

Volume II- Project Development Processes

This section outlines the procedures that are expected of capital projects at The University of Chicago. These requirements supplement the planning procedures required by the City of Chicago and all regulatory agencies with jurisdiction on Facilities Services Capital Project Delivery projects. The information described in this section is supplemental to the A/E Agreement and Exhibits; in the case of any conflict, the A/E Agreement shall govern.

The purpose of this section is to:

- Delineate the working relationship, responsibilities, and operational details between The University of Chicago (University) and those Architects, Engineers, and other professionals commissioned by the University for its planning, design, construction and maintenance projects (Consultants). In the event of a conflict between the standards and the terms of the Agreement of the contract documents, the terms of the Agreement or the contract documents shall govern.
- Encourage clear communications and professional attitudes resulting in superior projects.

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

- Develop design solutions that comply with the program scope, budget, and schedule as included in the program documents. The project program documents and project requirements will be evaluated throughout the project's development and construction and serve as a benchmark for performance. The Consultant is required to notify the project team of any proposed divergence from this document and obtain written approval from the University Project Manager before incorporating that divergence into the project. The Consultant will be required to submit a matrix to the University Project Manager documenting the status of each proposed divergence at each project milestone.
- Obtain economic balance, commensurate with available funds and design objectives, between initial construction costs, building permanence, operation, and maintenance costs. The University, within our Stewardship and Sustainability programs, will require project evaluation during the design phase regarding the life-cycle profile of the building envelope and major systems performance of the building.
- Incorporate maintainability, energy efficiency and sustainability into the design solution.
- Comply with all applicable codes, including but not limited to those pertaining to accessibility, environmental conditions and safety, and the requirements of participating governmental agencies.

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- Exceed current accessibility requirements where feasible as described in these standards, and apply these standards for accessibility to projects for University facilities and sites even where codes and regulations do not require accessibility.
- Meet all defined review and authorization procedures at each phase of the project and provide the required deliverables at each stage and at the conclusion of the project per the FS Compliance Guide Matrix.
- Deliver documentation and training required to support the operation and maintenance of the completed project through its life cycle.

A. Consultant's Relationship to the University

1. Facilities Services Role

The University's projects are managed through the office of Facilities Services (FS), typically within the Capital Project Delivery (CPD) group. A Project Manager is assigned as the University representative for each project. The FS Project Manager is the sole point of contact for the Consultant and all project correspondence and decisions shall be coordinated through this representative. In order to maximize continuity and accountability the assigned Project Manager will typically be on the project from conception to beneficial occupancy.

The Facilities Services department is structured so that as projects move from design into construction the Project Manager reports to senior leadership throughout all project phases, maximizing efficiency, specialized experience, and synthesis with appropriate University resources. An FS organizational chart can be accessed through the FS website to help illustrate the various components of the department.

2. Consultant's Role

The Consultant will work through the FS project manager, and must turn to this person for authoritative information on all matters and questions involving the University.

The Consultant shall designate an individual within the Consultant's firm who is directly responsible for the project, and who can be contacted directly on any matter pertaining to the project.

3. Related Roles

Additional resources and entities may be required as part of the University's project delivery process, such as Commissioning Agents, Construction Managers, General Contractors, and various other Owner Consultants. The Consultant is expected to work with those entities engaged by the University as necessary throughout the design and construction process.

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B. Project Development Sequence

1. Overview

The Facilities Services Capital Project Delivery Unit has developed the following processes to assess and implement capital projects and enhance the department's accountability, responsiveness, efficiency and collaboration with our internal stakeholders and our consultants and design professionals. In addition, the Consultant is advised to review individual standards sections, such as Accessibility, for specific processes inherent within that subject.

FS2: The Project Development Process: Implementation

The purpose of the process is to provide a reliable, repeatable framework for the successful delivery of projects of any size. The process can be tailored to relevantly address the needs of a variety of project types and sizes. FS2 is at its core a reference which allows the user, consultant/contractor or staff member, direct access to project-relevant content including process.

Understanding the FS2 Project Development Process: two examples:

For Traditional Projects, which are large and complex, it is expected that the full scope of the Project Development Process as defined in FS2 be employed. Typically each project, beginning with Project Initiation through Close out, will follow the prescribed steps as outlined in Volume II.

Compressed Schedule Projects, which make up more than 80% of projects on campus, can be structured to take advantage of compression opportunities. For example, the Schematic design (SD) and Design Development (DD) phases can be combined into a single phase. It should be understood that the process is adaptable suit the particular needs of a given project. Modifications to the process will be established and agreed to at the beginning of a project.

2. Project Development Phases

a) Program Planning and Project Initiation (Prior to Consultant Engagement)

The FS Project Manager is typically identified and assigned to a project upon the initial identification of a facility need by an academic group, school, department, institute, or

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support function at the University. The project is reviewed at several leadership levels to ensure that it is consistent with the goals, objectives, and priorities of the University. The assigned FS Project Manager will then develop the project charter, including known scope and program requirements. The Consultant will develop the Owner's Project Requirements (OPR) upon engagement.

Compressed Schedule Projects: It is at this point that a Compressed Schedule Project will be identified by the FS Project Manager, described in the OPR and an appropriate schedule of phases developed in cooperation with the Consultant and the Consultant's initiation of the Basis of Design. Additionally, the FS Project Manager will determine the appropriate Construction Document deliverables for the Compressed Schedule Project.

i. Project Management System

The University maintains a web-based project management system (e- Builder) that enables the team to correspond and document the project throughout the programming, design, and construction phases. Typically, all project correspondence, such as minutes, invoices, RFI's, etc., will be posted, reviewed, or approved on the system. Any Consultant who has not been previously trained will be expected to attend the next available monthly training session and is welcome to attend additional sessions as a refresher. The Contractor, Commissioning Agent and any other primary vendors on the project will also utilize the University's project management software.

b) Programming Phase

The Programming Phase typically is the start of the Consultant's engagement, although in some cases, the University will combine the following activities into the Schematic Design Phase. (Refer also to Exhibit A of the A/E Agreement).

i. Schedule

At the beginning of the engagement, the Consultant will be expected to develop and submit a project schedule for the preconstruction phase of the project that outlines key deliverables, milestones and decision points for review with the Facilities Services Project Manager. The Consultant will be expected to update the schedule no less frequently than at the end of each phase. It is very important that the Consultant clearly communicate decision points and expectations at these points, as

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well as providing adequate time for the University’s team to review and respond to the information provided.

Compressed Schedule Projects: For those projects identified as Compressed Schedule Projects, the Programming Phases the FS Project Manager may decide to combine this phase with the “Design Phase” (Schematic and Design Development Phases Combined)

ii. Programming, Program Verification, and Conceptual Design

The University will typically require the assistance of the Consultant in program verification of the proposed project, and may require full programming or conceptual design services depending on the nature of the project. The scope of these services will have been established during the Consultant selection.

iii. Site and or Existing Conditions

The University has extensive electronic archives including record drawings for use by the Consultant. However, due to the age of many of the University’s buildings and the many renovations and repairs, these drawings are not always available or may not be updated. It is the responsibility of the Consultant to verify all information provided for accuracy relevant to the Project. The FS Project Manager is to be notified when any information regarding the existing conditions of a project is inaccurate or inadequate.

The Consultant and FS Project Manager will meet to discuss the processes, Project Directory, and available reference materials and resources within the Facility Services group and University support units such as Information Technology Services (IT Services), Safety & Security, and Environmental Health & Safety (EH&S). The Facilities Services Department includes the Engineering and Utilities managers and the Space Information Management Services (SIMS) group for a point of contact for existing documents including internal and external contacts with utility companies.

The University expects the Consultant to perform a thorough examination of existing systems including but not limited to mechanical, plumbing, electrical, and fire protection. As example, the Consultant should not assume that existing HVAC systems are delivering proper air flow to an existing space. If available, the Consultant will be provided with an existing, recent test and balance report. If not available, the Consultant should perform a test and balance as part of the analysis of existing conditions. The electrical engineer is expected to examine existing electrical panels to confirm adequate capacity for the proposed work. Additionally, the Consultant needs to identify any and all areas and concealed spaces (reasonably accessible) that will require assistance from the University in order to get access. Given the complexity of the utility infrastructure and the importance of the landscape on the University of Chicago’s campus, it is critical that a surface feature conditions survey be completed by the programming or schematic design phase.

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iv. Geotechnical information

As part of the Consultant's services to the University, the Consultant is to recommend a list of qualified, licensed geotechnical service firms that can provide all geotechnical information for projects requiring such services. The University and Consultant will come to consensus on a list of qualified firms to solicit proposals from. The Consultant shall prepare a scope of services that the University will use in developing the RFP for geotechnical services. The geotechnical consultant shall contract directly with the University, but still be obligated to coordinate its services with the Consultant.

v. Initiation of the Basis of Design.

The Consultant will lead the development of the Basis of Design (BOD) document, informed by completion of due diligence and in response to the overall project goals, budget, and schedule included within the Owner Project Requirements (OPR). This process should include a commissioning and sustainability workshop when appropriate.

Compressed Schedule Projects will still be required to submit a Basis of Design even if the Schematic Design and Design Development Phases are combined into a common "Design Phase."

vi. Kick-off Meeting

The FS Project Manager will hold an initial or kick-off meeting to review the project goals and objectives, communication process, project processes and procedures and to clearly define the project scope, schedule budget (cost), quality and overall project goals. The Consultant is expected to document initial as well as subsequent meetings. Key activities include:

- Engage key stakeholders, set calendar invitations
- Create project directory and communication process
- Define scope, schedule and budget guidelines
- Review overall project goals and OPR/BOD process
- Review Heritage Strategy if applicable
- Review of quality expectations including expectations for inspection of existing conditions
- Review availability of University document resources
- Review of Project Team evaluation process, evaluations will be conducted at set intervals throughout the project
- Review project completion expectations
- Review of FS Compliance Guide requirements

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c) Schematic Design (SD) Phase

In the Schematic Design Phase the Consultant shall provide services and deliverables necessary to illustrate the general scope, scale and relationship of project components and systems in alignment with the budget and schedule (Refer also to Exhibit A of the A/E Agreement).

Compressed Schedule Projects: At the beginning of the Project Initiation, the FS Project Manager may decide to combine this phase with or separate from the Programming Phase or combine this phase with the Design Development Phase, in which case the combined phase would meet the requirements of the Design Development Phase as set forth in this document. A Basis of Design will still be required from the Consultant.

i. Schematic Design Start

The FS Project Manager will provide feedback from the project stakeholders and Facility Services leadership at the beginning of the phase to review the program, modify or re-affirm the project requirements, and establish subsequent meetings to develop the proposed project design. The Project Manager will provide written authorization to commence the SD phase if a prior Programming phase has been undertaken. Refer to the Reviews and Approvals section for the various types of meetings and reviews throughout the phase.

ii. Schematic Design (SD) Phase Review

The SD Review Submittal documents shall be reviewed at the end of the SD phase. Refer to the Reviews and Approvals section for a detailed description of the SD Phase Review process.

iii. Schematic Design Review Submittal

The SD Review Submittal to the University consists of a minimum of three (3) complete sets of documents, or as requested by the FS Project Manager. The University will review the documents for completion prior to submission to other review agencies. The SD Review Submittal should be developed to an adequate level of detail to assure that substantive changes will not be required during further development of the drawings to meet the program, budget and schedule for the project. This includes assuring that the level of development of the MEP and structural systems is adequate to avoid substantive changes to the floor plans, ceiling heights, program, budget and schedule. SD deliverables typically will have been established as part of the contract exhibits, but the following information must also be provided by the Consultant:

- A Basis Of Design (BOD) and Owner's Project Requirements (OPR) document prepared by Consultant

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- An Accessibility Plan as described in the Accessibility section of the standards
- A LEED Checklist with Commentary and Life Cycle Systems evaluation (if applicable)
- Heritage Strategy report as applicable
- Room Name, Numbering, and Areas

Consultants should not be compensated at the end of each phase AND the next phase should not proceed without milestone deliverables completed (or director's sign-off).

d) Design Development (DD) Phase

Based on the approved Schematic Design submittal, the Consultant shall provide services and deliverables necessary to more fully illustrate the project scope (Refer also to Exhibit A of the A/E Agreement). The Design Development deliverables should provide sufficient detail on the project to describe aesthetic and functional descriptions of the program, envelope, structure, mechanical, electrical, plumbing and other systems, in alignment with the budget and schedule.

Compressed Schedule Projects: At the beginning of the Project Initiation, the FS Project Manager may decide to combine this phase with the Design Development Phase, in which case the combined phase would meet the requirements of the Design Development Phase as set forth in this document.

i. Design Development Start

The FS Project Manager will provide feedback from the project stakeholders and Facility Services leadership at the beginning of the phase to review the program, modify or re-affirm the project requirements, and establish subsequent meetings to further develop the project design. Refer to the Reviews and Approvals section for the various types of meetings and reviews throughout the phase.

ii. Design Development (DD) Phase Review

The DD Review Submittal documents shall be reviewed at the end of the DD phase. Refer to the Reviews and Approvals section for a detailed description of the DD Phase Review process.

iii. Design Development Review – FM Global

The DD Review conducted by FM Global shall be coordinated by the FS Project Manager. Together with the University's Risk Management, the FS Project Manager will determine the project requirements for such reviews.

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iv. **Design Development Review Submittal**

The DD Review Submittal to the University consists of a minimum of three (3) complete sets of documents, or as requested by the FS Project Manager. The University will review the documents prior to any submission to any regulatory agencies with deliverables as required by the contract. In addition to the DD deliverables required as part of the contract, the following information must also be provided by the Consultant:

- An updated Basis of Design (BOD) and Owner’s Project Requirements (OPR) document prepared by Consultant.
- An Accessibility Plan as described in the Accessibility standards
- A LEED Checklist with Commentary and Life Cycle Systems evaluation if applicable
- Commissioning Plan from Cx Consultant
- Consultant is to identify in the bid documents a list of potential service interruptions and disruptions around the areas of work that the General Contractor is to include in their logistics plan and construction schedule.

Examples may include:

- Utilities: water, power, chilled water shut downs
- Accessibility in and around the areas of work
- Noise generating activities and vibrations that may disrupt adjacent spaces
- Life-Safety including egress & access, fire protection systems
- Review of the Site logistics/utility plans including access routing as prepared by the Contractor.



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e) **Construction Document (CD) Phase**

Based upon the approved Design Development submittal, the Consultant shall prepare construction documents and other materials required under their contract for the receipt of bids on the project (Refer also to Exhibit A of the A/E Agreement).

Compressed Schedule Projects: For Compressed Schedule Projects, the FS Project Manager in cooperation with the Consultant will determine the appropriate deliverables including abbreviated documents, phased documents, permitting documents or other as may be appropriate for the specific project.

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Construction Documentation Start

The FS Project Manager will establish meetings as required to further document the project design. Refer to section on Reviews and Approvals for the various types of meetings, reviews and approvals, including approvals by Regulatory Agencies. Based upon the understanding of the requirements of Regulatory Agencies having jurisdiction on the project, the Consultant will provide support and any documents involving phasing, preliminary review of project by review agencies or other construction enabling efforts, including Permit Documents.

ii. Construction Document (CD) Phase Reviews

The CD Review Submittal documents shall be reviewed at 50% on larger projects and at 90% of the CD phase on all projects. Refer to the Reviews and Approvals section for a detailed description of the CD Phase Review process.

iii. Construction Documents 50% Review Submittal

The CD 50% Review Submittal to the University consists of a minimum of three (3) complete sets of documents, or as requested by the FS Project Manager. The University will review the documents prior to submittal to regulatory agencies. Elements or systems within the project which are to be performance-based must be approved within the Design Development phase.

In addition to the CD deliverables required as part of the contract, the following information must also be provided by the Consultant:

- An updated Basis of Design (BOD) and Owner's Project Requirements (OPR) document prepared by the Consultant.
- An Accessibility Plan as described in the Accessibility section of the standards
- An updated A LEED Checklist with Commentary prepared by the Consultant
- Any updated Life Cycle Cost Analysis reports

iv. Construction Documents 90% Review Submittal

The CD 90% Review Submittal to the University consists of a minimum of three (3) complete sets of documents, or as requested by the FS Project Manager. The University will review the documents prior to submittal to regulatory agencies. The construction documents must be **fully engineered and detailed** by the Consultant team and not leave project detailing to the shop drawing phase. The construction document set (drawings and written specifications) shall be formatted consistent with standards of practice and requirements of the University and regulatory agencies. In addition to the CD deliverables required as part of the contract, the following information must also be provided:

- An Accessibility Plan as described in the Accessibility section of the standards
- An updated A LEED Checklist prepared by the Consultant
- Heritage Strategy documentation prepared by the Consultant

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- M-V program from Cx Consultant
- A Site Logistics Plan if applicable, to be reviewed by the Consultant, prepared by the Contractor.

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f) Furniture, Fixtures, & Equipment (FF&E)

The project scope may entail design, selection, and coordination of furniture, fixtures, and equipment (FF&E), either existing to be relocated or new. The FS Project Manager will advise the Consultant in coordinating with the appropriate FS furniture vendor representative(s) as well as participating furniture vendor(s) in the University's Master Furniture Standards program.

g) Bidding and Negotiation Phase

The Consultant's bidding phase responsibilities in regard to advertising for bids, creation of bid documents and supplementary bid documents, review and evaluation of bids and any exceptions, alternates, or substitutions, shall conform to the requirements of their contract, and include requests for information and preparation of addenda.

i. Preparation for the Bid Phase

Preparation for the bid phase begins in the Construction Documents phase. This includes activities such as the review of prequalified lists of vendors and contractors, development of the bidder list, scheduling of pre-bid conferences, etc. It also includes scheduling of post-bid activities such as detailed bidder scope review meetings to avoid delays in scheduling those meetings after bids have been received.

ii. Pre Bid Conference

The Pre-Bid Conferences are arranged at the convenience of the Consultant and the FS Project Manager.

iii. Bid Openings

The bids will be submitted via e-Builder for tabulation and review. The Project Manager and Consultant will evaluate the bids and comment on the base bid, options, alternates, and bid exceptions or qualifications.

iv. Construction Service Negotiations

The Consultant will participate in a detailed scope review meeting of the most competitive contractors' proposed team, costs, schedule, approach to the project and other criteria identified in the bid phase. The number of contractors invited to

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participate in a scope review meeting will be determined by the University based on the bid results.

h) Construction Phase

The Consultant's construction phase responsibilities in regard to submittal reviews, site observations, requests for information, changes in the work, alternates or substitutions, certificates of payment, and substantial completion shall conform to the requirements of their contract.

Compressed Schedule Projects: For compressed Schedule Projects the FS Project Manager, at project initiation in cooperation with the Consultant, determine that a phased construction schedule in conjunction with the compressed schedule is to be included in the project delivery. Additionally, the FS Project Manager may require that post-design project valuation (or "value engineering") be reviewed by the primary users that were involved in the project design prior to acceptance by the University.

i. Issued for Construction Set

The Consultant will prepare an Issued for Construction set of documents to include all updated bidding information, decisions, permit review corrections, etc. prior to start of construction.

ii. Owner, Architect, Contractor (OAC) Kick-off Meeting

The Contractor or Construction Manager will hold an initial OAC kick-off meeting to review project scope, construction schedule, responsibilities, and expectations with the project team. The Contractor is expected to document initial as well as subsequent meetings. Key activities include:

- Distribution of Project Directory
- Review of team member responsibilities
- Review of project scope, schedule, and construction budget
- Review of project procedures, distribution and communication requirements in conjunction with the University's web-based project management and delivery system (e-Builder)
- Review of anticipated shut-downs, service interruptions, and general disruptions
- Review of sustainability requirements
- Review of project completion expectations
- Review of expected FS Compliance Guide deliverables

iii. Construction Administration (CA)

The Consultant will perform CA duties in conformance with the requirements of their contract throughout the course of construction. The Consultant will be

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expected to work in a highly collaborative manner with the Contractor, Commissioning Agent, QA/QC Consultants, FF&E vendors, and other University representatives and consultants associated with the project. Key Consultant responsibilities include:

- Submittal review within agreed timeframes
- Request for Information (RFI) responses within agreed timeframes
- Issuance of Architect's Supplemental Information (ASI) documents
- Change Order (CO) review within agreed timeframes
- Field observation
- Monitoring and updating sustainability compliance as required
- Monitoring and updating accessibility compliance as required
- Contractor's Payment Application review

In addition, the Consultant should be aware of deliverable due dates throughout the Construction phase required by the Information Resources standards.

iv. Commissioning

The University will typically engage commissioning services for projects. The Commissioning Agent will coordinate the commissioning requirements for the project with the project team. The University expects that commissioning is complete prior to substantial completion to assure that the building is in working order when occupied and that the University operations staff have been properly trained and prepared to maintain the building. The University understands that certain off-season commissioning will not be complete on certain projects. A commissioning plan should be developed and agreed to with the University prior to issuing documents for bid.

In support of this effort the Contractor is to be required to submit all Operations and Maintenance documentation to the Consultant for review prior to submission of the 50% complete pay request. The Consultant and Commissioning Agent are expected to review and comment in a timely manner to assure that the approved documentation can be submitted to the University Operations staff for review prior to training.

Training is to be completed prior to substantial completion. The Commissioning Agent is required to develop a comprehensive training plan for review and approval by the University Operations staff.

v. Punchlist

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The Contractor is to prepare a preliminary punchlist based on inspections from the Consultant and project team, including any above-ceiling inspections.

vi. Certificate of Occupancy and Substantial Completion

The Contractor will coordinate final inspections and applications for a Certificate of Occupancy with the FS Project Manager and project team. The Consultant will prepare the Substantial Completion document and attach final punchlist for acceptance by FS Project Manager.

vii. Move Management

The University's Project Manager and /or User will coordinate User move and occupancy, including scheduling, communications, and FF&E deliveries. The Consultant may be included in the coordination of these issues as required by the project scope and contract.

viii. Construction Phase: Summary expected of FS Compliance Guide deliverables:

The FS Project Manager will expect as a minimum the following :

- Construction wayfinding and polyline graphic description of accessible routes
- A QA/QC review of the project process
- An updated LEED Checklist prepared by Consultant
- Room number samples
- Review of updated Site logistics/Utility plans by Consultant as prepared by Contractor



Consultants should not be compensated at the end of each phase AND the next phase should not proceed without milestone deliverables completed (or director's sign-off).

i) Project Close-out

The FS Project Manager and Contractor will typically coordinate aspects of the project close-out with the remainder of the project team. The various responsibilities include:

- The Contractor is to complete remaining punch list items (Consultant is responsible for prompt review of completed punch list items)
- The Consultant is to submit remaining applicable deliverables as described in Volume III E. Information Resources to the FS department and prepare Certificate of Final Completion

An eleven (11) month warranty walk-through is to be scheduled as part of the commissioning process. The Consultant, Commissioning Agent and Contractor are expected to attend the walkthrough.

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i. **Project Close-out: Summary expected of FS Compliance Guide deliverables:**

The FS Project Manager will expect as a minimum the following prior to final pay out:

- An updated LEED Checklist prepared by the Consultant
- Consultant review of close out documents for completeness (as prepared by Contractor)
- CADD/BIM as-built documents
- Consultant review of Scope Schedule of Values for completeness (as prepared by Contractor)
- Project Charter Update



Consultants should not be compensated at the end of each phase AND the next phase should not proceed without milestone deliverables completed (or director's sign-off).

3. Special Considerations

a) **Alternate Project Delivery Methods**

Certain University projects will require alternate or phased methods of project delivery. Determination of these requirements should be established as part of the Owner's Project Requirements at project initiation. For example, consideration may need to be given to phasing occupancy of the project, with associated noise mitigation and staging requirements. Project construction may also require alternate shift schedules to perform construction work around sensitive areas or departments. The FS Project Manager will discuss any special requirements or considerations regarding the design or construction phase.

b) **New Product/ Manufacturer Processes**

The standards developed by the University FS Department are a result of experience with methods and materials over time, and in some cases, are specific to the campus. However, the University will consider new products or manufacturer processes that have recently been developed for use on projects. In these situations, the Consultant will submit appropriate information, test results, documentation, etc., to the FS Project Manager for consideration. The Project Manager will coordinate an internal review of the submittal and advise the Consultant of the decision in writing. Sufficient time must be allowed for the review process.

4. Payment Processes

The University maintains a web-based project management and delivery system (e- Builder) that enables the team to correspond and document the project throughout the planning, design, and construction phases. Applications for payment are also submitted, reviewed, and approved through this process. The FS Project Manager or financial analyst will coordinate

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contract information set-up in the system and the Consultant will subsequently submit invoices according to their contract requirements.

C. Reviews and Approvals

The Consultant is expected to participate in presentations, review conferences, and make submittals at various stages of the project planning and construction process. Expected project phase submittals/deliverables are summarized in the FS Compliance Guide Matrix.

1. Functional Design Reviews

a) User /Project Meetings

The University department(s), or Users, that will occupy the building will have representatives attending regular project meetings as determined by the FS Project Manager to meet the project needs. They will also participate in periodic reviews, milestone reviews, and may have representatives serving on a Steering or other Committees if the scale, scope and complexity of the project require such.

b) SD/DD/CD Phase Reviews

The Facility Services Department includes Operations, Capital Project Delivery (CPD), Procurement and Economic Impact, Campus Planning & Sustainability, Engineering & Utilities representatives, each of which will participate as necessary in the project phase reviews at various milestones in the project development. Other administrative support units, such as Safety & Security and IT Services, will also participate in these reviews, which are coordinated by the FS Project Manager.

The Consultant will formally submit an SD (DD and CD similar) Package with deliverables as described in FS2 for University review. The Project Manger shall facilitate the review process as follows:

Schedule a review orientation meeting with representatives from Facilities Services and University-wide stakeholders as listed below:

- FS - Representative(s) from Engineering & Utilities
- FS - Representative(s) from Operations
- FS - Representative(s) from Accessibility
- FS - Representative(s) from Sustainability Unit
- FS - Representative(s) from Exterior Environments
- UC – User representatives
- UC – Representative(s) from IT Services
- UC – Representative(s) from Safety & Security

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- UC – Representative(s) from Environmental Health & Safety
- UC – Representative(s) from Risk Management
- Others as required by the project

The Consultant shall lead this meeting by providing an overview of the project, the basic building configuration, building systems and infrastructure layout, and walk through the set of SD drawings. Reviewers will be given an opportunity to ask questions and participate in a general discussion. At the conclusion of this initial “Project Orientation” meeting, the FS Project Manager shall summarize the design review process, time frames, and deliverables required.

The Project Manager shall distribute the SD documents (full package) along with review comment logs with instructions to all participants listed above. Documents shall be distributed electronically in pdf format. In addition, full size drawings (24” x 36” or larger) will be provided in hard copies as follows:

- One complete set of full size sets will be located on the 10th floor drafting table
- One complete set of full size sets will be located at the ATS Building
- One record set to be maintained in the project files by the FS Project Manager

Reviewers may request additional sets of hard copies from the Project Manager as needed. The Project Manager shall consider those requests and respond appropriately. All reviewers may contact the Project Manager at any time during the review period with any questions or clarifications required. Reviewers shall return the completed review comment logs to the Project Manager by the required due date. The Project Manager shall be responsible for compiling all review comments and returning those comments to the Consultant for their follow up action.

The Consultant shall address the comments received from the University and complete the comment logs accordingly with action taken. The Consultant shall insert responses to the comments in the comment logs and return the logs to the Project Manager within two weeks of receiving the comments, or as specified by the Project Manager. The comment logs should be included with the review submission for the subsequent phase. If the Consultant’s response is not satisfactory, the Project Manager shall facilitate the appropriate follow up for the parties to engage in seeking resolution of the issue at hand until a fully satisfactory outcome is achieved. The Consultant shall document all mutually agreed upon resolutions and such documentation shall be incorporated into the comment logs.

Upon receipt of the comment logs completed by the Consultant, and assuming that all comments have been satisfactorily addressed, all reviewers shall sign off on that phase using the attached sign off form. The Project Manager shall maintain the sign-off form in the project files.

Review Comment Notes:

1. In general the review period shall be 2 weeks (10 business days). The Project Manager shall adjust this period in conjunction with the project schedule and complexity of the project and the phase. In general, smaller and less complex projects shall require less

- time and larger and more complex projects shall require more time to enable a thorough and thoughtful review.
2. It is assumed that the Consultant's documents are in compliance with FS2. If there are known deviations from these standards, the Consultant shall highlight these deviations and explain the reasons for such deviations. The University reviewers may consider the Consultant's explanations and determine whether or not such deviations will be acceptable.
 3. The Consultant shall be responsible for maintaining the received review comments in the log as well as sign-off sheets for all phases in the appropriate project filing system.

A project cost estimate will typically be submitted as part of the review Package and the estimate will be reviewed against the project budget for reconciliation. The Consultant will be expected to develop alternate cost scenarios to achieve reconciliation if necessary. In some cases, the University will require estimates from both the Consultant and the Contractor or Construction Manager. These estimates are to be reconciled with each other as well.

2. University Design Reviews

The Consultant will make presentations to various groups charged with reviewing and approving the proposed project's design, typically for projects that include new construction, changes to the University grounds, or modifications to significant public spaces within University buildings. The FS Project Manager will identify those groups requiring review depending on scope of a given project. These groups may include:

- Environmental Health and Safety
- Facilities Services
- Safety and Security
- IT Services
- Accessibility Committee

Additionally, depending on scope and size of project, the following entities may include:

a) FS Design Review

The Facilities Services department leadership may be involved in reviewing and guiding the design process on a project. The review could consist of the FS Project Manager, the CPD Director, Planning & Design Executive Director, and the University Architect.

b) Steering Committee

The Steering Committee member composition is specifically tailored to the project and will include senior FS department personnel along with key user or other University department representatives. The committee will typically meet throughout the project duration to

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Please refer to the latest version of the document in accordance with Exhibit C of the contract agreements.

provide guidance on design, budget, schedule and scope objectives. The FS Project Manager will establish these meetings early in the design process and will update the meeting schedule information and prepare meeting agendas as required.

c) Board of Trustees

The University's Board of Trustees typically meets in March, June, and November to review and approve major projects and issues. Projects of a prominent or large-scale nature are presented to the Board of Trustees for design approval and approval to proceed with construction. Consultant preparation of presentations to the Board of Trustees may be required.

3. University Administrative Reviews

The Consultant will also make presentations to various groups charged with reviewing and approving other aspects of the proposed project. These groups include faculty, staff, students, and administration:

a) Accessibility Design Review Committee

This committee meets once a month to review all renovation or new construction projects in regard to accessibility standards. FS will have a representative on this committee who coordinates this committee's schedule with all projects for accessibility compliance. However, the Consultant will typically make presentations to this committee at the end of each project phase and must accommodate the review within the project schedule. Documentation of, and responses to, committee comments will be provided by the Consultant.

While the review is advisory in nature, it shall be regarded as representing the University's position on accessibility requirements for the project. The unit responsible for the space may appeal a decision of the Accessibility Design Review Committee by submitting a written request to the Vice-Provost for Academic Affairs. In addition, the Consultant should take note of the University's accessibility standards which may be more stringent than outside jurisdictions. Requests for exceptions to the University's accessibility standards may be made to the Accessibility Design Review Committee. The Consultant bears final responsibility for compliance with all applicable laws. Neither any comments offered by the University nor the failure of the University to offer any comments shall in any way reduce the Consultant's responsibility for compliance with applicable laws.

b) Provost Space Committee

The Provost Space Committee is composed of University senior leadership and meets regularly to review campus planning initiatives and space allocation requests. Provost Space Committee review is required prior to Board of Trustee Campus Planning and Facilities Committee meetings. Provost Space Committee presentations are internal closed meetings, but the Consultant will be required to provide presentation materials.

4. External and Regulatory Reviews

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The Consultant is responsible for submitting documents and soliciting review comments at each phase of the process to appropriate outside agencies with jurisdiction on the project. These reviews should be identified on the master project schedule. The FS Project Manager must be apprised of the progress and content of all reviews and will convey to the Consultant any sensitivity with regard to government or community discussions and any University protocols and government relationships which exist.

a) Government and Regulatory Agency Reviews

All University construction projects, unless otherwise designated, will require a building permit. The Consultant will be knowledgeable in understanding information requirements, duration of reviews, and other impacts to the project in order to meet the project schedule.

b) Community Reviews

The University has committed to a participatory planning and project implementation process through the Office of Civic Engagement (OCE) to fully engage and collaborate with the aldermanic elected officials and neighboring community that surrounds our urban campus setting.

If required by the nature of the project, meetings with external community entities will be planned under the advisement of the FS Project Manager and OCE at project milestones established at the initiation phase and updated regularly given the scope, scale and complexity of the project. The Consultant will provide the background and technical materials necessary to support these submittals. The Consultant shall attend public hearings related to these submittals as required.

c) Other Resources and Entities

i. PD-43

The University's core campus is within one of the City of Chicago's Planned Development zoning districts (PD-43). A zoning review by the Consultant will occur during the project's initial phase to determine any PD-43 requirements associated with the project.

ii. FM Global

The University maintains property insurance with FM Global. The FS Project Manager will coordinate project reviews and requirements through the University's Risk Management representative with the Consultant.

Typically, any project that results in changes to automatic protection systems, occupancy, water supply or construction (including new construction, additions, and renovations) should be reviewed by FM Global. It is expected that each project meet Factory Mutual Research guidelines, and, as applicable, utilize Factory Mutual Research Approved products.

d) FS Compliance Guide Matrix

- i. At each phase of the Design and Construction process, specific deliverables and activities are required to be completed. The purpose of enforcing compliance is to

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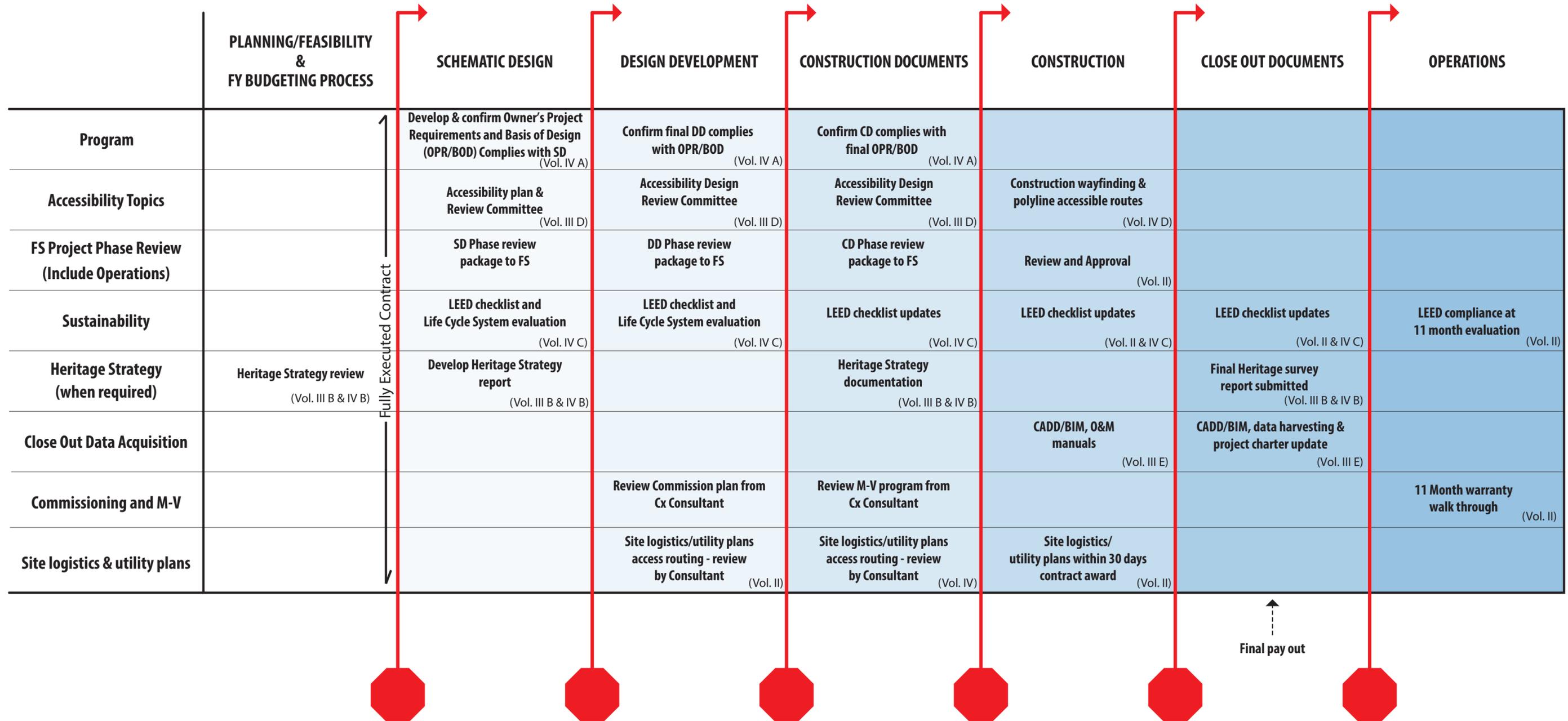
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emphasize the importance of certain minimum **(FS)²** requirements. The University's FS Project Manager will discuss specific project requirements with Consultants and Contractors as they relate to enforcement provisions. Failure to comply will result in withholding of payment until each deliverable or activity per the **(FS)²** requirements are satisfactorily completed.

²The Facilities Services Facility Standards **(FS)²** is a living document which is subject to change. Please refer to the latest version of the document in accordance with Exhibit C of the contract agreements.

FS Compliance Guide

The deliverables outlined in this project workflow diagram may not identify all project-specific requirements. Please consult with the assigned FS Project Manager and project-specific A/E Agreement and Exhibits for all obligations for each project phase.



Key
 = Consultants should not be compensated at the end of each phase AND the next phase should not proceed without milestone deliverable completed (or director's sign-off).

D. Construction Delivery Methods

1. Construction Management

The University frequently engages Construction Management (CM) services in the construction of large or complicated projects on campus. These services typically begin during the Consultant's design phase work and are meant to complement and assist the Consultant's efforts in designing to scope, schedule, and budget. The FS Project Manager will coordinate the specific contractual requirements with the Consultant. The CM is typically required to provide a Guaranteed Maximum Price at the completion of the Construction Documents phase.

a) Design/Assist Services

The CM may also be directed to retain Design/Assist Trade Contractor services during design phases. In these circumstances, the Trade Contractors would work collaboratively with the Consultant and CM in the development of more detailed, comprehensive and coordinated project documentation during the preconstruction phase.

2. General Contractor

The majority of University projects are bid to General Contractors (GC) based on construction documents prepared by the Consultant.

3. Design Build

The University will also occasionally negotiate Design-Build services for a project. A determination will be made by the University to pursue such services based on the specific project type, schedule or design parameters.