, blacklines, paper	4	1	2	1
Record Drawings, CAD files	1*	1	0	0
Record Drawings, PDF files	1*	1	0	0
Record Drawings, blacklines, Mylar	1	1	0	0
Record Drawings, blacklines, paper	4	1	2	1
<b>Other Documents</b>				
Other documents - addenda, change orders, etc.	1	1	0	0
Project correspondence files	1	1	0	0
Reports, including photographic records	2	1	1	0
Electronic files (photos, scanned documents)	1*	0	0	0
<b>* See notes on CAD/Electronic documents</b>				

a. Transmittal Summary – The requirements are explained above in Subsections 2 and 3.

b. Project Operations and Maintenance

The Contractor shall bind and turn over to the Closing Agent four sets of manufacturers' warranties and operating and/or maintenance manuals, instructions or schedules for all equipment and special materials requiring them, and associated copies of testing reports and certificates. The binders will categorize and index each piece of equipment and material included using a CSI format to be provided by the University, and shall be clearly marked noting "project specific" equipment, model numbers, and equipment cut sheets, value tag charts, electrical panel charts and other applicable information. Such manuals will be collected and organized by the Contractor and submitted to the Owner at one time, after review by the Architect/Engineer, prior to the issuance of the certificate of Substantial Completion. Except for the changes noted in this section, the Contractor will follow the procedure outlined in Section 6 of the Standard General Conditions.

c. Record Documents

Site survey, Shop Drawings, and Record Documents must be submitted in the format and quantity noted above.

d. Electronic Materials

- i. Electronic materials (CAD files, scans, index files, etc.) must be delivered on CDs. The University will no longer accept floppy disks (3.5" HD disks) or zip disks.
- ii. Upon request, the University will specify the preferred software applications, format, and dpi for scanned documents and photographs.

e. CAD Files

CAD drawings must adhere to the University of Chicago CAD Standards (See Exhibit H, A/E Professional Services Agreement). Key elements of that standard that will be enforced include the following:

- i. A/E is required to deliver a PDF file set of all CAD files. The PDF set should replicate the mylar version of record drawings and will serve as the permanent electronic file copy for the project.
- ii. All CAD files must be delivered in AutoCAD release 2000i or 2002/Map 5 DWG files, or the current Owner's AutoCAD release at the completion date of the Project - DXF files will not be accepted as a substitution for DWG CAD files.
- iii. All building information is to be drawn in model space at 1:1 scale (actual size). All title blocks and borders are to be in view/paper space.
- iv. X-ref's are to be used by the Vendor for referencing architectural backgrounds on discipline drawings and should not be bound into the discipline drawing as a block before submittal.
- v. In a new or detailed drawing the University expects a high degree of dimensional accuracy. The CAD drawing should be +/- 2-inches for any one room dimension. Wall thickness should be to the nearest 1/4-inch.
- vi. All drawings must be produced following CAD "best practices". For example, AutoCAD object snaps must be used for all line intersections to insure that all corners meet.

- vii. Colors and line types are “by layer” only. Colors are restricted to lighter shades suitable for viewing on a dark background. Plotting is by layer color so strict adherence to layer color standards is required.
- viii. Use CAD Standard block definitions only. Use of non-standard blocks is by approval only. All new blocks must be created on layer “0” at location 0,0,0. All unused block definitions must be purged from the file.
- ix. Use only AutoCAD text and line styles. Roman is the standard font. No custom line styles are allowed. Text must plot at a minimum plotted height of 3/32”.
- x. University buildings are drawn at the Illinois state plane coordinates. Do not rotate or shift building or map information provided by the University.
- xi. The Facilities Services Planning Group must approve all new or modified room numbers. All room polyline boundaries are linked by building, floor and room ID’s to the space information management system (SIMS) database. The SIMS software is provided under license from Facilities Information Systems, Inc. (FIS).
- xii. The Owner uses space standards defined in the U.S. Department of Education “Postsecondary Education Facilities Inventory and Classification Manual”. These are also commonly known as the “HEGIS” standards.