UNIVERSITY of HOUSTON

FACILITIES MANAGEMENT

Project Delivery Program

Facilities Management

Project Delivery Manual

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INTRODUCTION

PURPOSE OF THE MANUAL

The goal of the Project Delivery Manual (PDM) is to improve understanding and communication among all stakeholders by clearly identifying the roles and responsibilities of the various team members, as well as the processes and controls expected at each phase of the project.

This manual serves as a comprehensive summary of the key processes, procedures, tasks, and tools involved in initiating, managing and completing a facilities improvement project at the University of Houston (UH).

The PDM will assist in educating new Facilities Management (FM) staff and serve as a day-to-day reference for FM personnel. It is also designed to facilitate communication with internal and external stakeholders interested in understanding FM's processes for the design and construction of their projects. The PDM will be reviewed annually, and revised to address the evolving needs, processes and policy of the University.

Processes presented in this manual are a guide but variances in the sequence of activities may be required due to unique project circumstances.

OVERVIEW OF THE MANUAL

The first section of the PDM describes the Project Delivery Process and the steps of each project phase.

Each phase of project delivery involves tools, tasks, and deliverables that ensure the project is on track with the overall goals, budget, and schedule. The project phases are as follows:

Step 1: Needs Development

1. Project Intake
2. Project Assignment

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3. Project Close-out
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APPENDICES

The appendices of the PDM identify and describe specific processes, requirements, or resources involved in the successful delivery of facilities improvement projects at UH, including:

1. Project Delivery Acronyms
2. Project Delivery Definitions
3. Supporting Business Processes (See reference of application coversheet)
    a. PM Applicable (Business procedures for which the PM's must be knowledgeable and may either have sole or shared responsibility for)
    b. Business Service Functional (procedures utilized by the Business, Project Accounting and Contracting Staff to perform their daily functions)
    c. Combination PM Applicable and Business Service Functional
4. Design Review Process
    a. Core Team Definition/Process
    b. Design Variance Form/Process
5. Room and Space Numbering Process

6. Project Delivery Flow Charts and Step Narratives

FACILITIES MANAGEMENT (FM) ORGANIZATION OVERVIEW

FM is an integrated support unit within Plant Operations and the Office of Administration and Finance, and supports UH's academic mission by providing business, renovations, infrastructure and facility maintenance services. FM strives to provide the best possible physical environment for students, faculty and staff members through these services.

MISSION AND VISION

Plant Operations supports UH'S academic facility needs while providing responsible stewardship for the long-term preservation of the university's physical assets. Our staff strives to deliver high quality service to the university community while remaining cost effective and competitive.

FACILITIES MANAGEMENT ORGANIZATION & SERVICES THAT SUPPORT PROJECTS AS WELL AS MAINTAIN UNIVERSITY PHYSICAL PLANT.

a. **Business Services** supports financial, purchasing and contracting needs for Plant Operations units support and services.

b. **Facilities Operations & Maintenance**
   i. **Central Facilities Services** performs fleet, lock and key and pest control services as well as provides management of emergency recovery services.

   ii. **Technical Services** provides campus of level 2 technical services including electrical, elevator, fire alarm and plumbing.

   iii. **Central Plants & Mechanical** provide campus services for HVAC, building automation, mechanical and central plants operations. This group also provides energy services and sustainability program support.

   iv. **Auxiliary Facilities Services** provide contract, billable and general trade services to auxiliary areas on campus.

   v. **Landscape & Waste Services** provides landscape master planning, grounds and field maintenance, solid waste & recycling and parking garage lot maintenance.

   vi. **Zone Maintenance** performs level 1 skilled trades and maintenance repairs as well as custodial services.

c. **Minor and Planned Projects** manage minor construction renovations and project under $4M as well as Minor In House Construction projects.

d. **Administration Services** manages FM program support units including, Facilities Service Center, Building Coordinator Program, FAMIS work management system, as well as support of capital planning, university wide committees and business planning and other related support services.

PROJECT MANAGER AS LEADER

The title "Project Manager", while emphasizing the importance of overseeing and monitoring a project, can cause one to overlook other leadership skills needed to successfully lead a project to completion. A Project Manager is both a "manager" and a "leader." There are six major responsibilities associated with the roles of manager and leader. A Senior Project Manager is a project manager with leadership and management obligations.

1. Focus on the Customer

All projects begin and end with the customer. It is the duty of the Project Manager to understand the needs and expectations of the customer; to develop the project vision and gain endorsement of it; to plan for customer involvement, communication and service; and to maintain a meaningful dialogue with the customer during the project.

2. Create the Project Vision

The project vision is the image or understanding of what the project will accomplish as its end result. Having a project vision is crucial to effective leadership and management of any project. In creating the vision, the Project Manager is responsible for planning a route to project completion based on customer needs and expectations; articulating the vision with enthusiasm; and modifying the vision and strategy as needed (but it must not be continually modified since it is the foundation of the customer's needs and expectations).

3. Build and Maintain the Project Team

A strong team is vital to the success of any project. The Project Manager is responsible for helping the Project Team members become an effective working unit. Leadership of the Project Team involves preserving, protecting, and improving the productive capability of people, the most valuable resource available to the Project Manager. Keys to building and maintaining an effective Project Team include open communications; attending to individual needs; clearly defining roles and responsibilities; and rewarding and recognizing team members.

4. Plan the Project

Once the vision has been defined, agreed upon, and the Project Team formed, focus shifts to planning the project, the elaboration of concrete strategies for achieving the goals of the project. The duties of the Project Manager include developing a work plan in which the customer's vision and definition of the project coincide; involving the appropriate teams, customer and others in endorsing the work plan; and ensuring that all components of the work plan support project delivery and remain aligned with the vision.

5. Managing Resources

Once a project has launched, managing resources becomes a major focus of the Project Manager; that is, keeping a clear grasp of where the project is, compared to where it should be, at any moment. The duties of the Project Manager as it relates to managing resources includes preparing a realistic budget with sufficient contingencies that is endorsed by the Project Team and customer; preparing a reasonable, flexible schedule that meets the customer's needs; preparing accurate assessments of progress; and maintaining accurate and comprehensive project records.

6. Ensuring Quality

Ensuring quality is a leadership responsibility of the Project Manager and cannot be delegated. The Project Manager must establish appropriate definitions of quality for the project. In order to achieve high quality, the Project Manager must commit time to assess quality issues with the team. A Project Manager can ensure a high-quality project by emphasizing quality management to team members and by setting an example.

BUILDING CUSTOMER RELATIONSHIPS

A "customer" is a person or organization that is the primary user of the end product or service. A "stakeholder" is a person or organization that has a stake or interest in the project. The "executive team" is a group of people that have the final contractual or project cost approval authority.

At the core of a successful project delivery process is a satisfied customer. The foundation of a satisfied customer is the development of a strong, service-focused relationship. It is important to remember that the university is also a customer, and that Project Managers must balance the needs of the university with the needs of the project user/or customer. A UH Project Delivery Guide and Facilities Service Guide are available to all UH Customers and should be provided to the customer at the initial scoping meeting.

Successful customer relationships hinge on starting out right. It is critical to know your customer, to be prepared, and to communicate effectively. A Project Manager must work to build commitment and trust with their customers.

The organizational structure of FM's Project Manager Teams is designed to ensure customer focus, leadership commitment, and a collaborative team environment that fosters interdependent participation.

Additional keys to successful project delivery include:

- Well-developed and endorsed project work plan
- Project tools
- Performance measures and metrics
- Project chartering and project contact list at the start of the project
- Constant contact

- Meeting minutes
- Establish and meet your major milestones – if for any reason you cannot pre-communicate and discuss your project recovery plan internally and with your customer.

The benefits of a well-developed project delivery process are satisfied customers who receive high-quality projects that routinely meet expectations, costs, and schedule goals; and a consistent customer focus that is adaptable to ever-changing demands and challenges.

PROJECT DELIVERY PROCESS

A project is defined as "a temporary endeavor undertaken to create a unique product, service or outcome that has a beginning, requires substantial coordination and effort to accomplish, and has an end." We have identified seven major phases in a project process and steps for each phase.

The intent of the project delivery process is to provide a comprehensive roadmap that will enable successful cost, schedule and quality performance on all university projects. The process has been designed to provide a balanced, systematic approach to planning and delivering facilities improvement projects as well as to incorporate project management best practices.

STEP 1: NEEDS DEVELOPMENT

There are five ways to initiate a project with FM: the Capital Request Process; the Capital Renewal and Deferred Maintenance (CRDM) Request process; emergency requests, calling in to the Facilities Service Center or using the Online Work Request. Based on the request, the project will be assigned to the appropriate service area. The "Needs Development" step in the project delivery process refers to when a project is assigned to a Project Manager in FM and/or initiated by FM.

STEP 2: SCOPE DEVELOPMENT

The focus of this step is preparing the project charter and initial project scope. Chartering is a structured process used to guide the project team through the defining the project purpose, critical success factors, goals, roles and responsibilities and other elements that ensure a high-quality performance. This phase includes developing the project definition and vision, establishing the Project Team, defining project objectives and requirements, and project set-up in FM. At the end of this step, the project will have received all customer approvals and funding authorizations.

STEP 3: SELECTION OF DESIGN TEAM

This phase includes procuring the design products and services required for successful project design delivery. The two primary methods of procuring these services are through the Continuing Services Agreement (CSA) process and the Request for Qualifications (RFQ) process. If a commissioning agent will be utilized, this service should be selected parallel to the selection of the design team and engaged throughout the life of the project.

STEP 4: DESIGN PHASE

Effectively managing the design deliverables of a project is a critical role of the Project Manager. This entails continuously monitoring the scope of work being designed and comparing it to the scope of work planned and budgeted. The Project Manager proactively ensures that the project meets expectations within the defined constraints, including delivering a project on time and on budget. As a result of managing deliverables, change may be deemed necessary. All designs should adhere to the Campus Design Guidelines and Standards. Any variance must be presented and approved by the Campus Core Team and a signed variance form must become part of the project record.

STEP 5: SELECTION OF CONTRACTOR

This phase includes procuring the construction products and services required for successful project delivery. Methods of contractor selection include Informal Competitive Bidding, Job Order Contractor (JOC), Invitation To Bid (ITB) and Formal Competitive Sealed Proposal (RFP). This phase also includes the procurement of Owner Provided Services.

STEP 6: CONSTRUCTION PHASE

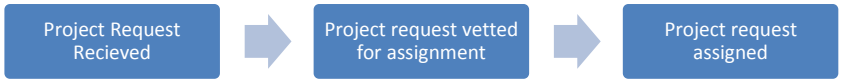
As in managing design deliverables, it is critical to continually monitor the work being constructed. This entails continuously communicating and monitoring the scope of work being constructed and comparing it to the scope of work that was designed. The Project Manager proactively ensures that the project meets expectations within the defined constraints, including delivering a project “on time and on budget.” Inspections of work should take place throughout this phase.

As a result of managing deliverables, change may be deemed necessary. Developing appropriate guidelines and processes for addressing change is crucial to a successful project.

STEP 7: TRANSITION, ACTIVATION AND CLOSEOUT

Project transition, activation and close-out captures the last construction-related issues including customer transitions, building systems activation, systems training, administrative (collection/distribution of Operations and Maintenance Manuals, Warranties and all other project documents), financial and contracts closeout and collecting project evaluations and assessments.

STEP 1: NEEDS DEVELOPMENT



REQUEST RECEIVED

All Facilities Management projects begin one of four ways before being assigned and initiated in FM:

- ✓ Capital Request
- ✓ Capital Renewal and Deferred Maintenance (CRDM)
- ✓ Emergencies
- ✓ Online Work Request (OWR)
- ✓ Customer requests via phone (Facilities Service Center)

CAPITAL REQUEST

The Capital Request Process is the means by which the university identifies proposed building construction or minor renovation projects regardless of funding source. Any project requiring Board of Regents approval must be assigned to Facilities Planning and Construction (FP&C) for processing and possible completion. The project assignment process within the University should be referenced by the Project Manager as needed.

CAPITAL RENEWAL AND DEFERRED MAINTENANCE (CRDM)

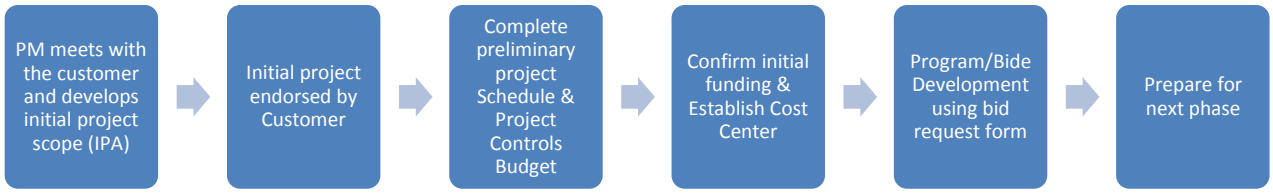
The university receives Higher Education Assistance Funding (HEAF) for projects that address maintenance and programmatic renovations. Project requests are submitted by academic units and FM. The requests are analyzed, estimated, and reviewed by the CRDM committee, which approves or makes funding recommendations to university leadership.

Projects can also be initiated through the CRDM request process. Due to funding limitations most requests are identified as an emergency or as needing immediate funding, and also include the proposed cost. If emergency and the request cannot wait for the next committee meeting the CRDM Coordinator will forward the request to the Executive Director of FM for approval. If the request is approved, the CRDM Coordinator will set up the project in PeopleSoft and notify the appropriate parties, including the Project Manager that the project has been budgeted and can proceed .Plant Accounting will fund the projects at month end. CRDM projects are to be managed like other renovation or capital projects and must follow all proper assignment, procurement and management guidelines as laid out in this manual and other university policies.

ONLINE WORK REQUEST FORM

The online Work Request Form is used to request several different services provided by FM including: renovation, serviceable and billable work. The online form is completed by the requestor and it workflows via e-mail for appropriate department approvals. Once all department approvals have been received FM is notified that the request is ready for processing. After an initial review and analysis by FM, the request is forwarded to the applicable service area for assignment and project completion. Work requests can also be called into the Facilities Service Center where the customer may be assisted with filling out the form by a service center representative.

STEP 2: SCOPE DEVELOPMENT



CUSTOMER CONTACT

The Project Manager or assigned service area will make follow up contact with the customer, to begin the process of defining the project utilizing the **Initial Project Assessment Form (IPA)** with the appropriate level of detail so subsequent activities can be completed. Request a list of stakeholders from the client. For research projects, ensure that a copy of the Faculty Start-Up Letter has been obtained, it will need to be attached as an addendum to the Program of Requirements (PoR). Once the project scope is better defined, a more detailed budget and schedule will be prepared.

PROJECT ENDORSEMENT

1. After confirming the project scope, the Project Manager is equipped to begin the project estimate. A detailed project budget is prepared and presented to the customer for approval before the project will move forward. A **Project Control Budget (PCB)** is available to assist with budget development. The initial budgets are refined throughout the planning and design phases and until the project is presented for bidding. It is imperative that all elements of the budget are clearly defined, captured, and developed throughout each phase.

2. A preliminary project schedule that meets the customers' needs should be prepared and should identify key milestones. When preparing the schedule, attention must be paid to approvals, review time, desired delivery date, and construction periods. A **conceptual project schedule** tool that includes most major project steps and milestones of a project is available to Project Managers.

3. For all projects, excluding CRDM, the Project Manager will present a validated/revised PCB and **Project Funding Agreement (PFA)** and schedule for endorsement by the customer. For CRDM requests, a PCB and CRDM request form will be present for endorsement from the Executive Director for Facilities Management or the CRDM committee. Additional information on the CRDM process can be found here.

4. The **PCB** is the first step in establishing the total cost of the project and is provided along with a preliminary project schedule based on the customer's critical delivery date.

5. The **example project schedule** tool includes high level project milestones and can serve as a reminder of most of the time constraints placed on a project. It is useful for planning a realistic schedule based on known steps and the desired completion date.

CONFIRM FUNDING

If the **PFA** is approved it is returned to Plant Ops Project Accounting and the project account is setup. At this stage, the Department Business Administrator (DBA) or Financial Coordinator (FC) will create a budget journal; Plant Accounting will then create a journal entry to transfer actual funding from the departmental cost center into the project cost center as annotated on the PFA to the assigned project cost center. After cost center is fully funded, the DBA or FC will email PM and Facilities Services Center (FSC) to 1) request work request number 2) link existing work request number with cost center.

PROGRAMMING/SCOPE DEVELOPMENT

While not all projects have full programs, all projects should have either a **Bid Request Form,** which includes a complete scope of work, or Program of Requirements **(PoR)**. The goal of programming is to further define the project's relationship with the university as a whole, the mission and vision of the project, the objectives of the project, and to provide detailed information of all identifiable spaces to be constructed or renovated – including exterior features. This information is presented in the **PoR**.

An important first step is determining whether the **PoR** should be prepared by in house staff or by a consultant. Projects of significant size and complexity should have the **PoR** prepared by either the A/E or a programming consultant. If this service is required by an A/E or consultant, the PM should proceed to Design Team Selection.

The programming process begins with an initial customer meeting and the process continues until the document is approved by the Project Team. Once the **PoR** is approved by the Project Team identified in the **PoR**, which includes the customer, it is forwarded to FM or other University leadership, as applicable.

PREPARE FOR NEXT PHASE

Before moving on to Plan the Project, when the project will officially begin and incur costs, the Project Manager will verify that the project has been endorsed in writing by the customer, including the budget and schedule estimates. The Project Manager will communicate with the customer that the project has been set-up and that funding has been confirmed.

RECORDS MANAGEMENT

Project records, whether electronic or hardcopy, are important records of the work performed by FM. Project documents must be organized for quick and easy access. It is critical that these records are complete, thorough, documented, and retrievable. A standardized **Records Management Process** has been developed to assist in filing both hard and electronic project documents. Project records are the responsibility of the assigned PM.

A record is any document, device, or item, regardless of physical form or characteristic, created or received, that serves to provide evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the project.

Some examples of project records are the **PFA,** PCB, contracts, change orders, meeting minutes, e-mails with directives, payment request, invoices, etc.

A non-record is any document, device, or item, regardless of physical form or characteristic, created or received, that **DOES NOT** serve to document the organization, functions, policies, decisions, procedures, operations, or other activities of the project.

Some examples of non-records are preliminary drafts (when superseded), simple transactional communications, “personal copy,” “extra copy,” etc. Please refer to the **email etiquette guidelines** to ensure you understand the proper way to respond to correspondence as well as the rules related to public information.

All records created will be complete, objective, and reflective of concerns for safety, ethics, and compliance with university and state policy, proper business practices, and the law. Ambiguous language, exaggerations, subjective comments, and other remarks that can be misinterpreted should be avoided. Creating personal template tools or forms is not allowed without written authorization from the PPM or equivalent.

Each Project Manager should be proficient with the file structure and their responsibilities as they relate to hardcopy and electronic file management of the project.

Using the standard project file structure will:

- Maintain consistency across projects
- Reduce workload by offering a readymade and standardized template
- Ease the alignment of electronic file and hardcopy file structure

It is important that all Project Team members are familiar with FM’s **Records Management Guidelines**, and the standard filing structure, to ensure consistency in the management of project files. The guidelines address both hard copy and electronic files. Random sampling of project files will occur by the Director of Capital Renewal & Project Delivery Program to ensure file and records management compliance and maintaining accurate files will be part of each Project Managers annual performance evaluation.

STEP 3A & 3B: SELECTION OF DESIGN TEAM

Some projects may not require a design or engineering consultant, but many do. The selection of design consultants is a qualifications-based process with the goal to select the most qualified team of consultants for the project. The consultant team includes professionals that are selected to implement the design and construction of the project with input from the Project Team.

The consultant team is most often led by an architectural firm, or in the case of engineering-dominant projects, an engineering firm. In this manual, the lead firm is referred to as the A/E. The A/E may contract with other firms (sub-consultants) for other required design services such as specialized engineers, landscape architects, interior design firms, etc.

Under all circumstances the universities procurement rules, as well as proper contracting methods must be followed.

- Mechanical, Electrical and Plumbing (MEP) - $8K or Greater
- Architectural - $50K or Greater
- Other Engineering (Civil, Geotechnical, etc.) - $20K or Greater

Depending on the total project budget and the proposed professional services fees, two methods for procuring consultants are available. These include Continuing Service Agreements (CSA) or Request for Qualifications (RFQ).

For additional information related to the State of Texas Contracting methods please reference http://www.window.state.tx.us/procurement/prog/hub.

STEP 3A. CONTINUING SERVICES AGREEMENT

The University may identify Professional Service Providers through a transparent public bidding process and then enter into a Continuing Services Agreements with each Service Provider. The CSA contains the terms of the parties' agreement, including the duration, which is typically two (2) years with up to three (3) renewals of one (1) year each. If and when Plant Operations identifies a project, a service provider will be selected from one of the available service categories.

For a list of the service categories, contract terms and value limits please see the **CSA Process**.

It is each University employee's personal obligation to ensure that neither a CSA is, nor any set of Projects are, utilized to avoid, or get around University contracting and/or signature approval guidelines. If you believe that the anticipated projects under a CSA should more correctly be the subject of a Professional Services Agreement that would require the signature of a Vice Chancellor/Vice President or University President, you are required to object to the CSA and/or any Project awarded under it in writing.

SELECTION AND AWARD:

The Plant Operations executive leadership will assign a representative to serve as a consultant for each professional service category.

The Service Representative shall provide a summarized statement of qualifications for each service provider in the service category for which he/she is responsible. The summary will serve as the profile information for the service providers on the Request for Continuing Service Form which the Project Managers (PM) will complete to award a Project to a Service Provider. The summary shall include the following pertinent information:

a. Specialty and/or specific fields of expertise;

b. Limitations in scope or capacity to perform services;

c. Prior university project experience, if applicable.

To initiate the process, PM shall contact his/her designated Contract Coordinator to obtain a Request for Continuing Service Form for a specific Service Category.

The Contract Coordinator shall provide the PM a pre-populated Request for Continuing Service Form within 24 hours, including the profile for each service provider in the Service Category, the cumulative dollar amount of previously awarded projects under the CSA, the number of previously awarded projects under the CSA, and the past performance ratings.

The PM shall review and evaluate (1) the qualifications of the service providers in the context of the scope of work to be performed, (2) the cumulative dollar value of previously awarded Projects under the CSA, (3) the number of previously awarded Projects under the CSA, and (4) past performance. The PM may consult with the Service Representative for technical expertise during the evaluation.

The PM shall rank the Service Providers and submit the Best Choice, Recommendation A, inclusive of written justification, to his/her Director/PPM for approval or rejection.

APPROVAL AND REPORTING:

The PPM or equivalent shall accept or reject the Best Choice, Recommendation A.

a. If accepted, the Request for Continuing Service Form is returned to the PM and Contracts Coordinator for further processing.

b. If rejected, the Director/PPM shall proceed with Recommendation B and submit a detailed justification to be reviewed and approved by the appropriate Executive Director.

The Executive Director shall review and accept or reject any exceptions from the best choice recommendation assessed by the Principal Project Manager (PPM) or equivalent.

a. If accepted, the approved Request for Continuing Service Form is returned to the PPM or equivalent to proceed with contract negotiations.

b. If rejected, the Executive Director shall identify the next best choice recommendation and provide justification on the Request for Services Form. The completed form shall be returned to the PPM or equivalent to proceed with contract negotiations.

The PM will issue a Project RFP to the service provider approved for a project by the PPM or equivalent and or Executive Director in accordance with the immediately preceding section, and work to negotiate a service order.

In the event the PM is unable to negotiate a service order with the service provider approved by the PPM and equivalent and/or Executive Director, the PM shall issue the project RFP to the next identified service provider (in accordance with Section B.2) above) until a service order is executed or the project is abandoned.

Following successful negotiations with and execution of an approved service order by, a service provider, and the PM shall provide the Contract Coordinator with the approved Request for Continuing Service Form and necessary documents to complete the process and update the continuing service database. The approved request for Continuing Service Form shall accompany the service order and CSA during the signatory approval phase to Executive Management.

At the conclusion of a project, the PM, and PPM or equivalent shall provide to the appropriate Contract Coordinator a post-performance evaluation of the service provider's actual performance as compared to the intent of the service order and CSA for inclusion in the continuing service database. The evaluation shall also document any significant changes in business profile, status and/or practices.

The Contract Coordinators shall provide Plant Operations executive leadership a monthly and quarterly activity report highlighting the participation and performance levels of the service providers.

On a quarterly basis, the Plant Operations executive leadership and the service representatives shall evaluate the continuing service activity reports, and applicable post-performance evaluations, to determine whether each service provider's participation in the program continues to provide the 'best value' to the University.

In addition, during the 1st year of the program, the Plant Operations executive leadership shall review the process at a minimum on a bi-annual basis to ensure continuous compliance to the guidelines and to evaluate the effectiveness of the program.

Training on this process can also be located here.

STEP 3B: REQUEST FOR QUALIFICATIONS (RFQ)

PREPARE RFQ

The Project Manager begins by preparing a **Request for Qualifications (RFQ)** outlining the project scope, the services needed, and selection criteria. The current template can be obtained from the Purchasing Department.

The **RFQ** is reviewed by the PPM or equivalent, the Executive Director and OGC before it is forwarded to Purchasing. PM identification and recommendation of the Selection Committee (SC), with a minimum of seven (7) members, is forwarded along with the RFQ draft. The PM incorporates any edits to the RFQ.

RFQ SUBMISSION PROCESS

1. PM forwards to Purchasing for final review and posting to the Electronic State Business Daily (ESBD).

2. Purchasing conducts a pre-submittal conference and issues addenda, as applicable. PM to perform meeting logistics. After deadline for questions, Purchasing issues final addenda to incorporate all pre-submittal questions. Answers provided by PM at least 7-10 days prior to bid closing.

3. After bid closing, Purchasing works with Business Services Contract Coordinators and compiles all respondents' proposals and distribute qualified submissions, evaluation criteria and non-disclosure agreement to Business Services for uploading to Purchasing SharePoint site. Business Services will notify PM and SC when posted and deadlines. PM may review the RFQ and process with SC prior to making initial evaluation.

4. The SC will evaluate each proposal based on the evaluation criteria and submits their rankings via email to Purchasing and copies the PM. Purchasing complies evaluation results and sends to PM and ED for review. PM sends short list recommendation to Purchasing who in turn forwards to the Executive Vice President of Administration and Finance (EVP) for approval.

5. Upon EVP response of approval or recommended action, PM will perform logistics and create interview schedule, addenda and questions. Purchasing will notify shortlisted firms of the interview date, time, and location. PM and SC develop the interview weighted evaluation criteria. A copy of the questions and interview criteria must be sent to SC and shortlisted firms prior to the interview.

INTERVIEW/SELECT CONSULTANT

After the interview, the SC scores the interviewed firm based on presentation and submits their evaluation to Purchasing. The interview scoring and evaluation of short-listed firms are based on information submitted by respondents at interviews in conjunction with the published interview selection criteria. Purchasing calculates results and presents to the PM the scoring matrix. PM and ED review the matrix and make award recommendation to Purchasing who forwards to EVP for final approval.

The PM will request a Fee Proposal from the selected firm (typically no more than 10 days after notification). The proposal and summary will include:

- Statement of their understanding of the project, including their understanding of project budget, university and customer goals, and security requirements and concerns
- Detailed description of their project management, control, and delivery approach for the project
- List of sub-contractors
- Preliminary project schedule
- Proposed services (basic and additional), fees requested, and reimbursable expenses
- HUB Subcontracting Plan
- Vendor Set-Up Form, if applicable

NEGOTIATE CONTRACT

The Fee Proposal begins the negotiation process of the professional services contract**.** The Project Manager should initiate a meeting between the selected Architecture/Engineering (A/E) firm to discuss the proposal and address any issues.

If an acceptable agreement cannot be reached with the selected A/E, or if the appropriate documents have not been provided, then negotiations can begin with the second ranked firm or the project can begin the selection process again. In such a case, the PM should discuss the options with their Principal Project Manager (PPM) or equivalent as well as the ED.

Fees are negotiated that reflect the scope of services required and deliverables. The proposal must also include the change order fee allowance (percentage). After receipt of an acceptable proposal, the Project Manager prepares a contracts package which includes a cover memo, scope continuation form, PCB, PFA, Texas HUB verification report, fee proposal and schedule. The Project Manager will forward contracts package to the PPM or equivalent for approval. Once approved by the PPM, the PM submits to the Contracts Coordinator (CC) who will assign a contract number and draft the Professional Services contract, Proposed Project Transaction (PPT) and signature page. The CC will submit the draft contract to the Project Manager for review and approval. Once the PM reviews and approves, the CC will send to vendor via email.

COMPLETE CONTRACTING

In addition to the contract, the following documents must be submitted:

- Workers Compensation Certificate
- Employers Liability
- Professional Liability Insurance
- Commercial General Liability

- Comprehensive Auto Insurance
- Umbrella Coverage
- Specific coverage amounts can be found here.

Contracts are first signed by the A/E and submitted to the Contracts Coordinator via mail or courier. Contract Coordinator prepares contract for signature process and routes to all applicable internal levels. See Delegation of Signature Authority for signature authorization levels. If for any reason, contract approvals are not achieved, the contract will be re-routed for modifications or will be canceled and closed as applicable to the situation. If for any reason there are edits to any original documentation, they must be initialed by both parties.

Upon receiving all approvals and insurance documents, the CC will prepare the Notice to Proceed (NTP) and send for PPM or equivalent signature. PM will route signed NTP back to the CC who will forward via mail to the successful vendor. PM will notify Purchasing of the executed contract and request notification to all unsuccessful respondents.

CONTRACT AMENDMENTS – PROFESSIONAL SERVICES

If a change to the signed **Professional Services Agreement** is required, the process to prepare a **Design Change Authorization** (DCA) is initiated by the A/E. The A/E submits a request in writing to the Project Manager outlining the scope of work revisions and applicable adjustments to the fees or reimbursables. The Project Manager should work with the A/E to discuss the scope of work and negotiate the fees for the proposed design change.

The PM will complete Steps 4 & 5 of this process to execute any design change authorizations.

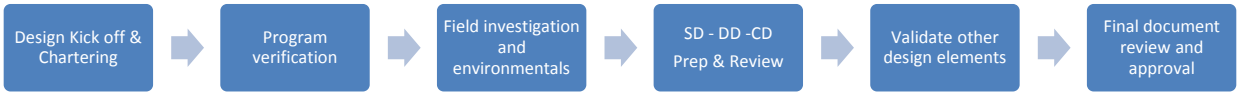
SELECTION PROCESS – OTHER PROFESSIONAL SERVICES

Similar processes are followed for any other special consultants desired for a project or study. Other special consultants can include services for:

- Hazardous materials abatement
- Specialized engineering services
- Commissioning
- Emergency Services

For emergency services, the University currently has a contract in place for full emergency response and restoration services. For contract information, contact any member of the **FM Emergency Response Management Team**. Emergency response Usage Form and Service Order Form are required to procure these services.

STEP 4: DESIGN PHASE



DESIGN AND PROJECT KICK-OFF MEETING

With the selection of the A/E and CM, the Project Team will gather to kick-off the design phases of the project which include Programming/Program Verification; Schematic Design; Design Development; and Construction Documents. The purpose of the kick-off meeting is to define the roles and responsibilities of the larger Project Team; to review and gain endorsement of the work plan established during Plan the Project meeting; and to charter the Project Team.

The ability of a Project Manager to conduct effective meetings is a key element for successful projects. Two tools that are helpful in conducting effective meetings are a clear meeting agenda and meeting minutes that accurately reflect the content of the meeting.

1. The **Design and Project Meeting Agenda** will be prepared in advance and distributed to the participants. One of the first steps in any meeting should be to confirm the agenda, and modify it if necessary.

2. The second essential part of proper meeting management is good minutes. Meetings need to be documented, even when actions do not result from the meeting. When actions do result from the meeting, minutes are a way of documenting, communicating, and confirming those actions with the corresponding team member responsible for those actions. If a consulting firm is engaged, the firm should take the meeting minutes. The PM is ultimately responsible for creation and distribution of minutes. This should be done within three (3) days of each meeting. PMs should utilize the **Meeting Minutes template** when required to perform this step. Meeting minutes should include a list of attendees, the major discussion points, conclusions, and action items. It is not necessary to document the entire content of all the discussion, just the resolutions and the action items. Distribution of the minutes should occur within 72 hours of the project meeting.

3. To prepare for the project kick-off meeting, the Project Manager looks at all project work plan elements and develops an agenda in advance to be used during the meeting. The Project Manager typically reviews the work plan contents to understand all actions that have been completed during these processes and the potential actions that are pending.

4. During the kick-off meeting, the Project Manager discusses the details pertaining to the work that needs to be accomplished. Normally, the type of communication that takes place during the session is one-way, with the Project Manager taking the lead role in the communication process. The Project Manager shares the pertinent information and then answers questions from the Project Team members.

5. Below is a list of potential topics to be addressed during a kick-off meeting. Depending on the nature of the project, some topics may or may not apply. The Project Manager will use discretion in the selection of the topics considered pertinent based on the kick-off meeting objectives.

    - Project Scope/Deliverables and Schedule
    - Project Budget
    - Project Site(s) - When appropriate, the Project Manager will use a map or drawing to identify the site(s) or location(s) associated with the project, with the intention of providing the geographical context in which the project takes place. For the project participants with a need to visit the project site(s), some details regarding site visit protocols will be incorporated into the discussion.
    - Project Organization - During the session, the Project Manager will review the Project Team roles and responsibilities to accomplish the project objectives.
    - Project Reporting/Document Control - The Project Team needs must understand the project reporting and archiving requirements (i.e., types of status reports, frequency, formats, and audience).
    - Environmental Health and Safety (EHS) - Special attention will be paid to any particular hazards in connection with the project.
    - Permitting - If permits are required for the project, the Project Manager needs to identify those and the particular instructions for obtaining them. For those projects requiring inspections from outside agencies, specific procedures and standards regarding those inspections may be included as a topic of discussion in the kick-off meeting.

<u>Selecting Attendees</u>

- All Project Team members should be present at the kick-off meeting.
- If a decision is necessary about a particular item on the agenda, ensure that the person or people necessary to make the decision are present and that all necessary information is available.
- If a consultant/contractor is performing a portion of the work, representatives from this company should be present at the kick-off meeting.

CHARTER THE TEAM

Due to the size and scope of FM projects, Chartering sessions will be combined with the Design and Project Kick-Off meeting. Chartering is a structured process used to guide a Project Team through the act of defining itself: its purpose, critical success factors, goals, roles and responsibilities, operating guidelines, interpersonal behaviors, and other elements that give a team the clarity of purpose essential for high-quality performance. There are several key teams involved in a project:

- Project Team: This team has primary responsibility for driving the project forward, for communications with the other teams and for expediting issues and managing change. This team typically meets weekly or bi-weekly. The Project Team will be responsible for coordination and facilitation of the project process, project budget, schedule management, and reporting to and gaining endorsement from the Executive Team. The Project Team will facilitate communication among all project teams.

- Executive Team: This team is responsible for final approval of contractual modifications or amendments and modification of project cost if necessary. This team typically meets monthly or quarterly for design and construction status updates, and other times deemed necessary when design, legal, or contracting issues require special attention.

- Stakeholders Team: This team is a group of individuals or representatives of campus groups who will be affected by the project or can influence it but who are not directly involved with doing the project work. This group has a high level of need to know regarding issues related to schedule and budget. This group could be kept up to date with a monthly e-mail newsletter or may have regularly scheduled meetings.

- Friends and Neighbors: This group is a collection of individual of representatives from campus groups that may be affected by the project, but do not have a direct influence on the program or the project.

- Programmatic and Technical Committees: This is a collection of individuals brought together to provide expertise in a certain area. All projects will have different collections of committees. These groups are responsible for providing support and giving direction within their area of expertise and will meet as necessary when design, program or technical issues need to be discussed.

A chartering session uses two-way communication to engage team members and other participants to define the “hows” of the project, such as responsibilities, operating guidelines, etc. **Sample charter agenda, charter document and project communication plan templates** are provided for project manager reference and use.

COMPLETE THE CHARTER

A tangible product of this process is a written charter document that has been endorsed by all the participants of the chartering session. PM can use **UH Charter Template** or A/E provided template to document the chartering process. The charter document is a written summary of the formal chartering elements for the project that includes, at a minimum, the team membership, project purpose statement, critical success factors, roles and responsibilities, and operating guidelines. The charter document is formally endorsed and shared with all individuals and groups with whom the team has primary interface and communications.

During the chartering session, several project topics are addressed, including procurement, communications and change management.

Communications among the different project participants working on (or interested in) the project is absolutely essential. The purpose is to ensure that all team members, management, associates, contractors, customers and stakeholders who are involved with the project provide and receive appropriate communications related to the project. The involvement of multiple team members, organizational units, management representatives, customers, and stakeholders increases the complexity of conveying the right message to the right audience at the right time. Project communications is an important topic of a chartering session.

Change management refers to having a means to recognize that change has occurred and that there is a process to document the change. A project change could have a negative or positive effect on the project while a project risk is an event or condition that, if it occurs, may impact the project negatively. A large part of change management is the acknowledgement that each project has certain risks or uncertainties associated with it that may affect the project in ways that cannot be clearly foreseen. These risks can arise from any source and, depending on how they are handled, may either affect the project or support it.

Several general types of project changes are:

- Scope creep: upward ratcheting of scope elements in small increments until a significant change has occurred, as a result of a poorly defined scope of work. This type of change is gradual and it could become substantial if the proper mechanisms are not in place.

- Level of effort: produced by continual refinement of alternatives, unknown obstacles and inaccurate data, among others. Scope creep can cause an increase in the level of effort, which translates into increased costs and delay in completing project tasks.

- Quality creep: when project standards and specifications are not followed. An understanding of project quality standards and specifications should be documented in the charter.

- New technology/tools: their adoption may change normal project operations causing an impact on cost and schedule. The adoption of new technologies and tools and their potential impact should be included in the charter.

- Staffing: personnel changes that may have an effect on team performance and the outcome of the project.

While most change management within the Project Team issues related to budget creep or variance from **design guidelines and standards** should be brought to the attention of the Core Team for review and approval. Core Team and Variance Processes can be referenced on these attached links.

ENDORSE THE CHARTER

The charter document is prepared with input and endorsed by the Project Team. As the project progresses through all phases, it may be necessary to review the charter and revise and update the work plan.

ENDORSEMENT BY THE PROJECT TEAM

The Project Team (including the customer) is asked to provide a written endorsement of the charter and work plan.

ENDORSEMENT BY MANAGEMENT AND STAKEHOLDERS

In some instances where FM may manage politically sensitive or highly visible projects additional endorsements by key members of the University's management or stakeholders may be required. This endorsement should be obtained in writing as applicable.

PROGRAM VERIFICATION

See **Design Deliverable Checklist.** If the **PoR** was prepared by Plant Ops staff or an outside consultant, Schematic Design will not begin until the **PoR** and proposed budget have been verified and approved by the appropriate parties.

If the **PoR** is prepared by a consultant, a conceptual budget based on the **PoR** must be submitted with the final **PoR** and must be within the budget established at project initiation. If the budget has increased, additional funds must be identified before final acceptance of the **PoR** or the program may be reduced.

The A/E will review the entire **PoR** and verify that it still expresses the University's needs and is up-to-date in every aspect. At the conclusion of Program Verification, the A/E will submit a summary of any revisions and Statement of Probable Cost that is based on the verified program. Schematic Design cannot begin until after the **PoR** has been prepared and verified.

IN HOUSE DESIGN/PLANNING

A Project Manager may perform in house design/plans services for small projects. The use of in house design/planning must be discussed with the PPM or equivalent and/or Executive Director. Such services can include landscape, interior, minor project planning and some aspects of civil engineering.

SCHEMATIC DESIGN PHASE

Schematic Design (SD) is a critical phase where expectations are set and the design budget and schedule are established. Schematic design determines the general scope, preliminary design, and the urban character, scale, and relationships among the components of the project and the adjacent environment. During this phase, the customer details the specific requirements for the design option developed during programming.

The primary objective of SD is to assure the Project Team that several options have been reviewed and analyzed before a final scheme is accepted for development. The A/E is expected to present different concept and design solutions for consideration that incorporate the master plan, contextual relationships, project goals and university goals. Though not detailed, the A/E must define all mechanical and building systems anticipated for the project.

DELIVERABLES – SCHEMATIC DESIGN

The deliverables for SD include site drawings, floor plans, elevations, building sections, equipment and furniture layouts, massing studies, updated project schedule, updated Statement of Probable Cost, life cycle cost analysis and project specifications. The A/E must also present a summary of all changes from the PoR.

DISTRIBUTE DELIVERABLES FOR REVIEW – SCHEMATIC DESIGN

The 90-95% SD materials are submitted to the team for review with the **Design Transmittal** included. If applicable, a review meeting is scheduled by the Project Manager where written comments from the Project Team are provided and reviewed. The A/E is expected to respond to all comments in writing and submit revised materials as needed before SD is complete and accepted.

DESIGN DEVELOPMENT PHASE

The Design Development (DD) phase refines the scope of work previously approved in the SD phase. In this phase the project is developed to a greater level of detail to define a clear, coordinated description of all aspects of the project. Building systems, building equipment, fire protection, mechanical, electrical, structural, telecommunications, and plumbing are designed and coordinated through enlarged scale drawings, detailed elevations, and plans. The primary objective of the DD phase is to complete all designs required for the project. This requires the A/E and the Project Team to verify all parts of the design.

The A/E must graphically demonstrate the design to address all exterior and interior architectural and environmental elements as well as site design in order to communicate the total concept. Any change to the project's scope or program after this phase will likely incur negative budget and schedule impacts.

DELIVERABLES – DESIGN DEVELOPMENT

The deliverables for the DD phase must include drawings for architectural and civil disciplines, structural disciplines, plumbing and mechanical disciplines, electrical disciplines, the project manual, final life cycle cost analysis, updated Statement of Probable Cost, and updated project schedule.

DISTRIBUTE DELIVERABLES FOR REVIEW – DESIGN DEVELOPMENT

The 50% DD materials are submitted to the Project Team for review with the **Design Transmittal** included. If applicable, a review meeting is scheduled by the Project Manager where written comments from the Project Team are provided and reviewed. The A/E is expected to respond to all comments in writing and submit revised materials as needed before DD is completed and accepted.

CONSTRUCTION DOCUMENTS PHASE

The Construction Documents (CD) phase is the last stage of design. The A/E is focused on finalizing the drawings and specifications for all components and systems of the building. A complete set of CDs

provides a comprehensive, fully coordinated set of construction drawings and specifications that the A/E and Project Team use to determine the final construction cost, to obtain the necessary permits, and to use as bid documents to construct the project. Because the A/E is responsible for delivering the project as defined at the end of the DD phase, changes to the scope or program in this phase will incur negative budget impact and schedule delays.

The primary objective of the CD phase is to produce bid documents for the various trade contractors. In this stage the final notes, tables, and instructions for execution of the construction for the project is specifically defined into contract phases for prime contractor trades.

During this phase, an interim review is conducted of the drawings and specifications at 50% CD completion for constructability and to identify any conflicts or issues. When CDs are 90-95% complete, a final constructability review is conducted.

The cost information presented by the A/E at the CD phase must be based upon supportive cost information from the updated Statement of Probable Cost prepared at DD.

FINAL REVIEW OF DELIVERABLES

The CD materials are submitted to the team for review with the **Design Transmittal** included. If applicable, a review meeting is scheduled by the Project Manager where written comments from the team are provided and reviewed. The A/E is expected to respond to all comments in writing and submit revised materials as needed before CDs are completed and accepted.

APPROVE FINAL DELIVERABLES

Once the Project Manager verifies that all comments have been addressed and all issues resolved, the cover sheet should be signed by the PPM or equivalent and the final deliverables accepted, which means the project is ready for bidding.

Once all signatures are received, the drawing set is ratified and the project is deemed to have been sufficiently reviewed, the project is ready for construction.

OTHER REQUIRED DESIGN ELEMENTS

PREVAILING WAGE

A contractor performing construction services for a public improvement project is required to pay the prevailing wage rates of the project locality to laborers and mechanics performing work on the project. The A/E is responsible for using the current wage rates in the bid documents and the contractor must monitor the prevailing wage rates during the construction period.

PLAN APPROVAL AND PERMITS

The Professional Service Provider is responsible for obtaining the basic state plan approvals for the project from the Texas Department of Licensing and Regulation **(TDLR)**, state notifications and paying all applicable fees as required. Utility or other city impacts will need to be planned for, possibly permitted and integrated into the project plan and drawings which is also the responsibility of the A/E. The A/E is

required to secure the Texas Commission of Environmental Quality (TCEQ) approval as applicable to the project, its impact and scope.

For small projects where there is no A/E, the Project Manager is responsible for securing any appropriate permits and they must develop a drawing set with coded notes and cover sheet on 11”x17” paper (See **Standard Cover Sheet and Title Block)**. At the end of the project the record drawings will be provided to Facilities Information for CAD and records retention, which they will then be responsible for updating in the appropriate database/resource area.

HUB - HISTORICALLY UNDERUTILIZED BUSINESSES

The Project Manager must ensure that the public bid advertisement includes an HUB goal and that the bid documents and contract documents include appropriate and required information about the HUB program. The current goal for all construction projects is 26.1% HUB participation. For more information www.uh.edu/hub

STEP 5: SELECTION OF CONTRACTOR

This phase includes procuring the construction products and services required for successful project delivery. Methods of contractor selection include Informal Competitive Bidding (ICB), Job Order Contractor (JOC), Invitation To Bid (ITB) and Formal Competitive Sealed Proposal (RFP).

1. This phase also includes the procurement of Owner Provided Services. Owner Provided Services are services that the university chooses to self-deliver or manage in house and may vary from project to project.

2. All project costs regardless of source of work (in house or contracted) need to be captured as part of the project accounting record and are part of the total project cost.

3. If equipment is pre-purchased by either the contractor or owner and stored on University property, it should be reported to EHS for insurance purposes. See Equipment Insurance Reporting Policy and Equipment Insurance Reporting Form.

4. For additional information related to the State of Texas Contracting methods please reference http://www.window.state.tx.us/procurement/prog/hub.

CONFIRM FUNDING/AUTHORIZATION

At this time it is important to ensure the appropriate funding is available and/or committed to the project (in the case of university bonds or future capital appropriations) and that all appropriate approvals have been received. Prior to advertising for bids, the **PFA** must be completed.

INFORMAL COMPETITIVE BID PROCESS

For projects under $25,000 (total project cost) project managers may utilize an **Informal Bid Request Form** to solicit project bids from at least 3 qualified contractors. The bids should be solicited from 3 qualified contractors, of which 2 should be Texas HUB certified contractors, whenever possible. If they are not, documentation of why should be included. The form must be fully completed and have an attached scope of work with schedule expectations and any other criteria that is pertinent to the performance of the job. This can include in house estimates for work that may be performed from shops.

Project Manager receives and evaluates the bid, content and ability to meet schedule and select the appropriate contractor after that review. They then prepare the contract package and work directly with the contract coordinators to complete the contracting process. Once the contract has been executed the project manager should notify the unsuccessful bidders of their non-selection.

JOB ORDER CONTRACTOR (JOC)

This process is usually utilized when construction project cost is more than $25K but less than $100K and where the total JOC contract value will be less than $100K. JOC are pre-selected contracts that are in place to expedite delivery of projects. A full program for management and delivery of JOC projects can be found at the links below:

JOC Guidelines & Procedures

JOC Vendor Listing

Process for Awarding Contracts

JOC Evaluation Form

JOC Training

INVITATION TO BID GUIDELINE FACILITIES PROJECTS/SERVICES: UNIVERSITY OF HOUSTON

This guideline focuses on the use of the Invitation to Bid (ITB) method and provides a framework of information that provides guidance regarding when this acquisition strategy is best suited for a given project. This guideline can be utilized by both UH procurement officials as well as project managers as a decision making tool and to help qualify projects for the Invitation to Bid acquisition method.

INVITATION TO BID DEFINED

"An invitation for bid (IFB) or invitation to bid (ITB) is an invitation to vendors to submit a proposal on a specific commodity or service through a bidding process. The IFB is generally a Request for Quote (RFQ) and is focused on pricing. The award is based upon the lowest bid meeting the minimum criteria for the specifications/requirements. Negotiations are not authorized when utilizing an Invitation for Bid (IFB) procurement method; however, if only one response is received, negotiations are allowed and encouraged." ***(page 43, State of Texas Procurement Manual)***

"Procurement process used when the requirements are clearly defined, negotiations are not necessary, and price is the major determining factor in selection. The ITB uses the competitive sealed bid method. ***(page 8, Contract Management Guide)***

It should be noted that the IFB/ITB procurement method tends to take less time than a comparable RFP. The key reason for this relates to the time required to evaluate the responses. For IFB/ITB's a bid tabulation is formulated highlighting the responsive bidders and their price. This can be determined very soon after bids are received and opened by the Purchasing Department. Within the RFP process, much time is taken within the "evaluation phase" whereby evaluators are reviewing respondent proposals. The evaluation phase of an RFP tends to add significant time to the procurement process.

RECOMMENDATION OF USE

The IFB/ITB is the procurement method most utilized for goods/commodities within the state. The IFB/ITB solicitation document outlines the specifications (i.e., the requirements and/or characteristics) of a needed good, with expected quantities and delivery requirements. An example of such a solicitation is the acquisition of gasoline for the vehicles used by UH campus. An IFB/ITB is the most appropriate purchasing method as the specifications and quantity are easily defined.

The IFB/ITB procurement method is also commonly utilized for what is termed “simple services”. Such services might include; mowing the grass on a practice field, providing translation services within a classroom, or providing ushering services at a University event. Such services can be easily defined by specifications and/or requirements of the service. Quality requirements can be built into the solicitation document such as professional certifications, 10 years of professional experience providing such services on a university campus, and so forth to ensure that we are doing business with professional, reputable vendors. Such quality requirements allow the University to avoid what is termed “low cost/low value” providers which may lead to performance issues and ensures that the University obtains “best value” for its dollars. All vendor quality requirements must be measurable and clearly stated in the IFB/ITB.

For facilities maintenance projects, the IFB delivery method is utilized when project or operations scope is well-defined and is fully packaged with complete specifications and drawings. This is common for standard Furniture, Fixture and Equipment (FF&E) purchases (See FF&E Policy) or minor renewal projects. IFB/ITBs may be used for repetitive scope renovation and renewal projects that the university does frequently and where there is low likelihood of change orders after the contract is awarded. Use of IFB’s for technical projects is prohibited. The following types of projects may use the IFB method:

- Minor and interior space renovations (not including laboratories)
- Parking lot construction or resurfacing
- Life safety renovations, such as installing or repairing fire alarms, smoke alarms, and sprinkler systems
- Roofing projects
- Landscaping
- Operational repair services that require project support (doors, equipment repair, emergency support services)

Prior to posting the IFB, Purchasing will obtain written approval from the applicable Executive Director to post the IFB, as well as General Counsel for construction and renovation services.

SELECT CONTRACTOR(S)

Contracts are awarded to the lowest responsive and responsible bidder. “Responsive” refers to the bidder’s proposal responding to bid specifications in all material respects and the bid containing no irregularities or deviations from the specifications which would affect the amount of the bid or otherwise give the bidder a competitive advantage. This may include HUB and other statutory requirements.

“Responsible” refers to the experience of the bidder, the bidder’s financial condition, conduct and performance on previous contracts, management skills, and ability to execute the contract properly. The

University often refers to the balance between responsive and responsible as the “best value”. Such quality requirements are built into the solicitation to ensure “best value” is received by the University.

If an apparent low bid is found not to be responsive or the bidder is deemed not responsible, the University may reject the bid and notify the Bidder in writing of the finding and the reasons for the finding. In situations where responses are rejected, the reason for the rejection must be documented on the bid tabulation and reviewed and approved by the Director of Purchasing before notification to the vendor. If the Director of Purchasing prepares the bid tabulation or is not available, someone in higher authority (Controller, for example) must review and approve the rejected bid.

PREPARE ADVERTISEMENT/BIDDING FOR IFB

1. Projects with a total project budget over $25,000 must be publicly bid if state contracts or cooperative agreements are not utilized.

2. IFB/ITBs are posted on the Electronic State Business Daily (ESBD) for a minimum of 14 calendar days. Purchasing will notify vendors who are registered on the Central Master Bidders List (CMBL) that provide the requested good and services of the posting by email.

3. The Project Manager, in conjunction with the A/E, if applicable, may set a time and place for a Pre-bid Meeting, which will be noted in the bid advertisement. The Pre-bid Meeting is an opportunity for bidders to examine the site, ask questions and allow potential bidders to attain a complete understanding of the bid documents. A standard **Pre-bid Meeting Agenda** is available for use by Project Managers. Any statements made by the A/E (as applicable) or Project Manager during a Pre-bid Meeting will not be binding. Any changes to bid documents must be made by written addendum. The Project Manager determines the time and place for the meeting and prepares the Pre-bid Meeting Agenda. Purchasing posts the Agenda on the ESBD, emails vendors that are registered with the CMBL and provide the needed goods and services about the meeting, and presides over the meeting.

4. If a potential bidder perceives any conflict, error, omission, or discrepancy on or between any of the bid documents or between the documents and applicable law, the bidder may submit a request to University Purchasing for an interpretation or clarification. Purchasing will work with the Project Manager to clarify, expand, or correct the bid documents and issue an addendum to the IFB, which will be posted on the ESBD. Drawings will be provided with **addenda** as needed. **Addenda** must be approved by the Project Manager and issued by Purchasing no later than 5 business days (excluding holidays and weekends) before the bid opening. Any addendum not issued in this timeframe will not be binding.

5. After deadline for questions, Purchasing issues a final addendum to incorporate all pre-submittal questions, with answers provided by PM, at least five (5) days prior to bid closing.

6. After bid closing, Purchasing compiles IFB respondent proposals and reviews with department to determine the lowest responsible bid. Purchasing will verify that the bidder has submitted all of the required documentation and department will verify that the bidders are responsible. These verifications will be documented in writing. The lowest responsible bid will receive the award.

7. Immediately following determination of the lowest responsible bidder, Purchasing will notify all bidders whether they received the award. If any vendors were disqualified, they will be notified of the reason for disqualification as well. In addition, Purchasing will indicate the name of the awarded vendor on the ESBD no more than seven days after the lowest responsible bidder is determined.

COMPLETE CONTRACTING FOR IFB PROCESS

The Project Manager prepares a contracts package which includes a cover memo, scope continuation form, PCB, PFA, Texas HUB verification report, HUB Subcontracting Plan, proposal package and schedule. The Project Manager will forward contracts package to the PPM or equivalent for approval. Once approved by the PPM, the PM submits to the Contracts Coordinator (CC) who will assign a contract number and draft the Owner Contractor Agreement contract, Proposed Project Transaction (PPT) and signature page. The CC will submit the draft contract to the Project Manager for review and approval. Once the PM reviews and approves, the CC will send to vendor via email.

In addition to the contract, the following documents must be submitted:

- Workers Compensation Certificate
- Employers Liability
- Professional Liability Insurance
- Commercial General Liability
- Comprehensive Auto Insurance
- Umbrella Coverage
- Performance Bonds (Contracts over $50,000)
- Payment Bonds (Contracts over $100,000)
- Specific coverage amounts can be found here.

Contracts are first signed by the Contractor and submitted to the Contracts Coordinator via mail or courier. Contract Coordinator prepares contract for signature process and routes to all applicable internal levels. See Delegation of Signature Authority for signature authorization levels. If for any reason, contract approvals are not achieved, the contract will be re-routed for modifications or will be canceled and closed as applicable to the situation.

Upon receiving all approvals and insurance documents, the CC will prepare the Notice to Proceed (NTP) and send for PPM or equivalent signature. PM will route signed NTP back to the CC who will forward via mail to the successful vendor. PM will notify Purchasing of the executed contract.

FORMAL COMPETITIVE BIDDING (RFP)

Utilize an RFP when project complexity or selection criteria warrant a “best value” determination. Size of project may also drive this determination. Final selection will be made based upon weighted matrix criteria. While interviewing is encouraged, an RFP selection may be determined without interviews after SC scoring when results indicate a clear selection.

PREPARE ADVERTISEMENT/BIDDING

1. Projects with a total project budget of $25,000 or more must be publicly bid.

2. Request for Bids are placed on the Electronic State Business Daily (ESBD). Usually an IFB must be posted for 14 calendar days and an RFP for 21 calendar days. An IFB should be utilized, if a complete solicitation document is available and/or the project is relatively simple. An RFP should be utilized if construction documents are available and/or the project contains detail specifications. While these timeframes are a minimum requirement, additional days may be added for more complicated projects Based on this process the time from posting to selection could range from 4 weeks – 2 months and should be planned for in the project schedule.

3. The Project Manager, in conjunction with the A/E, if applicable, will set a time and place for a Pre-bid Meeting, which will be noted in the bid advertisement. The Pre-bid Meeting is an opportunity for bidders to examine the site, ask questions and allow potential bidders to attain a complete understanding of the bid documents. A standard **Pre-bid Meeting Agenda** is available for use by Project Managers. Any statements made by the A/E (as applicable) or Project Manager during a Pre-bid Meeting will not be binding. Any changes to bid documents must be made by written addendum.

4. If a potential bidder perceives any conflict, error, omission, or discrepancy on or between any of the bid documents or between the documents and applicable law, the bidder may submit a request to University Purchasing for an interpretation or clarification. Purchasing will issue an **addendum** which will clarify, expand, or correct the bid documents in coordination with the Project Manager. Drawings will be provided with **addendums** as needed. **Addendums** must be revised and approved by the Project Manager and must be issued no later than 5 business days (excluding holidays and weekends) before the bid opening. Any addendum not issued in this timeframe will not be binding.

5. Purchasing conducts a pre-submittal conference and issues addenda, as applicable. PM to perform meeting logistics. After deadline for questions, Purchasing issues final addenda to incorporate all pre-submittal questions. Answers provided by PM at least five (5) days prior to bid closing.

6. After bid closing, Purchasing compiles IFB respondent proposals and distributes qualified submissions to the PM for evaluation and award. For RFPs, Purchasing compiles respondent proposals and distributes qualified submissions evaluation criteria and non-disclosure agreement to Business Services for uploading to Purchasing SharePoint site. Business Services will notify PM and SC when posted and deadlines. PM may review the RFP and process with SC prior to making initial evaluation.

7. The SC will evaluate each proposal based on the evaluation criteria and submits their rankings via email to Purchasing and copies the PM. Purchasing works with Business Services to compile evaluation results and sends to PM and ED for review. PM sends short list recommendation to Purchasing who in turn forwards to the Executive Vice President of Administration and Finance (EVP) for approval.

8. Upon EVP response of approval or recommended action, PM will perform logistics and create interview schedule, addenda and questions, if interview is required. Purchasing will notify shortlisted firms of the interview date, time, and location. PM and SC develop the interview weighted evaluation criteria. A copy of the questions and interview criteria must be sent to SC and shortlisted firms prior to the interview.

INTERVIEW/SELECT CONTRACTOR

After the interview, the SC scores the interviewed firm based on presentation and submits their evaluation to Purchasing. The interview scoring and evaluation of short-list firms are based on information submitted by respondents at interviews in conjunction with the published interview selection criteria. Purchasing calculates results and presents to the PM the scoring matrix. PM and ED review the matrix and make award recommendation to Purchasing who forwards to EVP for final approval.

COMPLETE CONTRACTING

The Project Manager prepares a contracts package which includes a cover memo, scope continuation form, PCB, PFA, Texas HUB verification report, HUB Subcontracting Plan, proposal package and schedule. The Project Manager will forward contracts package to the PPM or equivalent for approval. Once approved by the PPM, the PM submits to the Contracts Coordinator (CC) who will assign a contract number and draft the Owner Contractor Agreement contract, Proposed Project Transaction (PPT) and signature page. The CC will submit the draft contract to the Project Manager for review and approval. Once the PM reviews and approves, the CC will send to vendor via email.

In addition to the contract, the following documents must be submitted:

- Workers Compensation Certificate
- Employers Liability
- Professional Liability Insurance
- Commercial General Liability
- Comprehensive Auto Insurance
- Umbrella Coverage
- Performance Bonds (Contracts over $50,000)
- Payment Bonds (Contracts over $100,000)
- Specific coverage amounts can be found here.

Contracts are first signed by the Contractor and submitted to the Contracts Coordinator via mail or courier. Contract Coordinator prepares contract for signature process and routes to all applicable internal levels. See Delegation of Signature Authority for signature authorization levels. If for any reason, contract approvals are not achieved, the contract will be re-routed for modifications or will be canceled and closed as applicable to the situation.

Upon receiving all approvals and insurance documents, the CC will prepare the Notice to Proceed (NTP) and send for PPM or equivalent signature. PM will route signed NTP back to the CC who will forward via mail to the successful vendor. PM will notify Purchasing of the executed contract and request notification to all unsuccessful respondents.

CONTRACT CHANGE ORDERS – CONTRACTOR

If a change to the signed **Owner Contractor Agreement** is required, the process to prepare a Change Order is initiated by the Contractor. The Contractor submits the Change Order request to the Project Manager outlining the scope of work revisions and applicable adjustments to the fees and schedule. The Project Manager should work with the Contractor to discuss the scope of work and negotiate the fees and schedule for the proposed change. The PM will keep an accurate of all change orders pending and executed by category of change.

The PM will complete Steps 4 & 5 of this process to execute any Change Order authorizations.

STEP 6: CONSTRUCTION PHASE

- The management of construction deliverables should be considered during the planning phase of most projects. As team members are assigned and roles are identified, the personnel responsible for delivering the construction phase of the project should, where appropriate, become involved in the planning process.

- The following section and corresponding table identify the primary and secondary responsibilities of Facilities Management staff during each phase of the project.

- It is important to note that each project is unique and team members should have flexibility to modify roles to best utilize skills and abilities.

FM Project Manager: The initial project planning effort should identify how the project management duties will be delivered throughout the project. The Project Manager has primary management responsibilities for project related items.

CONSTRUCTION KICK-OFF (PRE-CONSTRUCTION MEETING)

Also referred to as the Pre-Construction Meeting, this is a time for the Project Team to meet to review the project scope, review the work plan and define roles and responsibilities for all team members. Project site logistics are discussed, and safety and emergency processes are outlined. A standard **Pre-Construction Meeting Agenda** is available for use by the Project Manager.

Construction contractors must submit several items that were specified in the Notice to Proceed. The Schedule of Values must be submitted and approved prior to the first payment request.

REVIEW DELIVERABLES

A complete review of the project scope and drawings will occur to ensure proper understanding before construction begins. Often this occurs as part of the Construction Kick-Off Meeting. During this time FM staff will become familiar with and review the deliverables of all other Project Team members, including the prime contractors, the A/E and CM. Items to review include but are not limited to:

- Contractor's scope of work and Schedule of Values
- Subcontractor and Material Suppliers
- Baseline construction schedule

- Review of any phasing or special user requests or requirements
- Progress meeting and coordination meeting schedule and attendees
- Issuance of required permits
- Review of A/E and CM contracts and deliverables
- Project Manual for Specifications

MANAGE DELIVERABLES

The prime contractors are responsible for the purchase of all components included in the CDs, unless specified as owner supplied/owner provided, coordinating their delivery and installation, and facilitating the inspection process to achieve building occupancy. It is the responsibility of the Project Manager to monitor and manage the performance of the contractors, A/E for adherence to university guidelines and processes. Items to be aware of and manage include but are not limited to:

- Monitor contractor performance of project safety requirements
- Participate in progress, coordination and Owner-Architect meetings
- Review and approve monthly pay applications
- Review monthly schedule updates
- Review status of As-Built drawings
- Coordinate special inspections and university required outages and permits
- Review and distribute shop drawings and submittals
- Review process for **Requests for Interpretation (RFI)** and **Change Orders**

During the construction phase it is often necessary to coordinate with other university entities that provide some type of service to the project or that will be affected by the construction, such as:

- FM Utilities for planned shut-offs (See Outage Policy and Outage Form), unforeseen damage to lines, tie-ins, etc.
- UIT for communication lines to the construction trailer, for final connections to the university network, etc.
- Technical Shops for shut-offs contractor access to mechanical or electrical spaces, existing system information, etc.
- Lock Shop for contractor keys, for installation of final lock cores, etc.
- Landscaping and Grounds for consultation on tree protection, plantings, acceptance of lawns, etc.

- Parking and Transportation and Public Safety for road shut downs, special delivery coordination, contractor parking, etc.
- Programmed Maintenance, copy Archivist, to pick up Operation and Maintenance (O&M) manuals after project completion
- Building Coordinators to keep them informed of construction activities that will affect their building
- ADA Coordination to help assess accessibility issues encountered

Utility Outage Policy should be discussed and scheduled as soon as possible after the Notice to proceed is issued. The request should be submitted at least 5 days prior to the anticipated outage date and the extent of outage depends on which utility is involved.

EVALUATE DELIVERABLES

1. Throughout the course of construction, the Project Manager, A/E, prime contractors and at least one Customer representative from the Project Team meet regularly (weekly, bi-weekly, etc.) to report on the construction activities, and to track submittal status, **RFIs**, budget and schedule. This is also a time to resolve conflicts and contract document discrepancies. The Prime Contractor's Project Manager will set the agenda, lead the meetings and document the decisions and outcomes of the meetings. In addition to periodic project meetings, special meetings may be called to address particular situations, consider specific problems and develop unique solutions.

2. A critical function of the Project Manager during construction is to manage the scope of the project in an effective way. This includes continuous monitoring of the scope of the work being performed in accordance with the contract documents and requirements. The Project manager should use the tools included and referenced in this Project Delivery Manual, as well as the expertise of other FM personnel to manage the process.

3. Once work is 80% complete, contractor must arrange for inspections of the work with the appropriate University entity. Upon completion of all inspections, the Fire Marshall will issue a Certificate of Occupancy or written verification of acceptance. The Project Manager should keep a copy of this within the project file.

PROJECT CONTROLS AND MANAGING CHANGE

1. Scope creep can be defined as the slow, continuous growth of a project beyond its original work contents and objectives. Several indicators put up red flags when scope starts to creep. But because these same red flags can also be indicative of other problems in the project, take care when reaching a conclusion as to the root cause of a particular condition. One of the key indicators is, of course, project timing. When timing starts to slip for no identifiable reason, growth in the scope of the program should be suspected. Similarly, if the project budget starts to overrun, without other identified reasons, the Project Manager should determine if more work is being done than was originally agreed to and budgeted.

2. Keeping control of a project involves carefully managing the work plan to keep it moving forward smoothly, including budget, schedule, costs, and status. Effective management allows Project Managers to gather information so that measurements and adjustments can be made to protect progress so that the project's goals can be accomplished. Project controls enable Project Managers to communicate project progress and changes to team members, management, customers and stakeholders, and gives Project Managers the justification for making any adjustments to the plan. It also enables Project Managers to measure current progress against the original work plan.

3. Once the execution of the project begins, potential changes to the project need to be managed. Ideally, changes that develop in the project should be recognized and acted upon in a proactive manner rather than waiting for them to happen and then reacting to them. During many projects, changes are not recognized because of the focus on completing the tasks at hand.

4. *Schedule Impacts*
    a. Delays in completing a project are often the culmination of a number of events. The Project Manager must work with the A/E and/or contractors to monitor the schedule closely and work to resolve issues in a timely manner.

        - Delays can be caused by the owner, the contractors or other situations. If there are concurrent delays, one for which the owner is responsible and one for which the contractor is responsible, no damages are pursued or awarded. Time extensions may be granted to contractors with no monetary compensation, such as in the case of delays due to severe weather or other situations where the contractor is not responsible. Such time extensions are approved as a **Change Orders**. **PM should reference the contract for detailed information concerning delays.**

        - The acceleration of work is the act of requiring work to be performed prior to the approved schedule to accommodate or reflect delays beyond the control and through no fault of the contractor (i.e. severe weather). The contractor may request a **Change Order** for acceleration. All schedule modifications, including acceleration, must be reviewed and approved by the PM prior to execution of change.

- When considering a change the A/E or Project Manager will determine the cost or impact the changes may have on a project. The A/E or Project Manager will recommend justifiable changes to the customer and will include a cost estimate.
- Several options for the basis of a **change order** are available and explained below:

All Project Managers should categorize the reason for change and track the % of change orders and rationale for changes. Errors and Omissions that exceed 2.5% of the total construction cost are considered excessive and should be reviewed for remedy.

Error/Omission: A change caused by an error on the contract documents or missing scope or omission that was intended to be included in the contract documents or should have been included within the "standard of care" of the profession. This could be missing scope in the document even though it may have been included on the technical specifications or drawings.

Field Resolution: This is most often associated with disputes between contractors or between a contractor and the university. It could be used to redistribute funds when a contractor affects the work of another or the project requires supplementing the work of a contractor.

Value Engineering: Reducing scope in order to reduce the cost of the project. Some contracts may actually increase while others decrease but the overall cost of the project is reduced.

Differing Condition: This refers to a condition that would not have been anticipated by the A/E or Contractor within the "standard of care" of the profession. This is more often in a renovation where existing conditions could not be predicted.

Other: Conditions that do not fit the other definitions.

Customers may also request additional work. Additional funds and Certifying Authority approval for User Requested Change Orders must be provided prior to execution.

1. *Project Budget Increases* - If changes to the project budget result in an increase, the increased project budget must be approved by the appropriate parties.

2. *Disputes and Contractor Termination – please refer to your contract and general conditions to receive more information on disputes and contractor termination. OGC should be consulted before any claims are resolved or contractors terminated.*

APPROVE DELIVERABLES

Throughout construction the A/E and Project Manager will review and approve a number of contractor deliverables. Some of these items include but are not limited to:

- Identify work that does not conform to the contract documents and implement corrective actions.
- Review and approve monthly pay applications
- Review monthly schedule updates and endorsements
- Review and distribute record documents and Operation &Maintenance (O&M) Manuals
- Document completion of the contractor's punch list

Ultimately, it is the responsibility of the PPM or equivalent to effectively use the expertise and experience of internal management staff in a way that provides continuity to the project while allowing day-to-day control of the project to be delegated.

If the procedures outlined in previous sections are followed, it can be expected that the management of the construction phase of FM projects will be completed by informed team members. These team members will possess the necessary tools and information to contribute to the success of the project.

APPROVE PAYMENT REQUESTS

Contractor payments are submitted monthly and should be reviewed and approved according to the **schedule of values** received at the start of construction by the contractor. Payment Requests are first submitted to Business Services via mail or to poinvoic@central.uh.edu. Business Services will email all pay applications and invoices to the Project manager for review and approval. Timely approval of payment requests is important. All invoices should be submitted with the following information:

- Contract Number
- Project Number
- Project Name
- Project Manager
- HUB Subcontracting Plan

If the Project Manager does not approve the invoice for any reason, the PM will initiate the Invoice Return Transmittal. The PM will send a copy of this transmittal to the Contractor and Business Services. The Contractor will resolve the issues with the pay application or invoice and submit a corrected copy. The corrected copy must note all the information above and be title with the verbiage "CORRECTION".

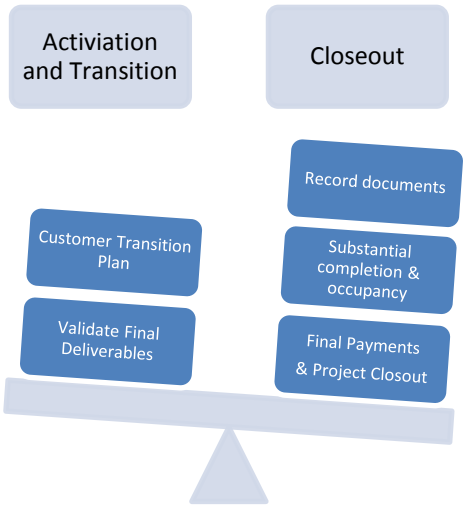
It is the responsibility of the A/E or PM to verify the following information on payment requests: the percent complete per line item is acceptable (including change orders), stored material (may require a visit to the storage location), and retainage in accordance with the General Conditions.

The Financial Assistant is responsible for verifying the following information:

- The Schedule of Values is approved prior to the first payment request being processed
- Invoices for new stored material being billed have been received
- Material stored does not exceed the total line item amount of the Schedule of Values, including the percent of material billed to date
- A/E and Project Manager signatures have been received
- Retainage is calculated correctly

The Project Manager will review the payment requests for critical items for the percent complete to date and accuracy.

STEP 7: ACTIVATION, TRANSITION AND CLOSEOUT



COMMISSIONING AND ACTIVATION

Some projects may conduct a commissioning process. The commissioning process is the verification of the performance of building systems and the training of Maintenance personnel. Systems to be commissioned vary according to project type but most typically involve the HVAC system. Commissioning is usually the responsibility of the contractor and must occur before occupancy of the building. A Commissioning Consultant via the CSA Process is sometimes contracted to lead this process.

Activation Activities Include:

- Providing adequate attic stock
- Ensuring a transitional and operational plan is in place with FM and the customer
- All fire, life and safety requirements has been met
- Building systems have been tested and commissioned
- Building systems equipment training has been conducted
- IT communication services have been established
- TDLR inspection has been requested,
- Locks, key, access plan and way finding completed
- Furniture delivered and installed
- **See Project Reporting & Closeout Form under *Step 7 (Transition, Activation and Closeout)***

CUSTOMER TRANSITION

1. Near the end of the construction phase the Project Manager should initiate customer transition meetings between the Project Team, Operations staff, building occupants, and other university personnel that are involved in the day-to-day operations of campus buildings and grounds. The purpose of these meetings is to review the project status and discuss the operational needs and issues once the project is complete and the facility "turned over" to the departments that will occupy and maintain the facility.

2. The customer transition meetings should begin prior to substantial completion (depending on the complexity of the project). This will allow time to identify and resolve key issues prior to the completion of the project. Meetings should continue on a regular basis until the project is complete and occupied. A follow up meeting should also be conducted just before the warranty expires (11 months after substantial completion). The **Customer Transition Meeting Agenda** and a **service matrix** are available for use by the Project Managers.

3. Customer transition meetings should not wait until construction is complete. It is important to begin early to allow adequate time to address issues or prepare agreements prior to building occupancy and turnover to FM Operations and other university departments.

FINAL DELIVERABLES

The Contractor must deliver all O&M manuals to the Project Manager for review prior to the demonstration period. The Contractor must schedule and manage the equipment start up demonstration. Also, all extra building materials (also known as "attic stock") must be delivered after the final punch list work is completed and accepted. Attic stock should be secured and managed by FM Operations.

PUNCH LIST

One important item in completing construction is the preparation of a punch list. The punch list is commonly understood to be a list made near the completion of the construction work indicating items of work that remain unfinished, do not meet quality or quantity requirements as specified or are yet to be performed by the contractor prior to completing the terms of the contract. The contract must resolve all punch list items within 30 days of substantial completion.

The Project Manager will plan ahead and be fully aware of the specific contractual requirements that relate to punch list items and to substantial completion as these items are closely related.

The Project Manager will assess the overall quality of items on the punch list. If the list is excessive, then there is likelihood that the project is not truly substantially complete.

RECORD DOCUMENTS

The record documents are a record of formal change orders as well as modifications required to construct the facility. The contractor turns over the as built drawings to the A/E or Project Manager as part of construction close out. The Project Manager will then will forward them to Facilities Information using the

Record Documents Transmittal. The Space Update Form should accompany all projects involving space changes.

It is important that all Project Team members are familiar with FM's **Records Management Guidelines**, and the standard filing structure, to ensure consistency in the management of project files. The guidelines address both hard copy and electronic files.

A complete project record is required and must be completed prior to administrative closeout.

FINAL ENDORSEMENT AND OCCUPANCY

Upon receipt of a Certificate of Occupancy or Temporary Certificate of Occupancy from the Fire Marshal, the Project Manager completes the **Certification of Substantial Completion** and submits to the Prime Contractor. The facility or area may be occupied and the warranty period begins. The Project Manager will provide a copy of the Certification and Notice of Occupancy to the Director of Facilities Operations & Maintenance and the office of EHS for the purpose of risk management and insurance. This notification relays that the building has now been turned over to the university and should be included in any applicable insurance policy for the university. See Property Insurance Reporting Policy, Property Insurance Reporting Form, Equipment Insurance Reporting Policy and Equipment Insurance Reporting Form.

The warranty period is normally a one-year period after receipt of the Certificate of Substantial Completion. During this time the goal is to provide consistent tracking and addressing of issues that occur during the warranty period. As issues arise after move-in, the Project Manager will work with FM in determining the responsible party. Contractor issues are immediately referred to the appropriate contractor for corrections; design issues are referred to the A/E for disposition. FM holds the warranties and is the responsible party in maintaining the facility.

Warranty reviews are conducted by the Project Team after the first growing season for landscape and eleven months after occupancy for equipment and other building items. At the end of the warranty period, Facilities Management Operations will assume full control of the facility. Extended warranty items will continue to be addressed between the Project Manager and Facilities Management until the expiration of those warranties.

FINAL PAYMENTS

After the A/E or Project Manager confirms that the contractor has completed all punch list items the A/E or PM will recommend that the project be formally accepted by signing the Contractor's final payment request. Final payment requests (billing for 100% contract completion) are approve by the PM. Billing for release of retainage must be received separately from the final payment request. When prime does not self-perform all work, the PM will ensure a release of liens certificate is produced. This is normally produced by the contractor and signed by the subcontractor(s).

CLOSE THE PROJECT

Project close out activities are not linear and often overlap when moving from Construction to Activation, Transition and Close-Out.

Administrative and financial closing consists of performing those tasks intended to close the project from a financial and contractual standpoint. By doing so, the Project Manager confirms that all project work tasks and deliverables have not only been completed but also accepted and that after the final invoice is paid no other charges or costs will be posted for the project.

Close out activities revolve around:

- Checklist completion
- Vendor evaluations
- Project assessment

PROJECT CHECKLISTS

There are three main checklists that will assist the Project Manager, PPM or equivalent; Contracts Coordinator and Financial Coordinator with project close out.

- **A/E Contract Completion Checklist**
- **Project Delivery Checklist**
- **Project Reporting & Closeout Checklist**

The **A/E Contract Completion Checklist** is completed by the Project Manager and is required to be completed and submitted with the A/E's final payment application. The Project Manager is responsible for reviewing the checklist and verifying all items have been completed before approving the final payment.

The **Project Delivery Checklist** is a comprehensive checklist that can be used from the beginning of a project. This is not a required checklist but should be used as a reference throughout the project and close out. The Project Manager should conduct a final review of the **Project Delivery Checklist** to verify all project steps and tasks are complete.

The Project Reporting & **Closeout Checklist** is required to be completed by the Project Manager, Contracts Coordinator and Financial Coordinator. The first section of the checklist is completed by the Project Manager. All items must be completed before the project can be moved to "Administrative Close Out." The Project Manager will work with the PPM or equivalent to verify all items are complete. The DBA of Contracts and Project Accounting can then change the project status and notify Plant Accounting that the project is ready for complete close out and reconciliation.

The Project Manager must confirm that all work deliverables have been completed and accepted. After the final invoices, no other costs will be incurred. The Project Manager must complete their section of the Project Reporting & **Closeout Checklist** and the PPM or equivalent is ultimately responsible for verifying the completion of all required steps to move a project from Post Construction to Administrative Close Out.

Once a project is in Administrative Close Out, the Project Manager's direct role is complete and it is up to Business Services to complete administrative and financial close out. The PM will monitor this process and follow up as necessary.

The Contracts Coordinator and Financial Coordinator work together to complete their section of the Close the Project Checklist. Once all items have been completed the project status can be changed to "Closed."

VENDOR EVALUATIONS

All vendors approved under the Continuing Services Agreements and Job Order Contracts must have evaluations completed and maintained in the project file and vendor files within Business Services. The Project Manager is responsible for submitting the evaluations to Business Services within 30 days of contract completion. For evaluation purposes, contract completion is the considered the date of final contract payment.

PROJECT FILE ARCHIVE

Ideally, project document filing will be conducted and completed throughout the life of the project. Documents that were not filed during the project should be organized according to the Records Management Process so they can be easily combined with documents already in the project files.

The Archivist will work with the Project Manager to prepare documents for final filing and archiving. The electronic files are moved to the "Closed" section of the network drive and are marked "read only." Hard copy files are moved to off-site storage for at least 10 years.

CLOSE OUT CHALLENGES

- Claims: All claims must be resolved before final invoices can be approved for the vendor involved in any claim
- Complete deliverables: Final payments should not be approved if all deliverables are not complete or have not been received.
- Professional Services payments: There are several things to verify before approving a final payment for professional services. In particular, the Project Manager must verify with the Archivist that the record documents have been received and are readable. Also, any remaining balances on the contract must be closed. Final payments should be marked "Final."
- Internal billings: The Project Manager is responsible for contacting the appropriate department (UIT, Zones and Technical Shops, Lock Shop, etc.) to verify that all billings have been processed and then notify the Financial Assistant. Any open balances will be reduced by the Financial Coordinator or DBA.

For more information on FM Project Delivery Process please visit the FM PD website.

APPENDIX 1: PROJECT ACRONYMS

Acronyms Glossary	
A/E	Architect, Engineer or Team Combination
BOR	Board of Regents
CC	Contracts Coordinator
CD	Construction Documents
CFPC	Campus Facilities Planning Committee
CSA	Continuing Services Agreement
CSP	Competitive Sealed Proposal
CRDM	Capital Renewal and Deferred Maintenance
DBA	Department Business Administrator
DD	Design Documents
DIR	Director
ED	Executive Director
EHS	Environmental Health and Safety
ESBD	Electronic State Business Daily

EVP	Executive Vice President (Administration and Finance)
FA	Financial Assistant
FF&E	Fixtures, furniture and equipment
FM	Facilities Management
FPC	Facilities Planning and Construction
FSC	Facilities Service Center
HUB	Historically Underutilized Businesses
HEAF	Higher Education Assistance Funds
IBR	Informal Bid Request
ICB	Informal Competitive Bids
IFB	Invitation For Bid
IPA	Initial Project Assessment Form
UIT	University Information Technology
JOC	Job Order Contract
LSPM	Lead Senior Project Manager
MEP	Mechanical and Electrical
MPP	Minor and Planned Projects

NTP	Notice to Proceed
O&M	Operations and Maintenance
OGC	Office General Council
OWR	On line work request
PCB	Project Controls Budget
PDM	Project Delivery Manual
PFA	Project Funding Agreement
PM	Project Manager
POR	Program of Requirements
PPM	Principal Project Manager
PPT	Proposed Project Transaction
PSA	Professional Services Contracts
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Qualifications
SC	Selection Committee
SD	Schematic Design

SPM	Senior Project Manager
THECB	Texas Higher Education Coordinating Board
UH	University of Houston
UHDSP	University of Houston Department of Public Safety

APPENDIX 2: PROJECT DEFINITIONS

Addendum	An addition or supplement to a solicitation document issued prior to the opening date.
Bid	To make a public announcement of the intention to purchase goods or services.
Bid Opening	The public opening of bids, in which the names of the bidders responding to a bid solicitation and prices of the bidders are publicly read and recorded.
Bid Tabulation	The recording of bids, in which names of the bidders responding to a bid solicitation and prices of the bidders are publicly read and recorded.
Bidder	An individual or entity that submits a bid. The term includes anyone acting on behalf of the individual or other entity that submits a bid, such as agents, employees and representatives.
Bidder List	A list of potential contractors who have expressed an interest in doing business with the State of Texas.
Biennium	The two (2) year period in which the Texas Legislature appropriates funds. The biennium begins on September 1 of odd numbered years
Bond Funds	Bond funds are allocated to earnings and administrative units through a biennial request process.
Capital Plan Projects	Projects approved in the university capital plan, or by executive management.

Competitive Sealed Bid	The process of advertising an invitation for bids (IFB), conducting a public bid opening and awarding a purchase order/contract to the lowest responsive, responsible bidder in accordance with state law
Competitive Sealed Proposal	Process of advertising a request for proposal (RFP), the evaluation of submitted proposals and awarding the contract.
Construction Contingency	Money held as soft cost funds to assist in any monetary issues that may arise after the project is bid. The amount held varies, primarily because of complexity and phasing of the project but is normally budgeted at 10 percent of the construction costs.
Consultant	A person that provides or proposes to provide a consulting service
Consulting Services	Practice of studying and advertising a state agency in a manner not involving the traditional employer/employee relationship per Texas Government Code, Section 2254.021
Contract	A written agreement where a contractor provides goods or services in accordance with the established price, terms and conditions.
Contract Administration	This generally refers to the processes that occur after a contract is signed.
Contractor	A business entity or individual that has a contract to provide goods or services to the State of Texas used interchangeably with the term Vendor.

Contracts Management	This refers to the entire contracting process from planning through contract administration.
Cost Estimates	An estimate of the cost of any construction work or renovation related to existing space. The completion of a cost estimate does not guarantee or imply project approval.
Customer	A person or organization that is the primary user of the end product or service.
Deliverable	A unit or increment of work required by the contract, including such items as goods, services, reports or documents.
Design & Planning Team	Architect and Planning provide expertise as needed.
Design Contingency or Estimating Contingency	Money held as hard cost funds to assist in covering costs that cannot be anticipated during the design period. Generally, this amount starts between 6-9 percent during SD, reduces to 6 percent during DD and ends at 0 percent when the final estimate is established and prior to bidding.
Differing Condition	This refers to a condition that could not have been anticipated within the standard of care for the profession. This is more often in a renovation where existing conditions could not be predicted.
Electronic State Business Daily	The electronic marketplace where the State of Texas bid opportunities over $25,000 is posted. See procurement manual https://www.window.state.tx.us/procurement/pub/manual

Error/Omission	A changed caused by an error on the contract documents or missing scope or omission that was intended to be included in the contract documents or should have been included in the contract documents or should have been included within the standard of care for the profession.
Executive Team	Final contractual or project cost approvals
Field Resolution	Most often associated with disputes between contractors or between a contractor and university. It could be used to redistribute funds when a contractor affects the work of another or the project requires supplementing the work of a contractor.
Friends and neighbors	Representatives that are affected by the project
Goods	A transportable article of trade or commerce that can be bartered or sold. Goods do not include services or real property.
Historically Underutilized Business	A minority or women-owned business as defined by the Texas Government Code, Title 10, Subtitle D, Chapter 2161
Invitation for bids (IFB)	Procurement process used when the requirements are clearly defined, negotiations are not necessary and price is a major determining factor for selection. The IFB uses competitive sealed bid method.
Local Funds	Donor funds and unit or departmental funds typically augment state appropriations or bond funds to complete a project.
Major Consulting Services Contract	A consulting services contract for which it is reasonably foreseeable that the value of the contract will exceed $15,000

Major Contract	A contract that has value of at least (1) Million dollars during the original term of the contract not including any renewal periods
Negotiations	A consensual bargaining process in which the parties attempt to reach agreement on a disputed or potentially disputed matter. In a contractual sense negotiation means the "dealings conducted between two more parties for the purpose of reaching an understanding".
Owner Request Other	An increase in the scope of the program beyond what was anticipated for inclusion in the contract documents that is requested by and only benefits the user of the facility. Examples include additional cabinets, moving a wall and requesting better finish materials.
Payment Bond	A bond executed in connection with a contract which secures the payment requirements of the contractor.
Performance Bond	A surety bond which provides assurance of a bidder's performance of certain contract. The amount for the performance bond shall be based on the bidder's annual level of potential monetary volume in the state purchasing program. Acceptable forms of bonds are those described in the definition for "bid deposit."
Professional Services	Services directly related to professional practices as defined by the professional services procurement acts.
Programmatic and Technical Committees	Provide expertise as needed

Project	A temporary endeavor undertaken to create a unique product, service or outcome that has a beginning, requires substantial coordination and effort to accomplish, and has an end.
Project Term	The period of time that describes the life of a project.
Proposal	An executed offer submitted by a respondent in response to an RF and intended to be used as a basis to negotiate a contract award.
Proposal Opening	The public opening of bids, in which the names of the bidders responding to a bid solicitation and prices of the bidders are publicly read and recorded.
Purchasing Department	The office designated to purchase goods and services for a state agency
Real Estate Services	Consultation services or initiating actions needed to purchase real estate, lease space to others or for assistance with site selection, real estate valuation, property management or real estate activities.
Repair and Renovations	Includes work such as painting; carpeting; adding, removing or moving walls; and adding or removing utilities in space that is already assigned to the unit. A cost estimate will be prepared as part of the processing of this type of request.
Request for Information (RFI)	A general invitation to contractors requesting information for a potential future solicitation. The RFI is typically used as a research and information gathering tool for preparation of a solicitation.

Request for Proposal (RFP)	A solicitation requesting submittal of a proposal in response to the required scope of services and usually includes some form of a cost proposal. The RFP process allows for negotiations between a proposer and issuing agency.
Request for Qualifications (RFQ)	A solicitation document requesting submittal of qualifications or specialized expertise in response to a scope of services required. No pricing is solicited in an RFQ
Request for Quote (RFQ)	An informal solicitation document requesting pricing on a small dollar purchase.
Respondent	An entity submitting a proposal in response to a solicitation (See bidder).
Responsible	The respondent has the capability to fully perform and in accordance with the contract requirements.
Responsive	The respondent has complied with all material aspects of the solicitation document, including submission of all required documents.
Service	The furnishing of labor by a contractor which may or may not include the delivery of a tangible end product.
Signage Request	Interior, exterior, commemorative plaques, building directories and studies.
Solicitation	A document requesting a submittal of bids or proposals for goods or services in accordance with advertised specifications.

Space Request	For new, additional or replacement space or to relinquish current assigned space based on assignable SF (ASF). This could include on-and-off campus space, space owned by UH, and/or space owned by non-UH entities. Some of the options to satisfy your request for space could involve additional costs or fees.
Stakeholders	Representatives that have indirect influence on the project
State	The State of Texas
State Agency	An agency of the State of Texas as defined in Texas Government Code 2056.001
State Capital Appropriations	Such appropriations are allocated to academic units through Central Administration and Provost Approval.
Study Request	For any type of study, such as a feasibility study for a building renovation or new facility, an engineering/technical study; a physical planning study, such as a master plan, land use or study of a specific geographic area or physical campus issue.
Value Engineering	Reducing scope to reduce the cost of the project, finding the second right answer to bring the project back in budget.
Vendor	A business entity or individual that has a contract to provide goods or services to the State of Texas used interchangeably with the term Vendor.

APPENDIX 3: SUMMARY OF TOOLS FOR PROJECT DELIVERY

Facilities Management Project Delivery Web Site

Step 1: Needs Development

Step 2: Scope Development

Step 3: Selection of Design Team

Step 4: Design Phase

Step 5: Selection of Contractor

Step 6: Construction Phase

Step 7: Transition, Activation and Closeout

Other References:

University of Houston Policies and Guidelines

MAPP/SAM/Design Guidelines

State of Texas Policies and Guidelines

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