

Subpart D – Planning

4.01 Project Planning Phase

The planning phase is the process of taking the concepts developed in 3.01 and developing additional detail to further define and explain concepts and includes the following:

- Design team, proposal and selection (may include the concept firm)
- Start developing detail scope, drawings and specifications.
- Identify assumptions regarding building systems, materials, commissioning and infrastructure.
- Develop detail needs/assumptions for clinical, IT, furniture and equipment.
- Evaluate and finalize co-worker and clinical work flows
- Evaluate and finalize patient and visitor flows
- Determine user group and design team responsibilities.
- Identify existing facilities impacts.
- Identify risks, policies requirements, site logistics and procedures.
- Confirm schedule, budget and business plan.
- Select type of construction delivery method.
- Identify approval requirement of Authorities Having Jurisdiction (AHJ)

The PM will need to lead the efforts of the planning phase and selecting Architect, Engineers, consultants, user groups and vendors. There should be a coordination meeting between the concept phase group and the new planning phase group to assure the information in concept phasing has been communicated to the planning group in the transition. The PM and the design team will recommend the results of the planning process to the Regional Director for coordination of SSU/SMHS for approval.

Planning, Design and Construction Process "Planning Phase"

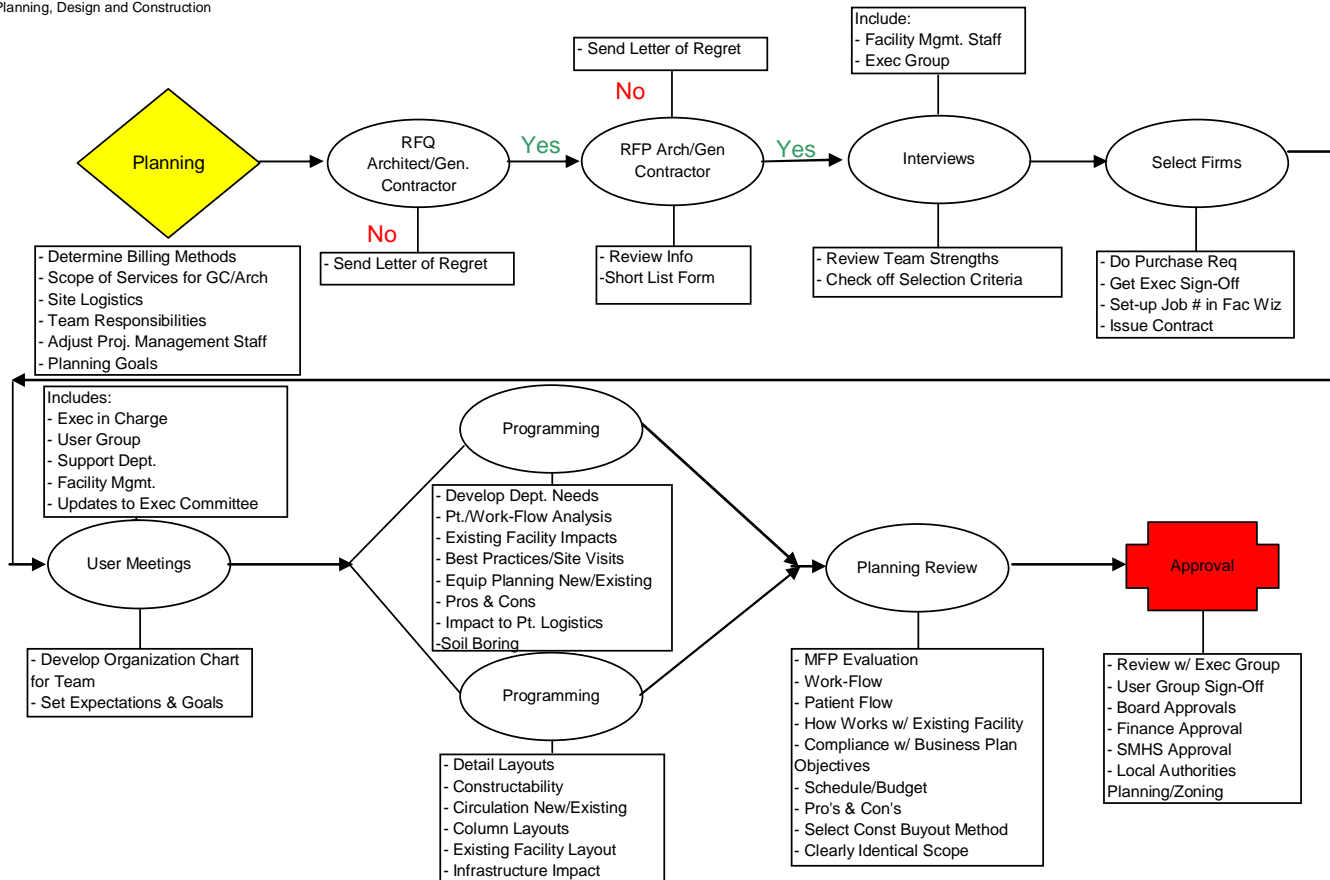


Figure 4.01.A

4.01.1 Purchase Requisition

Before moving forward, the PM should review existing purchase requisitions from concept planning and see if additional funds are needed to complete planning and design. It is important to get approval for total design costs up to the start of construction. At this point, the requisition should be adjusted and submitted for approval as in Subpart B. Once this is signed and approved, the PM can start the planning process and issue contracts. All contracts should be sent to the regional office for signatures. Minor routine projects will be signed by the local PM and executive group.

4.01.2 Organizational Chart

The design team should reassess the user group assigned to develop the project and see if the organizational chart for user groups needs to be adjusted. If so, this should be done and approved by VP in charge of project. This is the group that

will work with the PM and design team to develop the entire project so it is critical to have the right group (See Figure 3.03.1.1.A or Exhibit 3.03.1.1.A for design user group organization chart and see Figure 4.01.2.A or Exhibit 4.01.2.A for design team organization chart).

HH Project Org. Chart

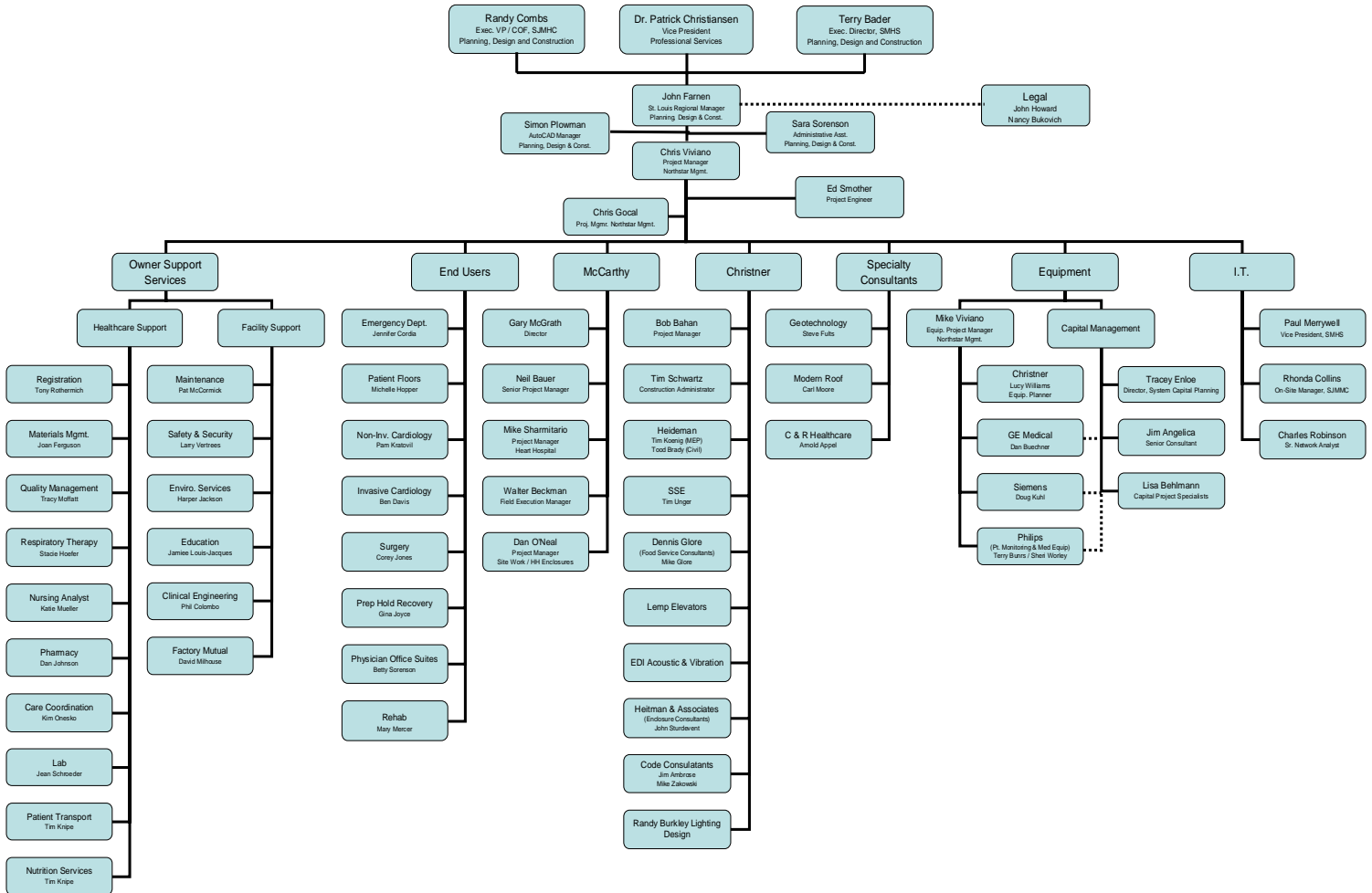


Figure 4.01.2.A

4.01.3 Confirm Goals and Expectations

The PM, VP, and design team should also re-visit the projects goals and expectations at this point. Any adjustments should be made then the goals and expectations should be shared with the user group. This should set expectations for what success will look like when the project is complete. This helps the users determine what the designers need to do to meet the goals and expectations.

4.01.4 User Group Meetings

The PM should schedule regular meetings with the user groups which will include all clinical and non-clinical departments to start developing the details of the project. The frequency of the meetings should be determined by the design team and PM based on project schedule and difficulty. The PM should attend all the meetings to make sure progress continues. The design team should develop an agenda to meet schedule obligations but the PM should approve. The PM must work closely with the VP to assure attendance of these meetings by the appropriate personnel. The success of these meetings will significantly influence the success of the project.

4.01.5 Challenge Work Flows

This is another opportunity for the PM and design team to challenge the departments and overall facility work flows. It is important to take advantage of the consultants, vendors and site visits to ensure that patients are being served in the best way possible; this should also include all support groups. The PM should challenge the overall building and campus flow for patients, visitors and staff. Will this project make conditions better or worse for departments in the project or outside the project scope?

4.01.6 CM/GC

For MFP projects and identified significant routine projects, the PM, following the RFQ/RFP process in Subpart C, should bid out the project to three or four general contractors using the SMHS standard pre-construction and construction services form with GC. For minor routine projects, the PM should determine the best method for buyout but should always be competitively bid to at least three contractors. The GC's preconstruction costs should be included in the planning requisition approved. Once the GC is selected, a contract for pre-construction services only should be issued. The PM should then have the GC start reviewing planning for constructability, budget and schedule. The GC should do all budget and constructability reviews with the PM and design team to assure that the project stays within the budget though the planning and design phase for MFP and significant projects that are bought out this way.

4.01.7 Commissioning

Commissioning is where people, processes, equipment, and systems are put through a series of operational and performance tests prior to building occupancy to ensure that the systems and equipment operate/ perform as per the design intent. It is essential that the concept of commissioning be considered at every step of the project process. Typical items that should be commissioned are building components (skin), Building systems, roofing, clinical equipment, MEP systems, IT systems, Owner's maintenance staff, and Owner's operational/maintenance programs. There are two basic steps to consider with

commissioning; the Design Phase and the Construction Phase. Each are outlined as follows:

Design Phase

- Establish basis of design intent (project concept)
- Identify performance criteria (planning)
- Define measurement methods/checklists (planning)
- Multi-Discipline input/review (planning and design) (including Owner's input)
- Identify steps/actions to ensure a coordinated system design

Construction Phase

- Confirm submittals and shop drawings conform with Design Phase information
- Ensure materials and installation conform with construction documents
- Perform functional testing (using checklists prepared in planning) and prepare written reports
- Uncover problems and resolve as soon as possible
- Ensure multi-discipline review
- Coordinate thorough training of Owner's staff including use of operating and maintenance manuals, in-service/start-up observation, etc.
- Consider timing of seasonal performance checks
- Establish warranty process

There are a variety of resources associated/involved with the commissioning process. The project's PM and regional director should consider these tasks (noted previously) and evaluate/determine the most appropriate resources to perform the various tasks. This should be determined during the planning process and then well documented for use in implementing project plans.

4.02 Planning Documentation

The PM at this point will need to confirm all of the concept plans. Such as department needs, work flows, patient/visitor flows, best practices and support needs are agreed to by everyone on the team.

4.02.1 Develop Departmental Detail

The design team will be expected to take the concept plans and continue the design process. The departments will start taking shape and appearing on drawings in detail showing offices, hallways, cubicles, exam rooms, nurse stations and storage. The PM can start walking the department through their space to understand how it will be laid out. This is when work flow and patient flow can really be tested (See Figure 4.02.1.A or Exhibit 4.02.1.A).

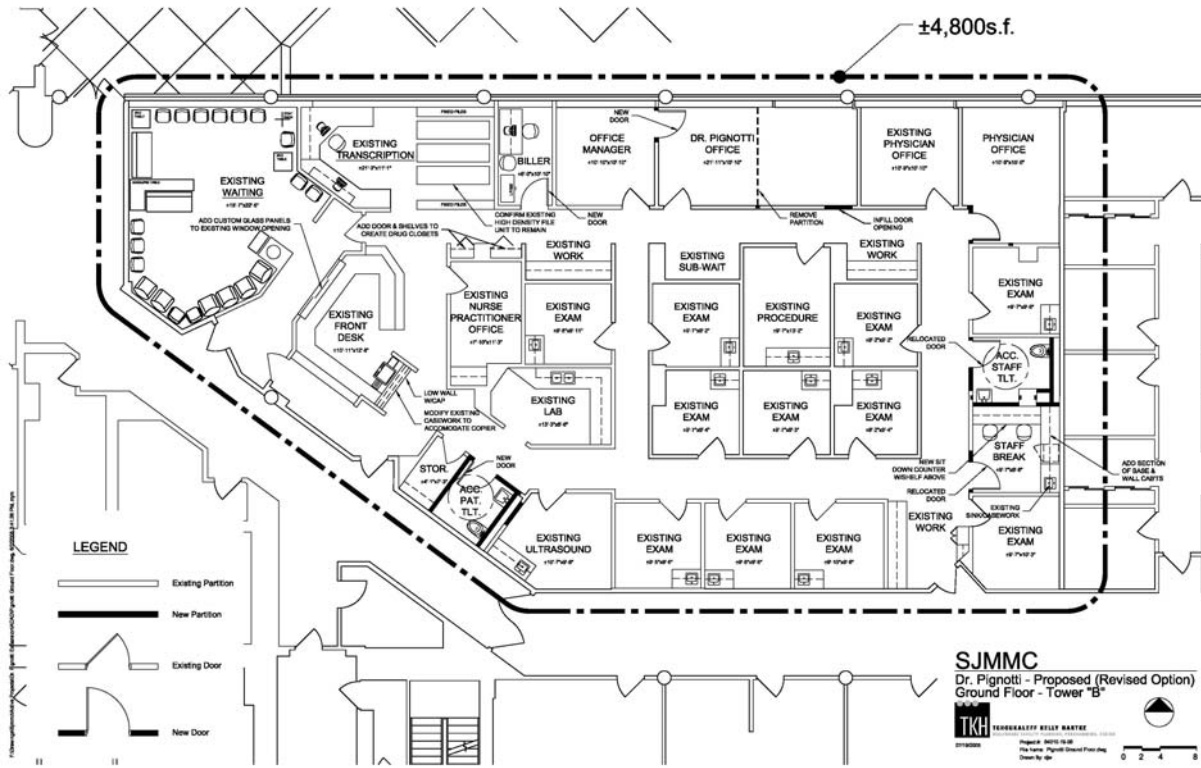


Figure 4.02.1.A

4.02.2 Infrastructure

At this point, the design team will start laying in columns, chases, data rooms, closets, electrical rooms, mechanical rooms and such. At this time they will start designing the mechanical, electrical, plumbing, data, phone and other infrastructure systems for the project. The PM will need to work with the maintenance department to determine the type of systems, controls and features the building will need. The PM will also need to meet with risk, safety, administrative nursing, clinical engineering, respiratory and other support groups to determine any special systems the building needs such as infant abduction, nurse call, acoustics, vibration, cable, equipment tracking, filtering, emergency back-up systems, cooling, software, IT and equipment are required.

4.02.3 Existing Facility

The PM needs to make certain when designing a new space that requires added capacity that the existing facility infrastructure can handle the load. For larger projects it may require added utility space to meet project objectives. For larger Master Facility Plan's, a study of the existing infrastructure may need to be undertaken. If tying a new building into an existing building it will be necessary to design any upgrades needed to that existing building such as sprinklers, alarms, seismic, access through, utility tie-ins routings and life safety. This related work will need to be designed and budgeted to meet the schedule of the main project.

Any vacated space by expansion or relocation will need to be verified. The PM should meet with administrative group to determine use of space to budget appropriately.

4.02.4 Best Practices

The PM will also need to have the design team and user groups check other best practices in local area and outside local area. The PM should test existing, visit other sites and utilize consultants when reviewing work flows, patient flows, building systems, equipment, IT and department design. The SMHS design team should always try to see best practices in other places. (See CF 330 and Exhibit 4.02.4.A).

4.02.5 IT / Equipment Detail Process

The PM should start developing the equipment and IT list by gathering specifications and requirements from vendors so design team can size rooms, work stations and data rooms. At this point, the vendor for equipment may not be known so the room may have to be designed to fit the worse case of equipment being considered. This will also be needed to complete the mechanical, electrical and other utility designs. The equipment process for construction should be followed. (See CP 004).

4.02.6 Visitor / Patient Logistics

The design team needs to also track the visitor and patient flows when doing renovations or building additions. For example, if the patient/visitor is in the new building, how do they access the cafeteria, chapel or other departments in the existing facility? If the patient/visitor enters the existing facility to go to admitting, how do they get to new building? How does CS supply new building? It is very important to track patient/visitor flow from the time they drive onto campus from the time they reach their final destination.

4.02.7 Design Team

Any soil borings, hazardous material testing, existing system(s) capacity testing or any other design testing required for the project should now be underway. This should all be included in the owner directs and approved on requisition for planning and design services. The PM should also test parking counts for any building adding square footages or increasing volumes significantly.

4.02.8 Documentation

The design team will be writing specification criteria and standards for the project. The design team will also produce drawings showing column layouts, mechanical space, electrical space, departmental layouts, data closets, clean rooms, soil rooms, chases, windows, exterior finishes, parking, circulation, existing facility changes needed, utility tie-ins and vertical access depending on

size of project. Again, the CM/GC or that has been brought into the design team should at this point be verifying constructability and budget compliance.

4.02.9 Schedule / Budget Compliance

Once all of the planning documentation has been completed, the PM should verify the status of the budget and the schedule. If the GC/CM has been employed and is now part of the team, the first thing the GC/CM should do is review the scope, drawings and schedule to verify where the team is to date on schedule and budget. If it is determined that the current scope is over budget or schedule, then the PM, GC/CM and design team will need to review scope to make appropriate changes to bring the project back within targets. If this can not be achieved, the PM should meet with the regional director to determine what should be done to re-evaluate target budget or schedule.

4.03 Planning Documentation Approval

Once the planning documentation is complete and the goals are met, it is important that the entire team including the design team, user groups, support groups and the executive group complete a final review of the project. On MFP and significant routine projects, the PM should be able to use the team organization chart that was created to ensure that everyone was included. The entire team should sign-off and approve the documents or drawings that are complete to date. It is important that the entire user group agrees that the project workflows are appropriate for the uses of the space. This needs to be documented with signatures.

4.03.1 Support Groups

The PM, design team and clinical departments need to walk-thru the overall project logistics with the support groups. The PM should discuss circulation of the staff, patients and visitors in the existing facility and new if applicable. The PM should also discuss what systems are in the project such as pneumatic tube, infant abduction, back-up power, paging, security, MEP, telemetry or other systems impacting support groups. Once the review is complete, the support groups should all sign-off on the drawing. If changes were recommended then the PM should make the changes, as acceptable, and then get the group to sign-off. Any mock-ups, renderings or MEP specifications agreed to should also be signed off on.

4.03.2 Department User Groups

The PM and the design team should meet with all of the departments individually or together where departments affect each other to review the plans. This review should include the staff work flow, support department work flow, patient/visitor flow and review of the project goals. Once the review is complete, the user groups should all sign-off on the drawing or they should sign after all acceptable

changes are made. Mock-ups, renderings and MEP specifications agreed to should also be signed off on.

4.03.3 Executive Group

Once all reviews and approvals are complete with the support and user groups, the PM should then set-up a meeting with the executive group. For the MFP and significant routine projects, this should include the regional director which will be part of previous reviews. For minor routine projects, this will all be done at the local SSU. The review with the executive group will include the PM, design team, regional director and VP in charge of project. The review will include overall project drawings, work flows, patient/visitor flows, impacts to existing facilities, schedule, budget, business plan, risk analysis and goals. The comments from this meeting should be recorded by the PM to be used in finishing the design. The executive group should then sign-off on plans with comments. The PM will work with the design team and the VP in charge will review which comments to incorporate into the project as appropriate. On approval of above VP should secure additional approval as appropriate, CEO, Board, SMHS, etc.

4.04 Local Authority Approvals

Once the PM has all the appropriate approvals they should proceed with getting whatever approval is required by the local jurisdictions such as state architect, city planning committee, city zoning and public works departments. If the local authority approval process needs to start sooner, the PM needs to work with the regional director for approval to begin on this process.