# **Table of Contents**

Foreword by Michelle Trott, AIA, NCARB, ACHA, CPL Architecture Engineering Planning Foreword by Herman A. McKenzie, The Joint Commission

#### Introduction

**Readers of This Book** 

**Purpose** 

**Content and Organization** 

Chapters

**Key Terms** 

Joint Commission and Joint Commission International Standards

Manuals to Consult

**Common Themes** 

Acknowledgments

**Other Contributors** 

## Foundations: Standards and Regulations

Joint Commission and Joint Commission International Standards

Standards and the Physical Environment

The Facility Guidelines Institute

The FGI Guidelines

# Other Relevant Standards and Regulations

US/Domestic Standards and Regulations

International Standards and Regulations

Codes per the Authority Having jurisdiction (AHJ)

## Chapter 1: Planning

## Types of Planning

Strategic Planning

Master Facility Planning

Project Predesign Planning

The Strategic Planning Process

## The Master Facility Planning Process

Confirmation of the Strategic Plan

Documentation of the Current Situation

**Determination of Future Functional Space Requirements** 

Development of the Master Plan

#### **Detailed Functional and Space Programming**

**Functional Program Overview** 

Developing an Operational or Functional Program

Evidence-Based Design

#### Logistics and Organizing the Planning Process

Assembling the Project Team

Budgeting

Case Study: Health Equity: Friend Family Health Center, Chicago, IL

Woodlawn Family Health

Case Study: Planning: Sarasota Memorial Hospital, Sarasota, FL

#### Case Study: Staff Well-Being: Royal Liverpool University Hospital, Liverpool, UK

## **Chapter 2: Design Process**

# Predesign

The Functional Plan

Risk Assessments During Predesign

Process Improvement During Predesign

#### Schematic Design

**Testing Design Alternatives** 

Documentation

Revised Budget and Schedule

## **Design Development**

Interactive Teamwork

Space Planning and Standardization

Regulatory Review

Documentation

Mock-Ups

Revised Budget and Schedule

## **Construction Documents Preparation**

Documentation

Separate Contracts

Revised Budget and Schedule

Case Study: Flex Spaces at Gundersen St. Joseph's, Hillsboro, WI

Case Study: Modular Design for COVID-19 Response and Beyond: STAAT Mod

## Chapter 3: Considerations for Designing the Physical Environment of Care

## Designing for Mechanical, Electrical, and Plumbing Infrastructures

Fire/Smoke Dampers

Air Exchanges

Room Pressurization

**Humidity Control** 

Redundancies

**Emergency Power** 

Fuel Storage

Microgrid Systems

## Role of Design in Design in Environmentally Sustainable Health Care

Incorporating Sustainable Design Principles

Sustainable Design Certifications

ZERO Code: A Standard for Zero-Net-Carbon Buildings

Materials Transparency: Health Product and Environmental Product Declarations

Sustainable Health Care Resources

## **Efficiency and Ergonomics**

Patient Movement

**Human Factors** 

Fall Prevention

Visitors and Family

Evidence-Based Design

Technology-Supportive Design

Patient-Centered Design Designing for Resiliency

## **Specialty Design**

Laboratories

Pharmacies

**Hybrid Operating Rooms** 

Diagnostic Imaging

Behavioral Health

Rehabilitation Services

Case Study: Sustainability: Lucile Packard Children's Hospital Stanford, Palo Alto, CA

Case Study: Sustainability: Emory Musculoskeletal Institute, Brookhaven, GA Case Study: Specialty Design: Eating Recovery Center Willow, Denver, CO Case Study: Resiliency: Ruth Bader Ginsberg Hospital, New York, NY

#### **Chapter 4: Construction**

**Construction Bidding or Negotiating** 

## **Construction Risk Management**

Preconstruction Risk Assessment

Infection Control Risk Assessment (ICRA)

Implementing Preconstruction Risk Assessment Measures

# Interim Life Safety Measures (ILSMs)

**ILSM Options** 

Implementing ILSMs

Statement of Conditions (SOC)

**ILSM Team** 

#### **Construction Activities**

Project Team Kickoff Meeting

**Construction Worker Education** 

Implementing Safety Measures During Construction

**Environmental Sustainability During Construction** 

Cleaning Up

Focus: Construction Risks and Measures

#### **Chapter 5: Commissioning**

#### The Commissioning Process

**During Planning** 

**During Design** 

**During Construction** 

**During Commissioning** 

Allowing Time for Commissioning

## The Commissioning Team

**Commissioning Authority** 

Sample Commissioning Team

#### Standards and Regulations for Commissioning

Joint Commission International and Commissioning

#### **Facility Commissioning**

**Performance Tests** 

Issues Log

Process Management with Checklists **Process Documentation** Joint Commission-Required Documentation

**Commissioning Budget Benefits of Commissioning Looking Forward** 

## **Chapter 6: Occupancy and Postoccupancy**

**Facility Orientation** Simulations

Staff Training and Simulations

# **Clinical Operations Commissioning**

Seven Medical Flows

Five Steps for COC Simulations

Effect of Workflow Processes on Medical Flows

Using FMEA

## Move-In

Issue Resolution System

# **Postoccupancy Evaluation**

Dissemination of Evaluation Findings

Use of Space

# **Survey Considerations**

**Extension Surveys** 

Focus: Moving Day

# Index

