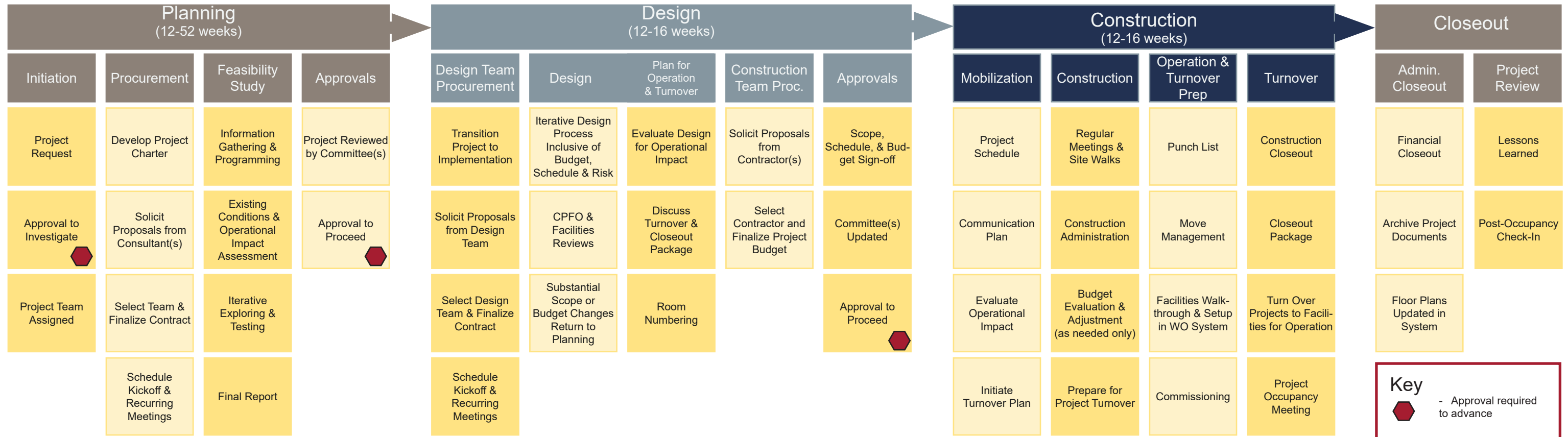


HMS PDP Workflow - Level 3

(9- 20 months)

Departmental Impact: High
 Campus Impact: Moderate to High
 University Impact: Low to Moderate



Key

 - Approval required to advance

Majors Steps

Start

A. PROJECT INITIATION
Phase Owner: Planning Leader

Start

1. Confirm and evaluate project request

Goal: Customer is engaged in an early “Go-No/Go” to objectively vet request against HMS broader vision, identify level of effort needed, and key decision-makers.

1.1 Receive Project Request

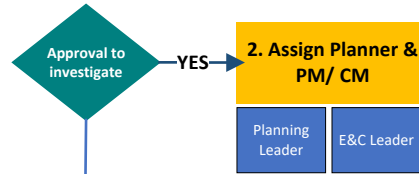
- Customer submits project request with brief description of requirements and expectations

Customer Planning Leader

1.2 Define project at a high level

- Define project goals at high level
- Contribution to HMS strategic goals
- Available funding source for Planning phase
- Likely project category (scope, visibility, level of effort, budget, duration)
- Approvers and decision-makers

Planning Leader Customer CPFO



Inform Customer & Stakeholders



Planning Leader E&C Leader

Detail Sub Process Steps

1. Project Ramp Up

Goal: Establish a strong foundation of project goals and parameters to serve as a guide throughout the entire project lifecycle.

1.1 Develop Project Charter

- Outline the project charge – what need is the project satisfying
- Project Effort
- Project Scope
- Project Risk
- Project Deliverables
- Project Approach
- Project Oversight
- Project Team
 - Internal Stakeholders
 - Internal Collaborators
 - Consultants
 - Define rolls and responsibilities
 - Establish committee(s)
- Project Timeline
- Approval Process
- Feasibility Study Budget
- Preferred communication method & frequency

Planner PM Planning Leader Customer

CPFO E&C Leader Facilities Leader

1.2 Review Project Charter with Leadership

- Revise based on feedback

Planner HMS Leadership CPFO Planning Leader

Customer

B. PROJECT DEFINITION / SCOPING & FEASIBILITY PROCUREMENT
Phase Owner: Planner

2. RFP and Project Team Awards

Goal: Identify all external partners and consultants needed to support the planning effort on the project. Vet and select the firm that will best support the project goals and objectives.

2.1 Evaluate applicable project intent to confirm code requirements, parameters, and standards that will influence overall concept

- Space / Office Lab Std.
- Design Goals – HMS, HU standards
- Sustainability
- Accessibility
- Equipment O&M guidelines

Planner E&C Leader/ PM FOM/ Engineer/ Energy

2.2 Confirm required consultants and identify criteria for selection of A/E/CM, specialties, consider:

- Required program elements for feasibility study including, but not limited to:
 - Planning, Architecture, MEP, Structural, Building Code, Accessibility, etc
- Required program elements for design effort including, but not limited to:
 - MEP, IT, AV, Lighting, Furniture, Security
- Design parameters & metrics
- Relevant communication and data formats and software needed
- Process for design reviews & approvals
- Required meetings / approaches (e.g. attend & participate in pull planning meetings, etc.)
- Applicable regulations
- Identify Risks / Testing Needs: ACM, Hazmat, non & destructive testing

Planner Planning Leader E&C Leader/ PM CPFO

2.3 Develop and review RFP based on agreed-upon criteria

- Identify and create applicable exhibits

Planner Planning Leader E&C Leader/ PM CPFO

2.4 Identify recipients of RFP

Planner E&C Leader Planning Leader CPFO Customer

2.5 Send RFPs to AEC partners to propose work

- Planners/ architects/designers
- Engineers
- Pre-con/Construction Manager
- Other relevant specialties

2.6 Schedule & conduct walk-throughs with relevant info packet

Planner

2.7 Review RFPs

- RFP Submissions Executive Summary
- Determine which firms to invite for interviews

Planner CPFO E&C Leader Planning Leader

Customer

2.8 External Partner Selection Process

- Interview potential AEC team partners
- Evaluate & Select A/E/C Partners
- Compare AEC firms’ capabilities & approach vs. project charter, customer conditions of satisfaction, and other agreed-upon, shared criteria

Planner CPFO E&C Leader Planning Leader

Customer

2.9 Notify A/E/C Partners

Planner

Outputs

Project Brief

Enter Project into Sharepoint
Monthly report (dashboard) with Project in Request

Project Charter

RFP Recipients Executive Summary Matrix

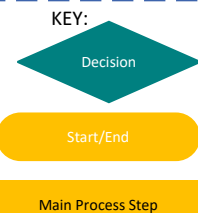
RFP

RFP Submissions Executive Summary Matrix

AEC Selection Justification Matrix

Recurring Project Management Actions

- Key for RACI:
- Responsible, does the work
 - Accountable, buck stops here
 - Consulted prior to, or during task
 - Informed of key outputs/decisions



Outputs/Data/Key Info
Sub Process Step

Evergreen documents or activities that team initiates, then actively manages as they learn new information impacting project success.

Initiate Monthly Report
Project Charter

C. FEASIBILITY STUDY
Phase Owner: Planner

3. Onboard AEC team

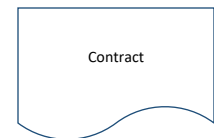
- 3.1 AEC Procurement**
- Execute contract for feasibility study
 - Internal funding mechanism and PO creation

Planner AEC Partner

3.2 Initiate formal project kick-off meeting with AEC partners and internal project team

3.3 Schedule regular team meetings & stakeholder meetings for duration of project

Planner AEC Partner PM Customer Key Stakeholders



Initiate Planning Project Milestone Schedule & Budget

1. Information Gathering

Goal: Identify and gather the information needed upfront to launch the planning effort. Create a strong foundation upon which the programming and exploration steps will be based.

- 1.1 Data & Information Gathering:**
- Verify program elements
 - Existing condition plans
 - Applicable historical information
 - In person interviews
 - Survey or Focus groups
 - Space tours
 - Benchmarking

Planner AEC Customer

- 1.2 Data Analysis & Reassessment**
- Utilization analysis
 - Key metrics
 - Verify goals

Planner AEC Customer

- 1.3 Create Criteria Matrix**
- Core project drivers upon which all options will be evaluated

Planner AEC Customer

Criteria Matrix

Meeting Agenda & Minutes

2. Programming

Goal: The customer feels as though they been heard, their needs are understood and documented, and senses they are part of a collaborative process.

2.1 Produce Program
Get sign off before moving forward

Planner AEC Customer PM

2.2 Initiate Risk Register
Will become part of a living Project Management Plan

Planner AEC

2.3 Initiate Decision Matrix
Will become part of a living Project Management Plan

Planner AEC

Program Risk Register Decision Matrix

Updated Project Charter



3. Exploring & Testing

Goal: Translate the program to proposed space solutions in an iterative process. Cost, schedule and operational impacts of proposed solutions are developed in parallel. The customer as well as key stakeholders have an opportunity to inform the proposed options so that they can have ownership of the final product.

- 3.1 Identify Available Space Options**
- Existing space that can meet programmatic needs
 - SF available that can be modified to satisfy the program
 - Other options available

Planner Planning Leader CPFO Customer PM AEC

- 3.2 Existing Conditions Assessment**
Walk the space(s) to verify existing plans and note any existing conditions to consider as part of the scope development
- Existing conditions
 - Suitability of space for desired use
 - MEP and infrastructure

Planner AEC CM PM FOM

- 3.3 Identify applicable preventive maintenance or opportunities for capital/ expense project coordination multiple years out of each option**

Planner Planning Leader FRWG

- 3.4 Evaluate MEP, Design, and other project elements to identify operational impact (utility, O&M) of each option**

Planner AEC Energy Facilities Engineer PM FOM

Key stakeholders (EHS, Sustainability, Security, AV, etc.)

Operational Impact Assessment

Project Charter

Risk Register

Decision Matrix

- 3.5 Create & develop multiple options for review**
- Evaluate how options align with stated project goals and program
 - Perform continuous cost estimating and scheduling based on concept & constructability reviews and adjustments
 - Evaluate delivery method (DBB, CM@R, D/B)

Planner AEC CM PM FOM

Key stakeholders (EHS, Sustainability, Security, AV, etc.)

3.6 Meetings to review options with customer and key stakeholders

Planner Customer AEC Partners

PM Key stakeholders (EHS, Sustainability, Security, AV, etc.) FOM

3.7 Conduct program alignment review at 50% and 75%

Planner AEC Partners Planning Leader

CPFO E&C Leader PM

Customer

Concept Plans with associated budget and schedules

Planning Project Milestone Schedule & Budget

4. Synthesizing & Output

Goal: Project team has consensus on the recommendations being presented. Key stakeholders and customer have confidence in the documentation being presented for approval. Material being presented allows the committee(s) to make an informed decision.

- 4.1 Select option(s) for presentation**
- Summary of findings
 - Evaluation of cost/ criteria matrix
 - Identify recommended option(s)
 - Team sign off

Planner Planning Leader CPFO Customer AEC

PM E&C Leader Facilities Leader/ FOM

4.2 Develop & distribute final report or deliverable

- Deliverable A: Single option for approval
- Deliverable B: Multiple options with recommendation

Planner AEC Planning Leader CPFO Customer

E&C Leader/ PM Facilities Leader/ FOM

Final Report/ Deliverable

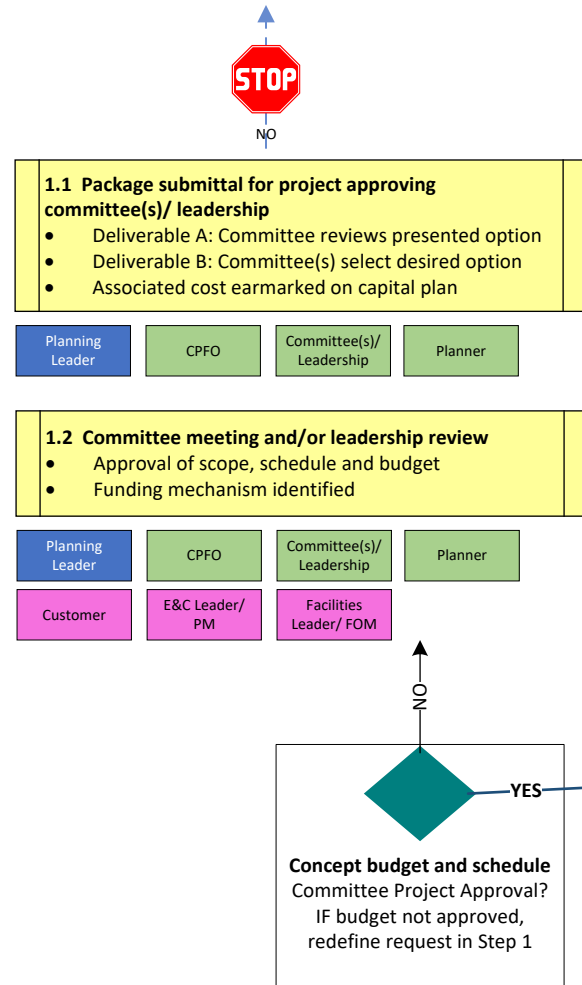


D. APPROVAL

E. Project Team Selection and Onboarding
Phase Owner: Project Manager

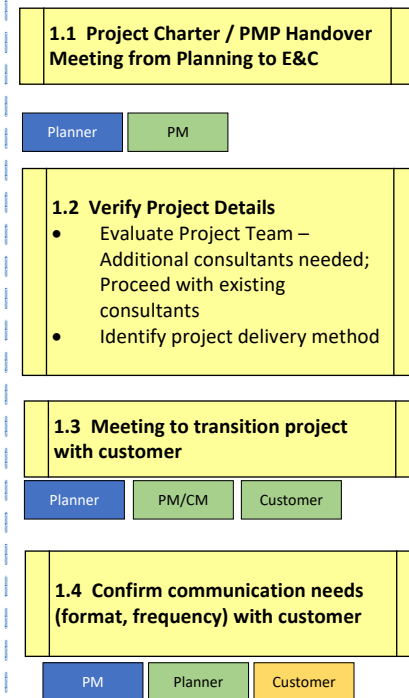
1. Approval and Customer Notification (Yes/No)

Goal: Project is reviewed for approval and clear direction is provided to the project team. Funding is earmarked on the capital plan.



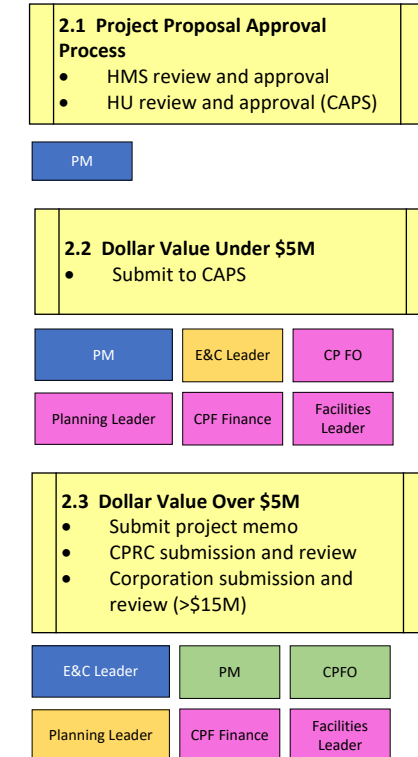
1. Transition from Planning to Implementation

Goal: Customer knows project has shifted to implementation phase, understand timing, how and when they will be engaged in project delivery, and knows their experience is a priority.



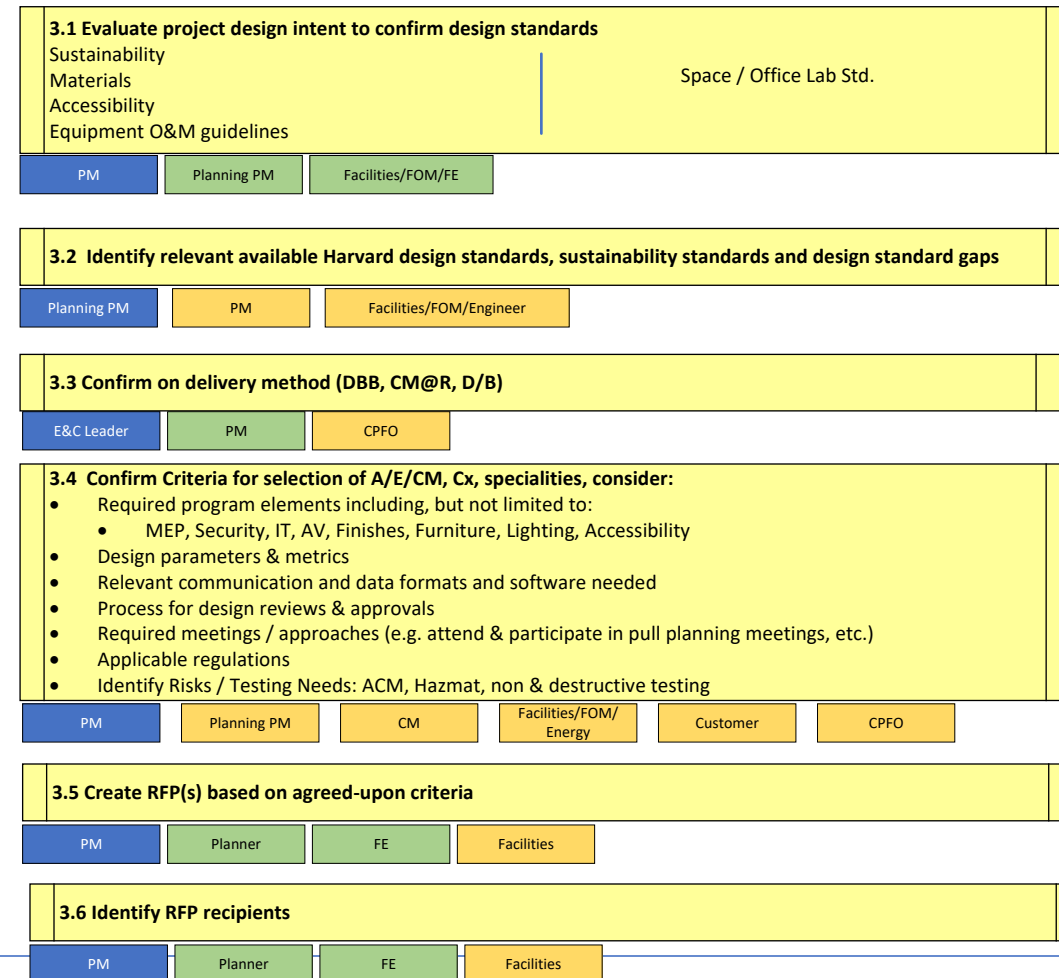
2. Administrative Ramp Up

Goal: Customer knows project has shifted to implementation phase, understand timing, how and when they will be engaged in project delivery, and knows their experience is a priority.



3. RFP and Project Team Awards

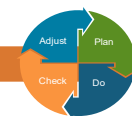
Goal: We shepherd the customer's vision from concept to executable form that our Architect, Engineering & Construction (AEC) partners can deliver. We match the right AEC partners with customer's conditions of satisfaction and project category.



Approved Recommendation and Funding Mechanism

PM notify email blast list of project opening and location of PMP

RFP (use standard template) with relevant information/packets



F. Design the Project
Phase Owner: Project Manager

G. Pre-Construction Management
Phase Owner: Project Manager

4. Onboard AEC team

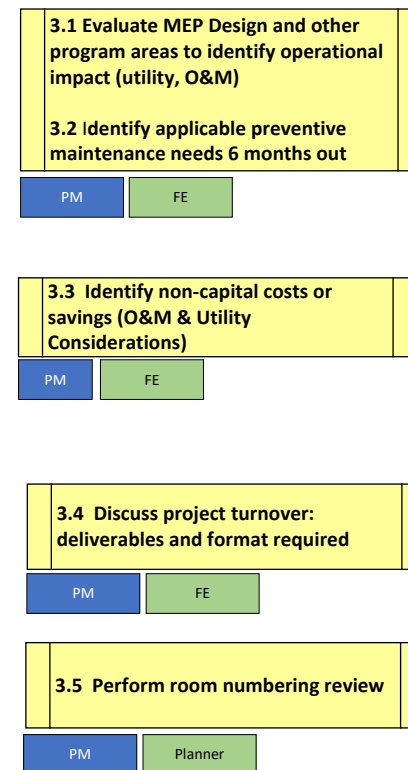
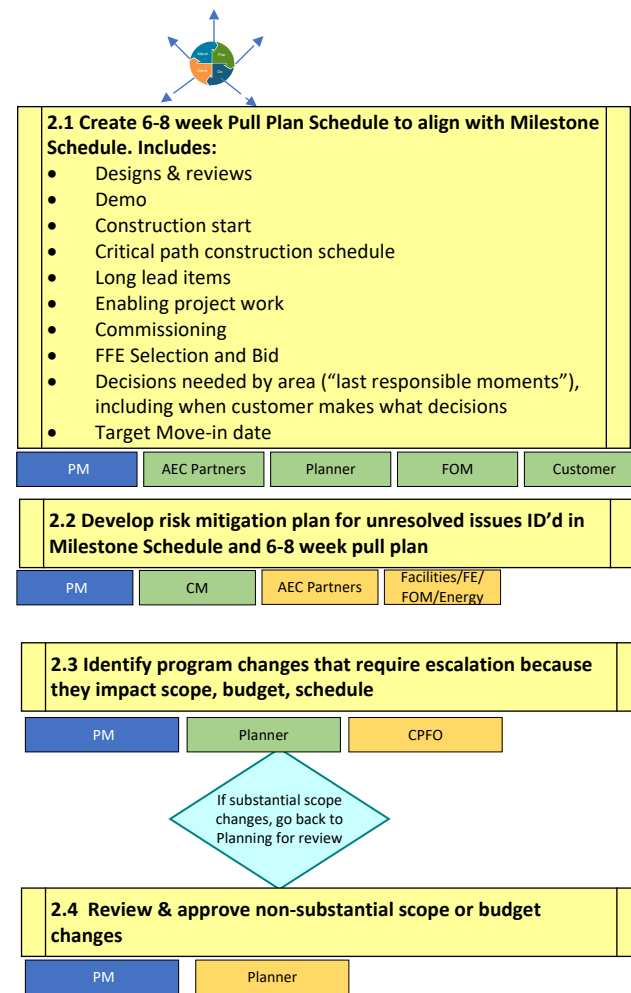
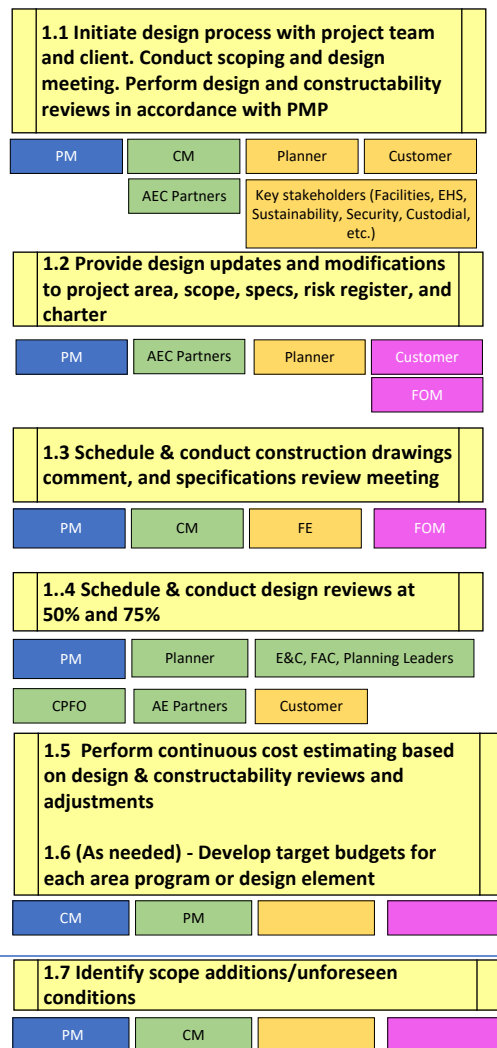
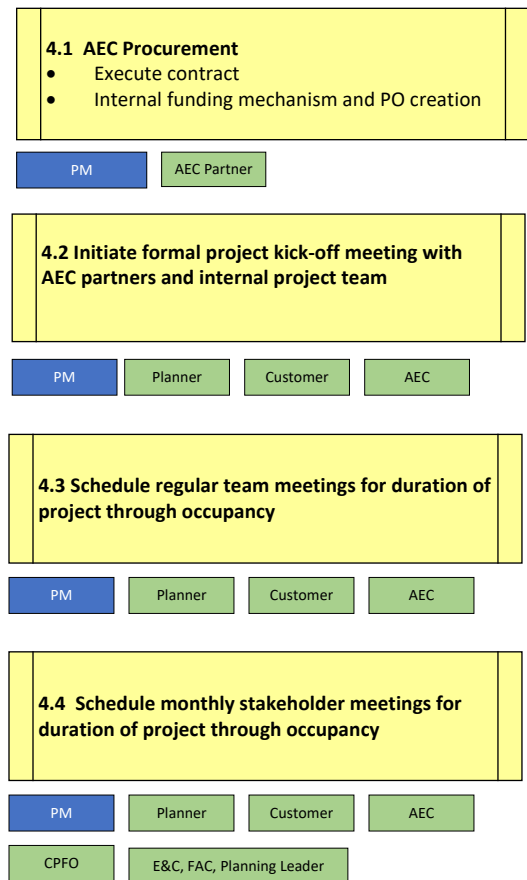
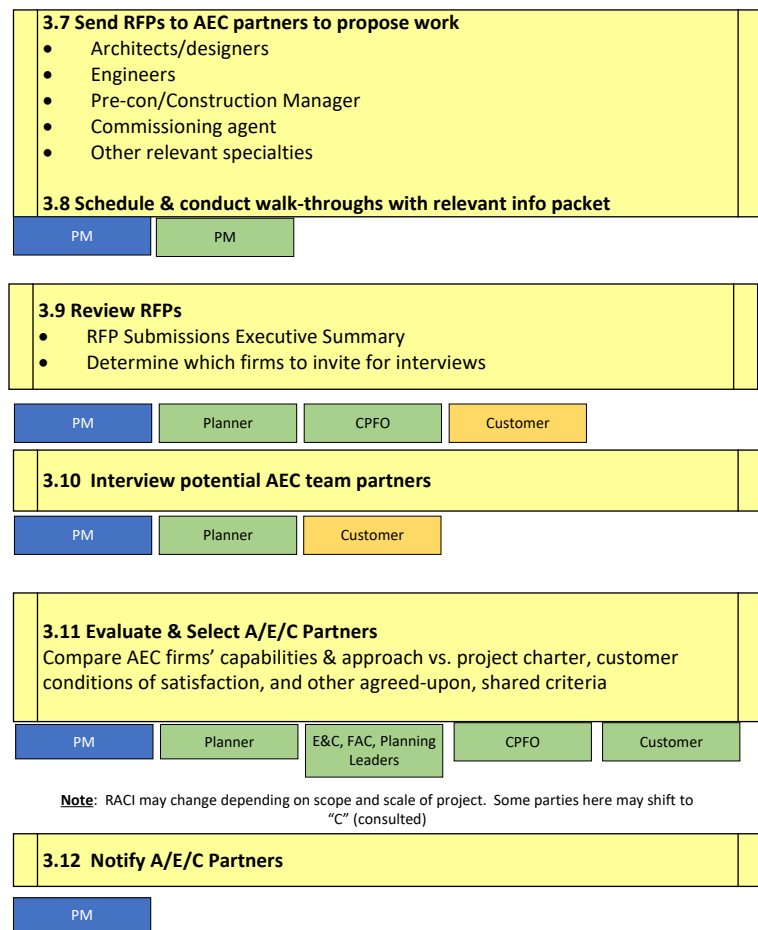
1. Develop Design

2. Actively Manage Budget, Schedule & Risks

3. Plan for O&M

Goal: AEC team understands scope and Conditions of Satisfaction for process and project success.

Goal: Planning, E&C, and Facilities and AEC partners perform design and constructability reviews and collaborate to regularly make problems visible, and the team works together to resolve. All team members contribute ideas and alternatives that can ensure the team delivers the customer's conditions of satisfaction, budget, and schedule.
Outcome: The team has a clear picture of what the project will look like, how it will be executed, by when.



Architect/Engineer/CM Interview/ Selection Report (use std template) on how/why chosen

Contract

Updated PMP with:

- added team members & roles
- Commissioning needs
- Risks Register: inc. Constructability issues, space constraints, ACM/hazmat needs, other
- Enabling projects & relevant infrastructure needs that will be addressed by this project
- Sustainability Goals (Energy, Carbon, Water, Materials)

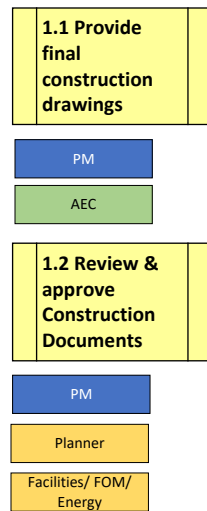
Updated PMP with Design Brief, 6-8 week Pull Plan, included

Initial O&M Plan Including schedule, trainings, and deliverables

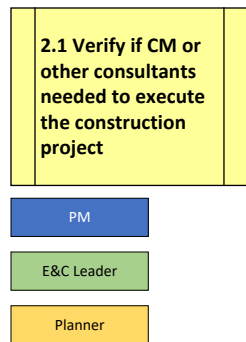


1. Deliver construction documents

Goal: PM and Construction Manager secure subcontractor partners capable of fulfilling the customer's conditions of satisfaction, budget, schedule, and project approach requirements.

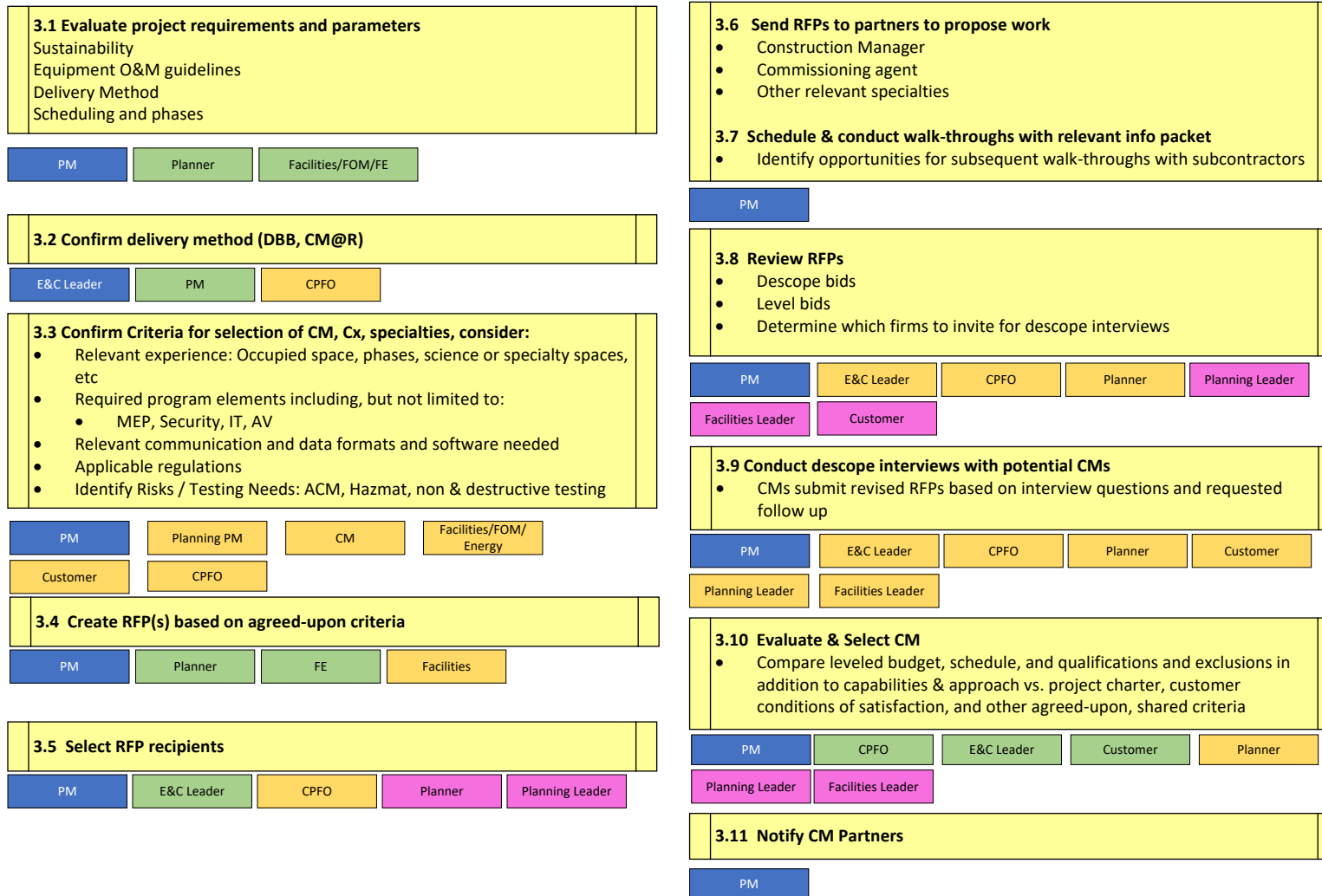


2. Project Team Evaluation



3. RFP and Project Team Awards

Goal: Identify the CM best able to delivery the project on time and on budget. Finalize the project budget based on input from the CMs using the contract document set.

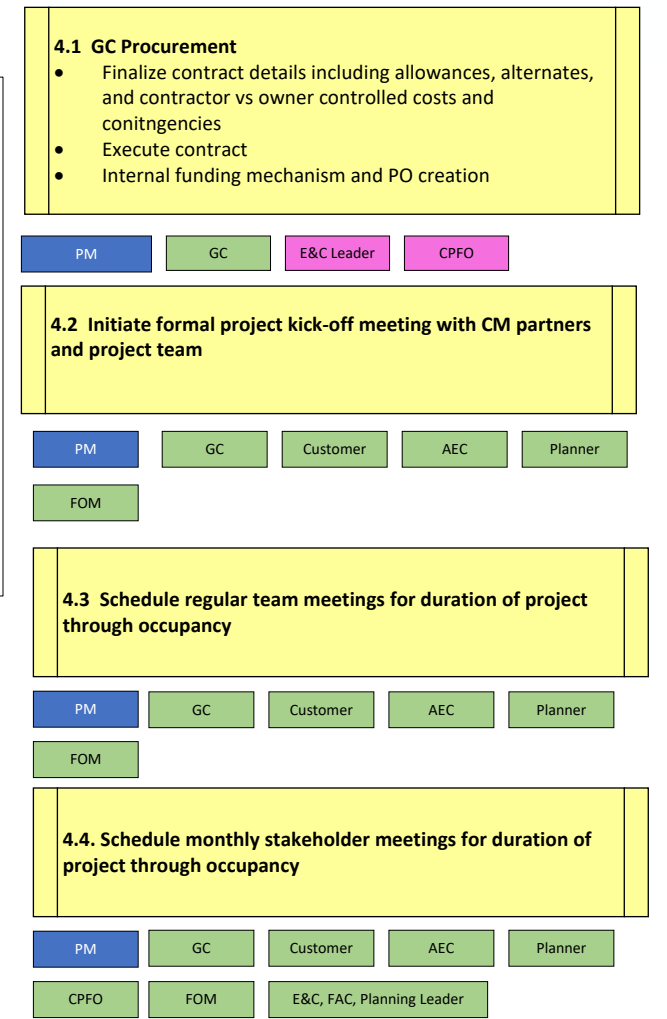


RFP (use standard template) with relevant information/packets

Architect/Engineer/ CM Interview/ Selection Report (use std template) on how/why chosen

4. Onboard CM

Goal: Contract with GC is executed and team understands scope and Conditions of Satisfaction for process and project success.



- Final Budget and Schedule approved by CPFO
- Committee Notifications
- Construction Administration Approved by HU (HU CAPS Step 2)

Contract

Updated PMP with:
 • added team members & roles
 • Commissioning needs
 • Risks Register: inc. Constructability issues, space constraints, ACM/hazmat needs, other
 • Enabling projects & relevant infrastructure needs that will be addressed by this project
 • Sustainability Goals (Energy, Carbon, Water, Materials)

I. Construction Mobilization
Phase Owner: Project Manager

J. Construction Phase/Install & Commissioning
Phase Owner: Project Manager



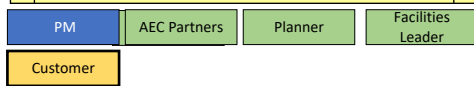
Goal: PM, CM and AE team collaboratively manage production, make reliable promises, identify constraints and escalate to leadership as needed in order to resolve and ensure the team delivers the customer's conditions of satisfaction, budget, and schedule.

Goal: We make use of available information to start the O&M process so that Facilities is prepared and trained upon turnover, and we prevent emergencies and failures of customer's systems and equipment.

Goal: PM, CM and AE team collaboratively manage production, make reliable promises, identify constraints and escalate to leadership as needed in order to resolve and ensure the team delivers the customer's conditions of satisfaction, budget, and schedule.

1.1 Update next 6-8 week Pull Plan Schedule to align with Milestone Schedule. Includes:

- Designs & reviews
- Demo
- Construction start
- Critical path construction schedule
- Long lead items
- Purchase & delivery plan
- Enabling project work
- Commissioning
- FFE install
- Decisions needed by area ("last responsible moments"), including when customer makes what decisions
- Target Move-in date



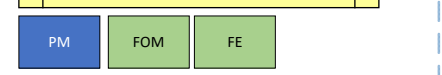
1.2 Develop construction mitigation plan – Evaluate operational impact. Substantial changes, revisit step E 3.1



1.3 Develop communications plan based on schedule, key stakeholders, and project approach



2.1 Evaluate as-built / asset info processes to integrate into GC scope



2.2 Identify special operation conditions (temp, humidity, etc.)

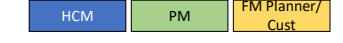


2.3 Update preventive maintenance plan/schedule as needed



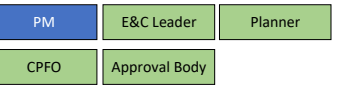
1.1 Walk space and perform huddles regularly, includes updates on:

- Schedule
- Budget & potential use of contingency vs. CO
- Risk log
- Any issues affecting scope or design



2.1 Evaluate and execute necessary use of contingencies or conditions warranting a CO

- Decision matrix
- Get required approvals using project decision tree
- Adjust budget



Weekly Huddle: OAC Meetings



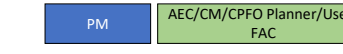
Weekly Huddle: EC/FM Mtg.

Forum for ongoing Turnover – critical topics to cover:

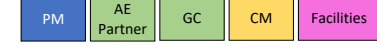
- Schedule Updates
- Training – schedule as needed
- Walk thru requests, etc
- Determine probable Facilities Shakedown Period



Monthly Huddles: Stakeholder Meetings



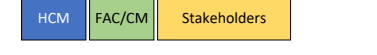
3.1 Submittals



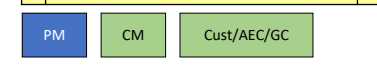
3.2 RFIs



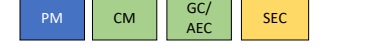
3.3 Shutdowns



3.4 FFE install coordination



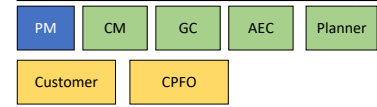
3.5 Security install



3.6 Signage



3.7 Mock-ups and sample review



4.1 HFE/FFE Punchlist items

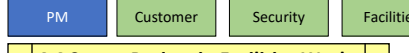


4.2 Move management & coordination

Contact list (Facilities, Custodial, etc)



4.3 Keys / access to space

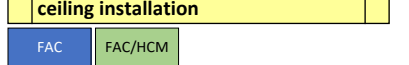


4.4 Set up Project in Facilities Work Order System (Job Plans, Schedule Frequency)

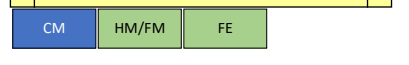


4.5 Perform inspection & identify deficiencies. Start to finish.

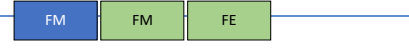
4.6 Conduct walkthrough before ceiling installation



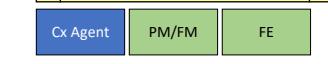
4.7 Track Asset "adds and deducts"



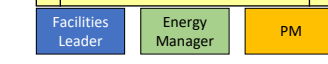
4.8 Issue new asset tags



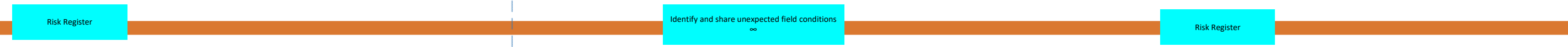
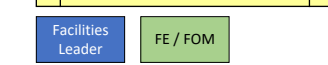
5.1 Commission project/building/system



5.2 Facilities review Commissioning for operational readiness.



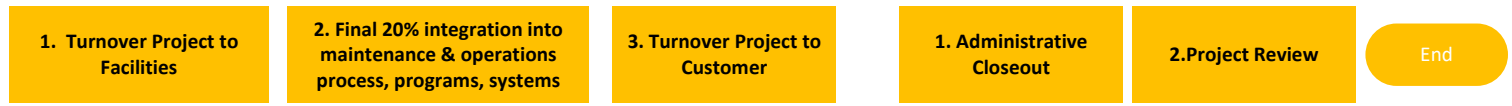
5.3 BAS Trending PT checklist alarm set points



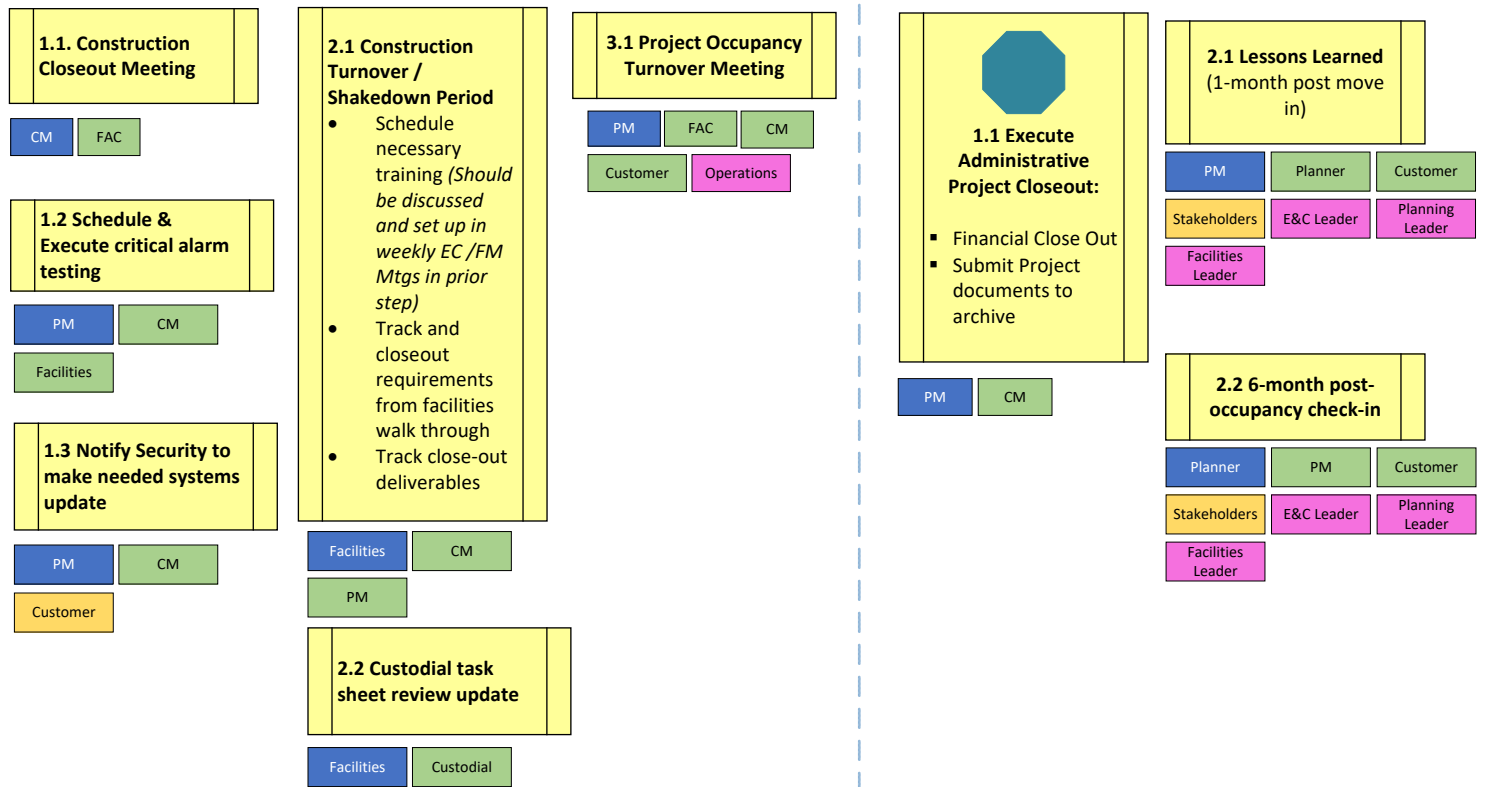
Conduct meetings, share meeting notes, make visible: decisions & action items & resolution; actively update Harvard central files (SharePoint) with critical project information and documents (e.g. pull from ProCore, Ebuilder, etc.)

K. Project Turnover
Phase Owners: Project Manager and Facilities

L. Project Closeout
Phase Owners: Project Manager and Facilities



Goal: Completed space is fully functional in accordance with customer's conditions of satisfaction, Facilities is ready to maintain in accordance with their operational conditions of satisfaction. No outstanding punchlist items. Adequate Facilities Shakedown periods based on complexity of project and schedule.



Updated floor plans
Close-out package, inc.:
O&M manuals
As-builts
Warranties

Close-out package archived
Lessons Learned
Improvement Goals

