

**201.101 – GENERAL PLANNING REQUIREMENTS****1.1 INTRODUCTION**

- A. **Planning Overview.** Hospital planning is often a strategic response to addressing functional and environmental needs. BJC has developed a process to identify and evaluate a hospital's needs based on many factors. The end result of planning is the development of a program that identifies and establishes the project requirements. On some projects, assistance from contracted design professionals is required.
- B. **Purpose.** The purpose of this document is to define and communicate key elements and expectations of the planning effort for hospitals. As always, coordination with project-specific requirements is essential.
- C. **Refer to Chapter 1 – *Overall Policies Guidelines and Standards*,** for general planning and design requirements.

**1.2 PLANNING PHILOSOPHY**

- A. **Performance-Based.** The planning process for hospital is rooted in performance based design. Operational decisions drive functional responses that result in physical outcomes. Form follows function.
- B. **There are two primary characteristics defining the approach to the design of interior hospital environments - Patient-Centered and User-Supported.** These characteristics reflect BJC's core values: Patient Safety, Healing Environment, and Staff Efficiency and Satisfaction.
  - 1. **Patient-Centered.** Design with the patient in mind is a fundamental concept with the design of all BJC environments. Creating environments that center on the patient experience and support a healing environment is our top priority. Every decision must consider and support the patient perspective. The notion of healing environments must include all aspects of the environmental experience. Important factors to consider range from the obvious physical responses (handrails to patient restroom, etc.) to the less perceived psychological elements (thermal comfort, acoustic privacy, quality of light, etc.). All elements are design with the patient response in mind.
  - 2. **User-Supported.** PD&C also places great emphasis on designing for nurses, physicians and all who provide direct patient care. By developing hospital environments to maximize staff efficiency and satisfaction, the level of care can increase. Staff engagement during the development of each project is important to understand the delivery of patient care.
    - a. **User-Supported versus User-Based.** User-Based permits all operational decisions at the local/departmental level to influence the outcome. BJC has developed best practices for many clinical areas through research-based analysis, case studies, and other metrics. The outcomes have resulted in standards and designs that maximize efficiencies and reinforce patient safety.

### 1.3 PLANNING PHASES

- A. SCP. Planning activities begin as early as the development/updating of the Strategic Campus Plan (SCP). The SCP sets the foundation for fundamental decisions that respond to changes in clinical services and existing infrastructure. Through the development of the SCP, project opportunities are identified. Those projects are evaluated and considered for Multi-Year Modeling and Capital Budgeting.
- B. Program. The planning effort for hospitals extends to the end of Pre-Design and the start of Schematic Design. The development of the PMP and program

### 1.4 PROJECT DELIVERY

- A. CM At Risk. Most often, hospital projects are delivered as CM at Risk. This approach suggests that a General Contractor is engaged during the development of the documents for pre-construction activities. These may include budget development/cost estimating, phasing coordination, existing conditions reporting, and other efforts as needed to work through issues that may impact the operations of the hospital.
- B. Coordination. Whether a project is delivered as CM at Risk, Design-Build, Design-Bid-Build, or any other approach, it is imperative the documents prepared by the design team be clear, complete, concise, coordinated and correct. The design team must be able to coordinate the design with the

### 1.5 DELIVERABLES

- A. General Deliverables. General deliverable requirements are listed in Exhibit 2 of the agreement. The exhibit document is designed to be a checklist and quick reference for the design team and owner to use on each project to understand the required deliverables.
- B. Planning (Pre-Design/Programming) Phase. The following deliverable requirements for the Planning (Pre-Design/Programming) Phase will be identified by the Planning Group. Design team may be involved to assist in the development of the documents.
  - 1. Design Schedule. The design schedule is issued at the start of the project and is updated regularly by the design team. Use the standard design schedule template in Chapter 1.
  - 2. Operational Analysis. An operational analysis documents functional issues, workflow problems and space deficiencies within an existing department or service line and operational improvement initiatives or technology investments for the future.
    - a. Department and Facility Assessment. These may include SOC's, facility and department conditions,
    - b. Utilization Analysis and Volume Projections. Utilization analysis and volume projections are used to document through-put and capacity within an existing department or service line and future demands for a specified time frame. The number of key rooms can be quantified using this information to form the basis for space programming.
    - c.
  - 3. Program. Two types of programs may be required.
    - a. Functional Program. The functional program documents existing and future state operations and specific functions that will take place in the spaces of a proposed

project, both individually and collectively. The functional program should provide a description of the scope of services and operational concepts as well as the numbers and categories of people, systems, and equipment necessary to operate the department or service line at a projected workload level. It should also address facility layout considerations, flow of people and materials, necessary and desired physical proximities, and opportunities to achieve operational flexibility and accommodate future growth.

- b. Space Program. There are two types of space programming that may be required.
  - 1) High level space programming establishes a departmental gross square footage (DGSF) per key room using comparable projects and benchmarking.
  - 2) Detailed space programming provides a comprehensive list of every room or space required for the project, the net square footage (NSF) of each room or space and the quantity for each room or space. The net square footages are added together and multiplied by a factor to account for departmental circulation, walls, etc. and get to a DGSF. Building gross square footage (BGSF) can be calculated by multiplying the total departmental square footage by a factor appropriate to the project type to allow for exterior walls, building circulation, MEP systems, etc.

- 4. Diagrams. Two types may be required, depending on project conditions.
  - a. Adjacency Diagram. Adjacency diagrams are used to establish future state key adjacencies, patient flow, staff flow, etc. to graphically communicate the intent of the functional program and the approximate size of spaces as identified in the space program.
  - b. Massing and Stacking Diagram. These diagrams communicate groupings of spaces and relationships of clinical departments, including vertical connections.
- 5. Circulation Analysis. Interior and Exterior analysis may be required.
- 6. Project Management Plan (PMP). The PMP is a document used to identify fundamental components of the project that affect the development. The PMP consists of 3 parts.
  - a. PMP 1. This part identifies the general project information, objectives, project conditions, scope and budgets. This is typically prepared by BJC Planning with input from the facility.
  - b. PMP 2. This part provides more detailed plan of the project and considers schedule, room standards, and design requirements, design standards. This part is typically prepared by the hospital with input from BJC Design and Construction.
  - c. PMP 3. This part provides a more detailed review of the applicable codes, licensing and regulatory requirements associated with the design, construction, and operation of the facility. This part is to be prepared by Architect with input from the facility and BJC.
- 7. Planning and Zoning Requirements. Documents as needed to support presentations to Planning and Zoning commissions and/or Architectural Review Boards. Attendance and presentations at public meetings may be required
- 8. Other Supporting Documents. There are several supporting documents that may be required as part of the development of the program. The documents support the business case and will be developed by BJC Planning as needed. In some instances, support from design professionals may be requested. These documents are as follows:

- C. Schematic Design Phase. Possible project deliverables are indicated below. Design team should understand that the checked items in the Exhibit 2 may not represent a complete list of deliverables

required for the project. Additional deliverables may be required to help communicate the design intent.

1. Drawings. Drawings are generally 2 dimensional, non-illustrated depictions of the project. In general, the types of drawings required at this phase include preliminary plans, elevations, and code compliance information. There should be sufficient information to clearly convey the project's major concepts.
2. Illustrated Drawings. Illustrated drawings may be selected for several reasons including reviews by leadership or project stakeholders not normally trained to read 2 dimensional drawings. Requirements of drawings will be determined on a project basis.
3. SD Project Manual. The specifications shall follow MasterFormat 2004 which is the 50 division format. The SD manual is in essence an outline spec. It is important to note that not every technical section needs to be completed and submitted at this phase. PD&C is interested in reviewing those products and materials that represent the greatest cost and biggest risk, those that are most common to construction, and those unique to the specific project. This outline should contain a list of items, organized by product/material describing basic characteristics. For instance, if resilient base is likely planned for a project, and the design team understands the PD&C standards, then the outline spec might look like the following:

*096513 Resilient Base and Accessories  
Type: TP, rubber  
Height: 4", match existing base  
Color: Match existing base  
Lengths: Coil  
Corners: Job-formed*

4. Cost Opinion. PD&C is interested in the design team's understanding of construction costs from similar past project experiences. This is a typically a cost per square foot analysis and is used for general purposes only. It is important to emphasize that this is listed as an "opinion" and not an "estimate".
5. LEED documentation. When and as required, LEED documentation may be required on projects pursuing LEED certification. The specific requirements will vary depending upon project-related issues and the submission process should be discussed at the start of the project.
6. Structural Engineering Deliverables. When structural engineering professional services are requested, provide deliverables as directed by the PD&C project manager or as is consistent with the list of deliverables requested of the design team.

END OF DOCUMENT

### RESPONSIBILITY MATRIX

The following matrix identifies those individuals, roles or departments responsible for maintaining the accuracy of the information and those responsible for providing input. Refer to Preface for detailed explanation.

	BJC HealthCare												Hospital/Entity					
	PD&C						Clinical Asset Management (CAM)	Risk Management	Real Estate	Ergonomics	Infection Prevention (IP)	Info Systems, Data, Telecom (IS)	Other:	Standards Review Committee	Facilities Engineering	Housekeeping	Security	Other:
Corporate Architect	Corporate Engineer	Director of Planning	Director of Design	Director of Construction	Other:													
Primary Authorship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary Authorship	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### DOCUMENT REVISION HISTORY

The following table indicates the date the document originated and any subsequent revisions.

Document 201.101		
Issue	Description of Issue	Prepared by
2012 v1	Original Issue	G. Zipfel
2016 v1	Reorganization and updates	G. Zipfel
2018	Renumbered and reissued	G. Zipfel