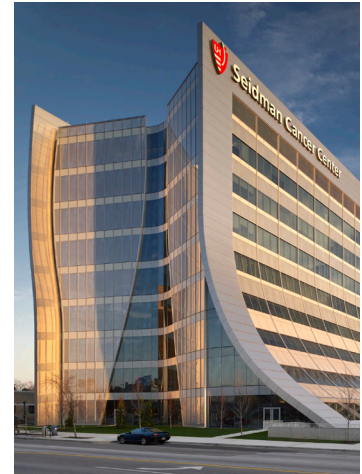


RESPONSE TO XXXX

# XXXX Medical Center

## Bed Tower Expansion and Renovation

April 11, 2014



**CANNONDESIGN**

# CANNONDESIGN

April 11, 2014

Dear Mr.

XXXX Medical Center is truly positioning to deliver "Excellence in the Care Experience" through the development of the new Inpatient Bed Tower and related renovations. We recognize that this project creates an unprecedented opportunity, but also unparalleled challenges, in the regulatory and reimbursement landscape. These challenges will force XXXX and our team to rethink the full breadth of clinical operations to ensure that the unsurpassed compassion and quality demonstrated in your patient care environment is matched by advances in your academic distinction and scientific research, all with the highest levels of performance in operational efficiency and cost containment.

**Boston**  
**New York**  
**Baltimore**  
**Washington DC**

**Buffalo**  
**Toronto**  
**Chicago**  
**St. Louis**

**Vancouver**  
**San Francisco**  
**Los Angeles**

**Phoenix**  
**Shanghai**  
**Mumbai**

As XXXX looks to tomorrow, there is no firm in the industry better positioned to partner with you in maximizing this opportunity and meeting these challenges than CannonDesign. We understand that design is a powerful tool to create innovative models of care, advance clinical quality, and deliver more coordinated, integrated care.

CannonDesign blends passion for design in a rapidly changing healthcare environment with unparalleled clinical expertise that will help you advance your "Excellence in the Care Experience." Among our qualifications:

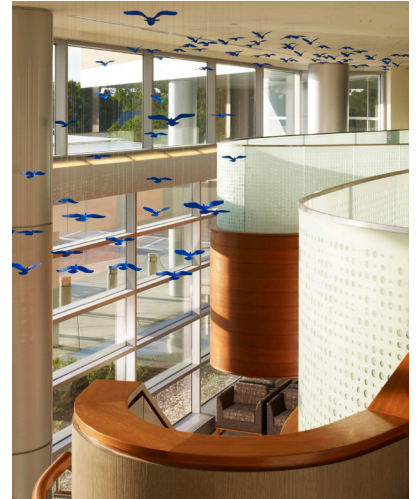
1. Nationally recognized experience in design innovation for academic medical center environments of care
2. A proprietary planning approach proven to result in operational efficiencies and cost savings in clinical care delivery
3. Globally sought thought leadership in combining technical experience, visionary thinking, and best in class benchmarks to plan for the future of healthcare
4. A commitment to developing safe environments that are operationally efficient and provide a positive, comforting patient experience with a rewarding staff experience
5. Industry leadership in creating sustainable design strategies as stewards of natural resources within the environment
6. Proven ability to balance design excellence with budget constraints to ensure a fiscally responsible facility solution in both first and lifecycle investments.

Thank you for the opportunity to submit this proposal for your review, and CannonDesign looks forward to developing a partnership with XXX. Together, we can advance your "Excellence in the Care Experience."

Sincerely,

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- 1 Executive Summary
- 2 Project Design and Management Team
- 3 Similar Project Experience
- 4 Project Approach
- 5 Budget and Code Compliance
- 6 Fee Proposal
- 7 Project Schedule/Work Plan
- 8 Insurance
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“Working with CannonDesign was an exciting and inclusive process that resulted in a high-performing and beautiful state of the art facility. The project has helped raise the profile of our pediatric services in the region and has contributed to an increase in admissions. Since its opening, we are experiencing increased satisfaction by patients, families, and staff. The knowledge of healthcare operational issues and sensitivity to the specific needs of children were translated by CannonDesign into innovative and thoughtful amenities that have supported our provision of family-centered care and excellence in service.”

Marilyn Eils, MS, RN, NEA-BC  
Director, Operations  
Women's and Children's Services  
Advocate Lutheran General Hospital



A photograph of a modern hospital patient room. The room features a bed with a white blanket and a brown fringed throw, a brown sofa, and a large window with a view of a building. The ceiling has recessed lighting and a large skylight. The walls are a light brown color. A large number '1' is visible in the top right corner.

1

"Recently my wife was a patient in the Seidman Cancer Center. Our experience there was certainly enhanced by the environment your firm has created. The attention to detail in everything from the patient rooms to the offices most definitely has a positive role in the healing process. Thank you for your contribution in helping all who enter feel a little better."

Robert Steines



**Contract Office:**

Chicago (See contact information below)

**Year Established:**

Firm: 1945

Contract Office: 1958

**Type of Organization:**

Corporation

**CannonDesign**

**Principal Office Locations:**

Baltimore

250 West Pratt Street  
Baltimore, MD 21201

Boston

100 Cambridge Street, Suite 1400  
Boston, MA 02114

Buffalo

2170 Whitehaven Road  
Grand Island, NY 14072

Chicago

225 N. Michigan Avenue, Suite 1100  
Chicago, IL 60601

Los Angeles

1901 Avenue of the Stars, Suite 175  
Los Angeles, CA 90067

Mumbai

06/21, 3rd Floor, Grants Building  
Arthur Bunder Road,  
Colaba, Mumbai 400 005 India

New York

360 Madison Avenue  
New York, NY 10017

Phoenix

829 North 1st. Avenue  
Phoenix, AZ 85003

St. Louis

1100 Clark Avenue  
St. Louis, MO 63102

San Francisco

595 Market Street, Suite 1250  
San Francisco, CA 94105

Shanghai

Room 9301, Building 9  
25 Jianguo Middle Road  
Shanghai 200025 China

Toronto

200 University Avenue, Suite 1200  
Toronto, OT M5H 3C6 Canada

Vancouver

1500 West Georgia Street Suite 710  
Vancouver, BC V6G 2Z6 Canada

Washington DC

3030 Clarendon Blvd., Suite 500  
Arlington, VA 2220

## Executive Summary

The mission, vision, and values of XXXX reinforce your strong dedication to "Excellence in the Care Experience" by delivering excellence in the patient care and the education of health professionals. Treating people with compassion and respect, you unite the best care environment with the latest advances in medicine, world-class physicians, and groundbreaking research and technology. This balance requires a design solution that supports your commitment, and is the challenge we at CannonDesign embrace. Providing highly reliable, quality care for every patient, every time, with every touch is the priority of our solutions in supporting you in your mission. Creating innovative models of care, advancing clinical quality, and delivering more coordinated, integrated care in a rapidly changing healthcare environment are powerful ways to fulfill this mission.

Already a premier medical center for patient care, research, and education, XXXX is embarking on an exciting program to develop a new Inpatient Tower. This new facility, which will include Inpatient beds, Critical Care, Surgery, Diagnostic Imaging, an MRI and related support functions, will be accompanied by a conversion of semi-private to private rooms in the existing facility. Scheduled for completion in January, XXXX, this facility will further enhance your reputation in quality, service, efficiency and financial performance.

In this proposal, you will find that the CannonDesign team has immense credentials and a personal commitment to:

***Creating an innovative model of care.***

XXXX places high value on the "Excellence in Care Experience"; nowhere is this more important than in balancing the unique and sometimes conflicting pursuits of academic distinction and scientific knowledge with compassion and care in your healing mission. CannonDesign's healthcare portfolio is among the leaders in the industry. Working from decades of award-winning design innovation in this environment, we understand how to create a landscape of care that supports more coordinated, integrated care.

***Incorporating lean operations into planning and design to reduce operating costs.***

CannonDesign recognizes that in order to be fiscally successful the Inpatient Bed Tower must be designed to support the delivery of care. By uniting our in-house clinicians, lean certified planners, and design staff with

your Operational Improvements Consultants, in house users, and other key stakeholders, we will utilize our proprietary Outcomes Based Visioning methodology which engages stakeholders to develop the right operational models that drive optimized performance. Our approach begins with understanding the current state and tests potential operational, staffing, technology, and facility innovations to determine the right mix of improvements to yield optimal performance. Our data-driven and analysis-based approach, combined with engaged users and staff input, will guide the development of an optimized flow map aligned with XXXX's unique culture and informed by industry best practices.

#### ***Improving day-to-day living experiences and bottom-line business metrics.***

CannonDesign's Outcomes Based Visioning is informed by qualitative and quantitative best practice benchmarks in our comprehensive in-house database coupled with internal and external industry research. We believe in improving design through shared, proven best practices to deliver high-quality, cost-effective care in the most appropriate setting. Our expertise in operational efficiency coupled with our benchmarked best practices enable us to investigate and integrate the impact of changing processes on patients, staff, and physicians. Our informed planning approach will guide a design process to deliver better, safer, and more cost-effective outcomes.

#### ***Being fiscally responsible.***

The establishment of a comprehensive early Target Value, and on-going accurate updates, is critical to your project's success. CannonDesign, as one of the top five healthcare architectural firms in the nation, has proven protocols that ensure the design stays within the approved target value, and construction is completed without cost deviations. We recognize our team's ability to influence the construction cost declines as the design phase progresses. As a result, our team works closely with our clients, especially during the early stages of Schematic and Design Development, to analyze and define the primary building systems.

As design work commences in the Schematic Design phase, we document our solutions in three dimensional Building Information Models (BIM) to collect all project information, allowing our in house estimating team to frequently and rapidly extract quantitative and qualitative data to assure alignment with XXXX's target value.

#### ***Future-proofing your facility.***

These optimized patient flows are the foundation upon which our functional space program is based and the staffing plan is developed. A benefit of these concepts as developed in architecture is that they lead to more "universality" – less unique and limiting dedication of spaces for a single purpose, which ensures a future proof solution that can adapt to care models over time. Leveraging over 700 prototypes in the CannonDesign database, solutions can be rapidly tested and organized on proven building modules that can adapt over the building life cycle. The Inpatient Bed Tower will be able to evolve to support the rapidly changing environment of healthcare

#### ***Building sustainability into design.***

Sustainable design is part of optimizing the whole for the XXXX Inpatient Bed Tower. Our solutions are operationally efficient and environmentally responsible. Our firm is a trusted advisor to the United States Green Building Council, and we have been instrumental in the LEED Core and Shell Pilot Program (LEED-CS), including project guidance for over 250 national and international projects, and the authorship of the LEED-CS 2.0 Reference Guide. Recognizing that XXXX desires a LEED-certifiable building, but may not pursue LEED certification, our leadership in LEED will ensure that operationally efficient and environmentally responsible solutions are built into the design of the new tower and related renovation projects. By applying a "Good/Better/Best" systems planning method, the project team can identify building system options and their associated first cost, long-term cost, and return on investment. CannonDesign analyzes all building systems, architectural, and interior design elements to identify potential cost effective, high performance sustainable design approaches.

#### ***Ensuring the commitment of professional staff to provide project leadership.***

CannonDesign has pledged our most valuable asset – our people – who bring the experience, expertise and compassion that will be integral to the XXXX Inpatient Bed Tower project success. Team synergy is in place and ready to work for XXXX.

Our proposed team has extensive experience working together on similar projects and we commit to their availability throughout the project.

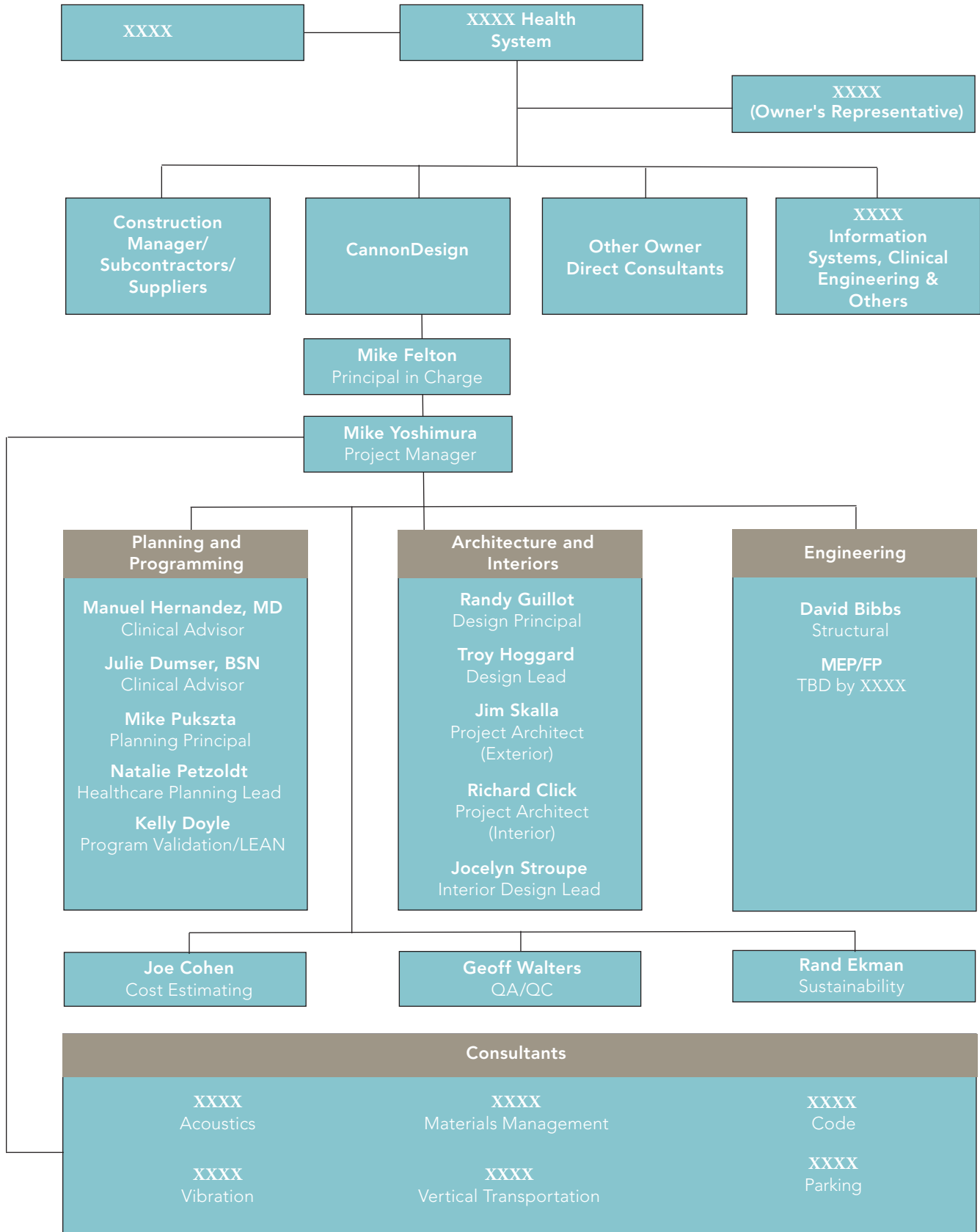


A photograph of a modern, multi-story hospital building at dusk. The building features a prominent glass facade and a courtyard area below. The courtyard is paved with light-colored tiles and contains several tables and chairs, along with some landscaping. The building's interior lights are visible through the glass windows, and the sky is a deep blue. A large number '2' is positioned in the upper right corner of the image.

2

CannonDesign's multidisciplinary team of MDs, RNs, strategic planners, LEAN operational specialists, architects, engineers, and interior designers create bed towers that are not only patient and family friendly, they are operationally efficient for staff.

## 2. PROJECT DESIGN AND MANAGEMENT TEAM





## 2. PROJECT DESIGN AND MANAGEMENT TEAM

### Team Member Project Assignment and Involvement

The chart below indicates each team member's project assignment and expected percent of involvement at various stages of design and construction for the XXXX Medical Center Bed Tower Expansion and Renovation project.

PROJECT TEAM TIME COMMITMENTS						
NAME	ASSIGNMENT	PD	SD	DD	CD	CONST
MIKE FELTON	Principal in Charge	20%	20%	20%	20%	20%
RANDY GUILLOT	Design Principal	50%	40%	30%	20%	0%
MIKE YOSHIMURA	Project Manager (Process Leader)	90%	90%	85%	75%	45%
TROY HOGGARD	Design Lead	50%	50%	30%	10%	5%
MANUEL HERNANDEZ, MD	Healthcare Clinical Advisor	10%	5%	0%	0%	0%
JULIE DUMSER, BSN	Healthcare Clinical Advisor / LEAN	30%	25%	20%	0%	0%
MIKE PUKSZTA	Planning Principal	30%	25%	20%	0%	0%
NATALIE PETZOLDT	Healthcare Planning Lead	50%	50%	30%	5%	0%
KELLY DOYLE	Program Validation / LEAN	30%	30%	20%	5%	0%
JIM SKALLA	Project Architect (Exterior)	30%	75%	75%	75%	50%
RICHARD CLICK	Project Architect (Interior)	30%	75%	75%	75%	50%
JOCELYN STROUPE	Interior Design Lead	10%	40%	80%	80%	20%
DAVID BIBBS	Structural Lead	25%	75%	75%	75%	20%
JOE COHEN	Cost Estimating / Benchmarking	10%	5%	5%	5%	0%
RAND EKMAN	Sustainability	20%	25%	25%	20%	10%
GEOFF WALTERS	QA/QC Lead	5%	5%	20%	25%	5%

## 2. PROJECT DESIGN AND MANAGEMENT TEAM



### Michael T. Felton, AIA

Principal in Charge

With more than 33 years of experience, Mike has exposure to a wide range of planning, design and construction issues commonly present in complex projects characterized by multiple-phase schedules and highly technical elements. Consequently, he is able to reliably match appropriate building construction with the functional and cost requirements established by the client. As Principal in Charge for this project, he will provide overall project management and will leverage his vast expertise with large complex academic medical center expansion and renovation projects.

**Tenure with Firm:**  
28 years

**Education:**  
B.Ed-Architecture:  
University of Kansas

**Registration:**  
Architect: MO, IN, AR,  
AZ, OH, AL, LA, IA, WI,  
CO, GA, IL, KS, MI, TX,  
OK, TN, MN, PA, SD

**Professional Affiliations**  
AIA, NCARB

### Alegent Creighton Health – Omaha, NE

Academic medical center integration and expansion, plus medical neighborhood.

### University Hospitals Seidman Cancer Center – Cleveland, OH

New LEED certified, \$260 million, 150-bed cancer hospital.

### Indiana University Health Melvin and Bren Simon Cancer Center – Indianapolis, IN

\$150 million, 405,000 sf integrated outpatient and inpatient center.

### St. Anthony's Medical Center – St. Louis, MO

A/E services for \$110 million major inpatient expansion (beds, surgery, imaging and cardiac services)

### BJC HealthCare/Washington University Medical Center – St. Louis, MO

\$320 million expansion and renovation in excess of 1 million square feet.



### Randolph E. Guillot, AIA, LEED AP

Design Principal

With more than 25 years of design experience, Randy's work is changing the face of today's healthcare architecture with buildings filled with daylight, connected to nature, and designed to promote health and well-being. His award-winning projects range from community hospitals to academic medical centers and have been featured in *The Wall Street Journal*, *Modern Healthcare*, *Architectural Record*, and *Contract*. As Design Principal for XXXX's new bed tower, he will work with XXXX to create a building that reflects your vision, values, and mission for the future, while respecting the culture and vitality of your campus and the surrounding area.

**Tenure with Firm:**  
12 years

**Education:**  
BS-Architecture: Rhode  
Island School of Design

**BFA:** Rhode Island  
School of Design

**Registration:**  
IL, CA

**Professional Affiliations**  
AIA

### Advocate Christ Medical Center – Oak Lawn, IL

New 143-bed, \$259 million bed tower.

### Advocate Lutheran General Hospital – Park Ridge, IL

New \$201 million, 384,000 sf Children's Hospital patient tower.

### Northwestern Memorial Hospital, Prentice Women's Hospital – Chicago, IL

New \$550 million, 947,000 sf, 328-bed, LEED Silver women's hospital.

### Northwest Community Hospital, South Pavilion – Arlington Heights, IL

New 225,000 sf, LEED Gold patient care tower.

### Froedtert and The Medical College of Wisconsin – Milwaukee, WI

New 508,000 sf inpatient and outpatient Clinical Cancer Center.



## 2. PROJECT DESIGN AND MANAGEMENT TEAM



### Mike Yoshimura, AIA

Project Manager

For more than 25 years, Mike has planned and designed spaces for an array of medical clients. His experience with, and understanding of, the evolving needs and complex expectations for academic medical centers and patient bed towers enables him to develop functional, flexible, fiscally-responsible, and forward-thinking solutions. As Project Manager for the XXXX project, he will manage the day-to-day operations of the project including quality control, monitoring scope and budget, and coordination with XXXX and all disciplines.

**Tenure with Firm:**  
32 years

**Education:**  
BArch-Architecture:  
University of Illinois-  
Chicago

**Registration:**  
Architect: IL, NM, MO,  
IN, SD, MN

**Engineer:** AZ

**Professional Affiliations**  
AIA

**University of Minnesota, Ambulatory Care Center – Minneapolis, MN**  
\$103 million, 305,000 sf, four-story ambulatory care center.

**Northwestern Memorial Hospital, Prentice Women's Hospital – Chicago, IL**  
New \$550 million, 947,000 sf, 328-bed, LEED Silver women's hospital.

**Northwestern Memorial Hospital, Outpatient Care Pavilion – Chicago, IL**  
New 900,000 sf, \$358 million, 22-story outpatient ambulatory care building.

**Advocate Good Samaritan Hospital – Downer's Grove, IL**  
Vertical expansion of bed tower above existing chassis.

**Sherman Hospital – Elgin, IL**  
Design services for new ambulatory care center and medical office building.



### Troy Hoggard, AIA, LEED AP, EDAC

Design Lead

A talented healthcare designer, Troy has become a trusted advisor to numerous clients across the country and internationally. Enhancing the quality of the care experience is the foundation of his design process. He constantly strives to move the industry toward models that are more sustainable and beautiful and more closely reflect the values of society. For the XXXX project, he will design an environment that not only helps the patient healing process, but also provides staff and administration with an efficient space that minimizes capital and operational costs.

**Tenure with Firm:**  
13 years

**Education:**  
MA-Architecture:  
University of Illinois-  
Chicago

**BS-Architecture:**  
University of Michigan

**Registration:**  
IL

**Professional Affiliations**  
AIA

**Advocate Christ Medical Center – Oak Lawn, IL**  
New 143-bed, \$259 million bed tower.

**Advocate Lutheran General Hospital – Park Ridge, IL**  
New \$201 million, 384,000 sf Children's Hospital patient tower.

**Northwest Community Hospital, South Pavilion – Arlington Heights, IL**  
New 225,000 sf, 250-bed patient care tower.

**Centre hospitalier de l'Universite de Montreal (CHUM) – Montreal, QC Canada**  
New LEED Silver, 3,597,000 sf hospital with 772 single-bed rooms.

**Froedtert Health – Milwaukee, WI**  
New 508,000 sf inpatient and outpatient Clinical Cancer Center.

## 2. PROJECT DESIGN AND MANAGEMENT TEAM



### **Manuel Hernandez, MD, MBA, FACEP**

Healthcare Clinical Advisor

Dr. Hernandez is a dynamic physician executive with 20+ years of healthcare experience. Focusing his talents on visioning future clinical delivery models, innovation in healthcare and the intersection of clinical operations and facility design, Dr. Hernandez is an accomplished clinical consultant, public speaker, and professional facilitator. He has assisted over 100 healthcare organizations achieve optimal outcomes in clinical strategy, operations, and facility design. He is an internationally-recognized healthcare speaker throughout North America, Europe, and Asia.

**Tenure with Firm:**  
3 years

**Education:**  
Doctor of Medicine:  
University of Pittsburgh  
School of Medicine

MBA: University of  
California-Berkley

BA-Rhetoric  
Communications:  
Temple University

**Professional Affiliations**  
FACEP

#### **Advocate Christ Medical Center – Oak Lawn, IL**

Clinical planning for new 143-bed, \$259 million bed tower.

#### **Hamad Medical Corporation – Doha, Qatar**

ED transformation planning to treat 500,000 patient visits annually.

#### **Penn State Hershey Medical Center – Hershey, PA**

Long-range, comprehensive plan for growth and development integrating facilities program with strategic plan and business goals.

#### **City of Hope – Duarte, CA**

System-wide operational optimization and efficiency planning.

#### **University Hospital – Augusta, GA**

Hospital-wide clinical operations assessment for inpatient, ambulatory, and D&T platforms..



### **Julie Dumser, BSN, MSM**

Healthcare Clinical Advisor / LEAN

Julie has a 30-year+ career in direct patient care, healthcare operations, nursing administration, and executive leadership roles. A certified LEAN professional and a Six Sigma Green Belt, she promotes process improvement, and operational and clinically efficient environments and has extensive experience working with children's hospitals. For XXXX, she will provide her expertise in enhancing operational efficiency, implementing performance initiatives, and optimizing care delivery.

**Tenure with Firm:**  
1 year

**Education:**  
BSN-Nursing and  
MS-Management  
Colorado Technical  
University

**Certifications:**  
Certified Nurse  
Operating Room

Ambulatory Surgery  
Administration Program  
– AORN

Six Sigma Green Belt

LEAN-Certified  
Professional

#### **Froedtert Health Center for Advanced Care – Milwaukee, WI**

Planning and LEAN process improvement.

#### **Children's Hospital and Research Center (Confidential Client) – CA\***

Redesign workflow to improve efficiency and accommodate facility upgrades.

#### **Comprehensive Women's Breast and Surgical Center (Confidential Client) – IN\***

Director of Nursing and Surgical Services.

#### **University Academic Medical Center (Confidential Client) – Southern US\***

Perioperative improvement project, collaborating with over 100 physician practices.

#### **St. Francis Mooresville – Mooresville, IN\***

Executive Director of a multi-specialty, 20-physician surgery center.

#### **Riley Children's Hospital – Indianapolis, IN\***

Staff nurse in operating room, patient care coordinator and resource manager.

*\*Previous Experience*

## 2. PROJECT DESIGN AND MANAGEMENT TEAM



### **Mike Puksza, AIA**

Planning Principal

Mike is an academic medical center specialist, having successfully navigated design processes at over 26 academic medical centers in his career. He has led many of CannonDesign's most complex engagements, including assignments at University of Michigan, University of Pennsylvania, Northwestern University, University of Chicago, University of Pittsburgh, and Washington University. As Planning Principal for the XXXX project he will create successful, flexible solutions focused on delivering the healthcare of tomorrow.

**Tenure with Firm:**  
19 years

**Education:**  
MS-Architecture:  
University of Michigan  
College of Architecture

BS-Architecture:  
University of Michigan  
College of Architecture

**Registration:**  
Architect: WI

**Professional Affiliations**  
AIA

#### **Advocate Christ Medical Center – Oak Lawn, IL**

New 143-bed, \$259 million bed tower.

#### **Alegent Creighton Health – Omaha, NE**

Academic medical center integration and expansion, plus medical neighborhood.

#### **Mount Sinai Medical Center – Miami Beach, FL**

New \$250 million surgery tower expansion with 120 inpatient rooms, 12 ORs, imaging, ED, and support services.

#### **University of Colorado Hospital Anschutz Inpatient Pavilion – Aurora, CO**

Programming, planning, and schematic design for \$400 million, 600,000 sf 250-bed expansion.

#### **Indiana University Health Melvin and Bren Simon Cancer Center – Indianapolis, IN**

150 million, 405,000 sf integrated inpatient and outpatient center.



### **Natalie Petzoldt, AIA, LEED AP, EDAC**

Healthcare Planning Lead

As a healthcare planner, Natalie has led innovative programs for the firm's most significant academic medical center facilities, including long-range strategic campus planning programs for BJC HealthCare and Washington University School of Medicine, Indiana University Health, University of Colorado Health, University of Chicago, University of Michigan, and the Centre hospitalier de l'Université de Montreal (CHUM). As Healthcare Planning Lead for the XXXX project she will focus on integrating XXXX's guiding principles and operational optimization with facility design based upon evidence-based design strategies.

**Tenure with Firm:**  
16 years

**Education:**  
BArch-Architecture:  
Kansas State University

**Registration:**  
MO

**Certification:**  
LEED AP  
EDAC

**Professional Affiliations**  
AIA

#### **Alegent + Creighton Health – Omaha, NE**

Academic medical center integration and expansion, plus medical neighborhood.

#### **University of Colorado Hospital Anschutz Inpatient Pavilion – Aurora, CO**

Programming, planning, and schematic design for \$400 million, 600,000 sf 250-bed expansion.

#### **Centre hospitalier de l'Université de Montreal (CHUM) – Montreal, QC Canada**

New LEED Silver, 3,597,000 sf hospital with 772 single-bed rooms.

#### **University Hospitals Seidman Cancer Center – Cleveland, OH**

New LEED certified, \$260 million, 150-bed cancer hospital.

#### **Indiana University Health Melvin and Bren Simon Cancer Center – Indianapolis, IN**

\$150 million, 405,000 sf integrated inpatient and outpatient cancer center.

#### **University of Chicago Medicine, Center for Care and Discovery – Chicago, IL**

New 10-story, 1.2 million sf pavilion with 240 inpatient beds, including 52 intensive care beds.



## 2. PROJECT DESIGN AND MANAGEMENT TEAM

The CannonDesign XXXX team has a wealth of experience in similar buildings and with major academic medical centers.

Project		Team Members								
		Mike Felton	Randy Guillot	Mike Yoshimura	Troy Hoggard	Mike Pukszta	Natalie Petzoldt	Kelly Doyle	Jim Skalla	Jocelyn Stroupe
	<b>Advocate Christ Medical Center Inpatient Tower</b> Oak Lawn, Illinois		●		●	●			●	●
	<b>University of Colorado Anschutz Inpatient Pavilion</b> Aurora, Colorado	●				●	●			●
	<b>Indiana University Inpatient Expansion/Cancer Ctr.</b> Indianapolis, Indiana	●				●	●			
	<b>University Hospitals Inpatient Expansion/Cancer Ctr.</b> Cleveland, Ohio	●				●	●			
	<b>University of Minnesota ACC</b> Minneapolis, Minnesota		●	●		●		●	●	●
	<b>Alegent Creighton Health New Academic Medical Center</b> Omaha, Nebraska	●				●	●	●		
	<b>Mount Sinai Medical Center Inpatient Tower Expansion</b> Miami Beach, Florida					●	●			●
	<b>St. Anthony's Medical Center Inpatient/Surgery Expansion</b> St. Louis, Missouri	●				●	●			
	<b>University of Kansas Inpatient/Surgery Expansion</b> Kansas City, Kansas					●				●
	<b>Centre hospitalier de l'Université de Montréal Acad. Med. Ctr.</b> , Montreal, QC				●		●			●
	<b>Advocate Lutheran General Hosp. Children's Hospital Patient Tower</b> Park Ridge, Illinois		●		●		●		●	●
	<b>Froedtert Health Center for Advanced Care</b> Milwaukee, Wisconsin		●					●	●	●
	<b>Northwestern Memorial Prentice Women's and Children's Hospital</b> Chicago, Illinois		●	●				●		●
	<b>Advocate Good Samaritan Hosp. Pavilion Vertical Expansion</b> Downer's Grove, Illinois		●	●				●	●	●
	<b>University of Chicago Medicine Center for Care and Discovery</b> Chicago, Illinois					●	●			
	<b>Northwest Community Hospital South Pavilion</b> Arlington Heights, Illinois		●					●		●

 Featured Projects in Section 3

## 2. PROJECT DESIGN AND MANAGEMENT TEAM

### Current Client Assignments

Mike Felton Principal in Charge	<b>Project:</b> Alegent Creighton, Academic Medical Center <b>Time Commitment:</b> 20% <b>Project Role:</b> Principal In Charge <b>Current Phase:</b> Pre-Design <b>Timeline:</b> October 2014	<b>Project:</b> St. Louis College of Pharmacy <b>Time Commitment:</b> 15% <b>Project Role:</b> Principal In Charge <b>Current Phase:</b> CD <b>Timeline:</b> 2015	<b>Project:</b> St. Anthony's Medical Center Medical Office Building <b>Time Commitment:</b> 10% <b>Project Role:</b> Principal in Charge <b>Current Phase:</b> SD <b>Timeline:</b> May 2015
Randy Guillot Design Principal	<b>Project:</b> Univ of MN Ambulatory Care <b>Time Commitment:</b> 15% <b>Project Role:</b> Design Principal <b>Current Phase:</b> CA <b>Timeline:</b> 2015	<b>Project:</b> Advocate Good Sam <b>Time Commitment:</b> 10% <b>Project Role:</b> Design Principal <b>Current Phase:</b> DD <b>Timeline:</b> xxxxx	<b>Project:</b> Northwestern Medicine OCP <b>Time Commitment:</b> 5% <b>Project Role:</b> Design Principal <b>Current Phase:</b> 5% <b>Timeline:</b> 2014
Mike Yoshimura Project Manager (Process Leader)	<b>Project:</b> NM Outpatient Care Pavilion <b>Time Commitment:</b> 5% <b>Project Role:</b> Project Director <b>Current Phase:</b> CA <b>Timeline:</b> Aug 2014	<b>Project:</b> Univ MN Ambulatory Care <b>Time Commitment:</b> 15% - 20% <b>Project Role:</b> Project Director <b>Current Phase:</b> CA/CD <b>Timeline:</b> Sept 2015	
Troy Hoggard Design Lead	<b>Project:</b> Centre hospitalier de l'Université de Montréal (CHUM) <b>Time Commitment:</b> 50% <b>Project Role:</b> Team Manager <b>Current Phase:</b> CD <b>Timeline:</b> May 2014		
Manuel Hernandez, MD Healthcare Clinical Advisor	<b>Project:</b> University of Maryland Medical Center ED Ops Optimization <b>Time Commitment:</b> 20% <b>Project Role:</b> Engagement Lead <b>Current Phase:</b> N/A <b>Timeline:</b> June 2014	<b>Project:</b> Hamad Medical Center ED Planning <b>Time Commitment:</b> 20% <b>Project Role:</b> Engagement Lead <b>Current Phase:</b> N/A <b>Timeline:</b> May 2015	<b>Project:</b> TX State Behavioral Health Assessment <b>Time Commitment:</b> 50% <b>Project Role:</b> Engagement Lead <b>Current Phase:</b> N/A <b>Timeline:</b> October 2014
Julie Dumser, BSN Healthcare Clinical Advisor	<b>Project:</b> Froedtert Integrated Surgical and Interventional Platform <b>Time Commitment:</b> 20% <b>Project Role:</b> Clinical Advisor <b>Current Phase:</b> Pre-Design <b>Timeline:</b> Through May 2014		
Mike Pukszta Planning Principal	<b>Project:</b> Alegent Creighton, Academic Medical Center <b>Time Commitment:</b> 25% <b>Project Role:</b> Planning Principal <b>Current Phase:</b> Pre-Design <b>Timeline:</b> Complete October 2014	<b>Project:</b> Mount Sinai Medical Center Bed Tower Expansion <b>Time Commitment:</b> 40% <b>Project Role:</b> Principal in Charge <b>Current Phase:</b> Pre-Design <b>Timeline:</b> 2016	<b>Project:</b> Univ. of PA, Office Fit-Out <b>Time Commitment:</b> 15% <b>Project Role:</b> Principal in Charge <b>Current Phase:</b> SD <b>Timeline:</b> December 2014
Natalie Petzoldt Healthcare Planning Lead	<b>Project:</b> BJC HealthCare, Alton Mem Hospital Strategic Campus Plan <b>Time Commitment:</b> 5% <b>Project Role:</b> PIC/PM <b>Current Phase:</b> Master Plan <b>Timeline:</b> May 2014	<b>Project:</b> Mount Sinai Med Ctr Expan <b>Time Commitment:</b> 45% <b>Project Role:</b> Health Planning Lead <b>Current Phase:</b> Pre-Design <b>Timeline:</b> December 2014	
Kelly Doyle Program Validation	<b>Project:</b> Froedtert Integrated Surgical and Interventional Platform <b>Time Commitment:</b> 50% <b>Project Role:</b> Programming Lead <b>Current Phase:</b> Pre-Design <b>Timeline:</b> Thru May 2014	<b>Project:</b> Advocate Trinity <b>Time Commitment:</b> 5% <b>Project Role:</b> Programming Lead <b>Current Phase:</b> Pre-Design <b>Timeline:</b> Thru mid-April 2014	<b>Project:</b> Alegent Creighton <b>Time Commitment:</b> 5% <b>Project Role:</b> Programmer <b>Current Phase:</b> Programming <b>Timeline:</b> October 2014

## 2. PROJECT DESIGN AND MANAGEMENT TEAM

Richard Click Project Architect (Interior)	<b>Project:</b> NMH OCP <b>Time Commitment:</b> 20% <b>Project Role:</b> Project Architect <b>Current Phase:</b> Construction <b>Timeline:</b> August 2014	<b>Project:</b> Advocate Pharmacies <b>Time Commitment:</b> 25% <b>Project Role:</b> Project Architect <b>Current Phase:</b> CD/Construction <b>Timeline:</b> October 2014	
Jocelyn Stroupe Interior Design Lead	<b>Project:</b> Univ MN Ambulatory Care <b>Time Commitment:</b> 20% <b>Project Role:</b> Interior Design Lead <b>Current Phase:</b> CA/CD <b>Timeline:</b> Sub. Comp Sept 2015	<b>Project:</b> Centre hospitalier de l'Université de Montréal (CHUM) <b>Time Commitment:</b> 10% <b>Project Role:</b> Interior Design Lead <b>Current Phase:</b> CA <b>Timeline:</b> 2018	<b>Project:</b> WUMC Campus Renewal <b>Time Commitment:</b> 10% <b>Project Role:</b> Peds Inter. Design Lead <b>Current Phase:</b> DD <b>Timeline:</b> June 2014
David Bibbs Structural Lead	<b>Project:</b> Froedtert Hospital <b>Time Commitment:</b> 10% <b>Project Role:</b> Structural Lead <b>Current Phase:</b> CA <b>Timeline:</b> Fall 2015	<b>Project:</b> U of Minnesota ACC <b>Time Commitment:</b> 15% <b>Project Role:</b> Structural Lead <b>Current Phase:</b> CA <b>Timeline:</b> 2016	<b>Project:</b> Westfield Hawthorn Mall <b>Time Commitment:</b> 10% <b>Project Role:</b> Structural Lead <b>Current Phase:</b> CA <b>Timeline:</b> Summer 2015
Joe Cohen Cost Estimating/ Benchmarking	<b>Project:</b> North Shore LIJ ED Southside <b>Time Commitment:</b> 4 hrs/wk <b>Project Role:</b> Lead Estimating <b>Current Phase:</b> SD <b>Timeline:</b> 2014	<b>Project:</b> VAMC Louisville Peer Review <b>Time Commitment:</b> 5 hrs/wk <b>Project Role:</b> Lead Cost Review <b>Current Phase:</b> SD <b>Timeline:</b> 2015	<b>Project:</b> VT CC Behavioral Health <b>Time Commitment:</b> 4hrs/wk <b>Project Role:</b> Lead Estimating <b>Current Phase:</b> SD <b>Timeline:</b> 2014
Rand Ekman Sustainability	<b>Project:</b> West LA Bed Tower, VAMC <b>Time Commitment:</b> 10% <b>Project Role:</b> Sustainability Consultant <b>Current Phase:</b> SD <b>Timeline:</b> 2020	<b>Project:</b> Ohione Community College <b>Time Commitment:</b> 10% <b>Project Role:</b> Sustainability Consultant <b>Current Phase:</b> DD <b>Timeline:</b> Fall 2016	<b>Project:</b> UDC New Student Center <b>Time Commitment:</b> 5% <b>Project Role:</b> Sustainability Consultant <b>Current Phase:</b> CA <b>Timeline:</b> Fall 2015
Geoff Walters QA/QC	<b>Project:</b> Centre hospitalier de l'Université de Montréal (CHUM) <b>Time Commitment:</b> 5% <b>Project Role:</b> Quality Review <b>Current Phase:</b> CD <b>Timeline:</b> 2014	<b>Project:</b> Harper College <b>Time Commitment:</b> 2% <b>Project Role:</b> Quality Review <b>Current Phase:</b> DD <b>Timeline:</b> 2014	<b>Project:</b> Moses Brown School <b>Time Commitment:</b> 2% <b>Project Role:</b> Quality Review <b>Current Phase:</b> SD <b>Timeline:</b> 2014

### Day-to-Day Leadership

Team project manager Mike Yoshimura will provide the consistent and continual day-to-day leadership and management for this project. During the design phase, Mike is estimated to be 75% to 100% dedicated to the Project. During the construction phase, his involvement will lessen to 45% to 50% as the technical architects become the prime drivers for construction administration, however Mike is still responsible for the leadership and decisions of the team.

As far as our expectations for his performance, Mike brings his academic medical center experience to XXXX and knowledge of managing large complex teams and projects. On the Prentice Women's Hospital project, Mike managed over 26 subconsultants on the project. Mike will work collaboratively with the XXXX team to find the best solutions for the project as our clients are considered our most valuable partners. He will be the "go-to" person on this project.



A detailed architectural rendering of a modern hospital building. The structure is characterized by its extensive use of glass and steel, with a prominent skybridge connecting different parts of the facility. The building is set against a clear blue sky with a few wispy clouds. In the foreground, there is a paved area with a red sports car, a black sedan, and a silver sedan. Several people are walking on the sidewalks, and some are standing near the entrance of the building. The overall scene is bright and clear, suggesting a sunny day.

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Over the last five years, CannonDesign has completed more inpatient bed facilities in the metro Chicago area than any other firm including over 3,000 inpatient beds, 6 million sf of space and representing a value of \$2.5 billion dollars.

### 3. SIMILAR PROJECT EXPERIENCE



348,000 sf  
 – 308,000 sf new construction  
 – 40,000 sf renovation

\$259 million

**Project Duration:**

– 2011 programming and design start  
 – 2013 construction start, 2015 occupancy (Phase 1); 2015 construction start, 2016 occupancy (Phase 2, Renovations)

**Basis of Selection:**

Academic medical center expertise, thought leadership. ability to meet fast-track schedule, collaboration/partnership

**Scope of Services:**

Architecture, Programming, Medical Planning, Interior Design, FF&E

**Prime:**

Architecture, Programming, Medical Planning, Interior Design, FF&E

**Budget:**

– \$259 million budget

**Schedule:**

– Design: 18 months estimate/actual  
 – Construction: 38 months estimate

**Performance-Based Design Solutions:**

– Integrated Project Delivery  
 – LEED-Silver certification (estimate)  
 – Travel distance studies

**Reference:**

Mr. Kenneth W. Lukhard  
 Market President  
 Advocate Christ Medical Center  
 (708) 684-5015  
 kenneth.lukhard@advocatehealth.com.

### ADVOCATE CHRIST MEDICAL CENTER NEW PATIENT TOWER

Oak Lawn, Illinois

ACMC's new seven-story, 143-bed patient tower revolves around its patients. Focusing on circulation of patients, materials and staff from LEAN process mapping, the new building's lobby links to the existing hospital main entry and to the new Winter Garden, new chapel, new kitchen and servery on the first level; it links on the second floor via pedestrian walkway to a new multi-level 778-car parking structure, existing South patient tower, and proposed NICU. The second floor houses triage and a 15-bed LDR unit and 8-bed ante partum unit. The upper floors have a 36-bed postpartum unit, a 12-bed postpartum unit with nurseries, 72 critical care beds and 4 C-section suites with private recovery rooms. Appropriate mechanical spaces, a new electrical vault, relocated oxygen farm and new hospital campus loading dock are also included as enabling projects.

For convenience, patients go from the lobby directly to one of the specialty floors for their treatment. Registration is decentralized, allowing patients to register on the unit where they will receive treatment. The waiting area on each floor has wraparound windows allowing panoramic views to help ease stress and anxiety.

Travel distances were compared between many floor plan and building configurations to minimize walking, maximize sightlines, and bring care closer to the patient. This resulted in a maximum travel distance of 20' from nurse station to patient door.

**Grossing Factors NSF to DGSF**

**DGSF to GSF:**  
 – LDR/Postpartum/ICU - 1.60  
 – Materials Management = 1.50 per Consultant  
 – Support Services = 1.30  
 – Building Grossing Factor = 1.34

**Benchmarks Area Per Patient Room**

**OR Dims Through-Put:**  
 – 2,600 DGSF per LDR Bed  
 – 800 DGSF per Postpartum Bed  
 – Typical ICU = 300 NSF  
 – Typical Medical Bed / Postpartum Room = 300 NSF

**Project Departmental Areas:**

– 15 LDR Beds + 8 Ante Partum Beds = 47,472 DGSF per unit  
 – Postpartum Beds (36 +12) = 45,862 DGSF  
 – ICU Beds (72) = 77,364 DGSF Total  
 – Material Management and Support Services = 40,526 DGSF

**Cost / SF**

– \$543.00



### 3. SIMILAR PROJECT EXPERIENCE



734,000 sf

\$260 million – New Construction

\$131 million – Renovation

**Project Duration:**

2009-2013

**Basis of Selection:**

Academic medical center expertise; thought leadership; ability to meet fast-track schedule; collaboration/partnership

**Scope of Services:**

Master Planning, Conceptual/Schematic Design (Architecture, Medical Planning, Structural, MEP, Interior Design)

**Prime:**

Master Plan, Pre-Design, and Schematic Design

**Budget:**

- \$400 million budget
- \$393 million actual

**Schedule:**

- Design: 12 months (estimate/actual)
- Construction: 26 months estimate; 22 months actual

**Performance-Based Design Solutions:**

- LEED Certified
- Named a top performing academic hospital in quality multiple years in a row

**Reference:**

Mr. Antonio (Tony) Ruiz  
Former Project Executive, Expansion Projects (Retired) and Operations  
University of Colorado  
(303) 372-5382  
tony.ruiz@uch.edu

### UNIVERSITY OF COLORADO HOSPITAL ANSCHUTZ INPATIENT PAVILION EXPANSION

Aurora, Colorado

CannonDesign was selected to establish the long term master plan growth for the expansion of the University of Colorado Hospital (UCH). UCH is located on the Anschutz Medical Campus in Aurora, Colorado, which is one of the nation's newest health care campuses and fosters collaboration among students, researchers and clinicians. The campus master planning sought to allow for logical long term growth of the medical center.

The result of the master plan defined the next phase of work, which CannonDesign provided programming, planning and schematic design services for a \$393 million, 13-floor, 734,000 sf inpatient tower with a helipad on the roof. This encompassed a new inpatient tower to accommodate 250 private inpatient rooms, a new Level 1 Trauma Center Emergency Department, expansion of existing diagnostic and treatment platforms (surgery, radiology, cardiac and vascular center), support services (pharmacy and food services), two additional parking structures to accommodate an estimated 3,000 vehicles, and all associated building and site infrastructure.

The project process initiated with a visioning session with over 60 faculty, clinicians and administrators. With the vision established, CannonDesign transitioned into assessing the current campus plan for strategic future growth, with a specific emphasis on the future of adult healthcare delivery, and its long term expansion needs.

**Grossing Factors NSF to DGSF  
DGSF to GSF:**

- Critical Acute Care Beds - 1.60
- Imaging = 1.45
- ED = 1.60
- Clinical Support = 1.35
- Building Support = 1.25
- Building Grossing Factor = 1.45

**Benchmarks Area Per Patient Room  
OR Dims Through-Put:**

- 800 DGSF per acute care bed
- 950 DGSF per critical care bed
- 3,500 DGSF per OR

**Project Departmental Areas:**

- Acute Care Beds:  
(36/unit) = 28,000 DGSF
- Critical Care Beds  
(24+/unit) = 23,500 DGSF
- Surgery = 31,800 DGSF
- ED = 36,400 DGSF
- Obs/CDU = 4,000 DGSF
- CV Procedural = 36,400 DGSF
- Support Services = 45,000 DGSF

**Cost / SF**

- \$350.00



### 3. SIMILAR PROJECT EXPERIENCE



420,000 sf  
 – 370,000 sf new construction  
 – 50,000 sf renovation

\$109.5 million

**Project Duration:**

- 2005 design start
- 2009 master plan start
- 2010 master plan update for fit-out

**Basis of Selection:**

Academic medical center and oncology/ cancer expertise; thought leadership; collaboration/partnership

**Scope of Services:**

Master Planning, Architecture, Medical Planning, Programming

**Prime:**

Architecture

**Budget:**

- \$101 million budget; \$109 million actual

**Schedule:**

- Design: 12 months estimate; 11 months actual
- Construction: 39 months estimate; 32 months actual

**Performance-Based Design Solutions:**

- Operational efficiency by consolidating services
- Evidence-based design
- POE to measure outcomes
- World Health Design award

**Reference:**

Debra Uhl  
 Former Chief Operating Officer (Retired)  
 Melvin and Bren Simon Cancer Center  
 (317) 575-0696  
 debrauhl@att.net

### INDIANA UNIVERSITY HEALTH MELVIN AND BREN SIMON CANCER CENTER

Indianapolis, Indiana

The Simon Cancer Center fosters both a holistic approach to patient care and collaboration between basic research and physician scientists. Connected to IU Hospital, the five-floor building includes 80 inpatient beds, a 40-chair infusion area, expandable to 60 chairs; three floors for outpatient clinics; 14 to 16 operating rooms; radiation oncology space for two additional treatment machines; radiology and imaging expansion; and space for teaching and research.

In addition to the full range of diagnostic and treatment destinations within the facility, amenities such as a family resource center, retail, food service, meditation rooms, education space and exterior gardens are incorporated throughout to address the physical, spiritual, and emotional needs of patients and families. Also included are staff sanctuaries for respite and rejuvenation in a tranquil, relaxing space.

Recognizing the need to create a market-driven environment sensitive to the specific needs of patients and their families, the design team sought the input of a patient experience team composed of cancer patients, cancer survivors, and family members spanning a broad demographic. Their suggestions are seen throughout the building in elements as obvious as the many green spaces available to visitors and as subtle as window shade systems that can be controlled by patients who are sensitive to sunlight.

**Grossing Factors NSF to DGSF**

**DGSF to GSF:**

- Inpatient Beds = 1.50
- Surgery = 1.60
- Imaging = 1.50
- Lab/Pharmacy = 1.25
- Building Grossing Factor = 1.25

**Benchmarks Area Per Patient Room**

**OR Dims Through-Put:**

- 900 DGSF per acute care bed
- 1,050 DGSF per critical care bed
- 2,800 DGSF per OR
- Private Patient Room = 275 NSF
- OR = 650 NSF

**Project Departmental Areas:**

- Acute Care Beds:  
(36 = 25,300 DGSF per unit)
- Critical Care Beds:  
(24 = 25,300 DGSF per unit)
- Surgery = 39,000 DGSF
- Imaging = 14,000 DGSF
- Radiation Oncology = 16,600 DGSF
- Infusion Center = 25,800 DGSF
- Ambulatory Clinics = 15,000 DGSF

**Cost / SF:**

- \$242.00

### 3. SIMILAR PROJECT EXPERIENCE



425,000 sf

- 375,000 sf new construction
- 50,000 sf renovation

\$157 million – New Construction

**Project Duration:**

- 2006 design start
- 2008 construction start
- 2011 occupancy

**Basis of Selection:**

Academic medical center and oncology/cancer expertise; thought leadership; collaboration/partnership

**Scope of Services:**

Architecture, Medical Planning, Structural, MEP

**Prime:**

Architecture, Structural, MEP

**Budget:**

- \$160 million budget; \$163 million actual

**Schedule:**

- Design: 18 months estimate; 20 months actual
- Construction: 30 months estimate; 28 months actual

**Performance-Based Design Solutions:**

- LEED Certified
- LEAN planning/process mapping
- Universal Grid design
- Operational efficiency by consolidating seven sites to one site

**Reference:**

Wendy Miano, DNP, RN  
 CNO/Director of Inpatient Nursing  
 Seidman Cancer Center  
 (216) 844-7385  
 wendy.miano@UHhospitals.org

## UNIVERSITY HOSPITALS SEIDMAN CANCER CENTER

Cleveland, Ohio

The Seidman Cancer Center represents an important consolidation of the components of cancer care – from diagnosis to outpatient and inpatient treatment. Designed with the involvement of administrative leadership, facilities committees, and departmental user groups, as well as patient focus, survivorship advocate, and physician advisory groups, the facility fosters synergy among all providers and users.

This facility solution addressed many complex issues on the tight urban site, while consolidating all oncology services into one comprehensive location and providing a new front door and image for the center. The facility incorporates space for 150 inpatient beds, surgery center expansion, dedicated imaging center including PET-MRI (only the fourth installation in the world for this new technology), clinical trials, ambulatory clinics and treatments, patient education, public amenities, teaching spaces and an outdoor healing garden.

Patient needs and their experience were at the heart of interior space arrangements. Clarity and simplicity of pathways, proper scale and introduction of natural light characterize the interior architecture. Designed with clear exterior and interior circulation paths, the building improves spatial orientation for patients under high levels of stress. Careful selection of colors and finishes contribute to a calming, quiet and healing environment, while the soaring, light-filled lobby and atrium lift the spirits of patients and visitors.

**Grossing Factors NSF to DGSF  
 DGSF to GSF:**

- Inpatient Beds - 1.55
- Surgery = 1.50
- Imaging = 1.50
- Lab/Pharmacy = 1.35
- Administration = 1.30
- Building Grossing Factor = 1.38

**Benchmarks Area Per Patient Room  
 OR Dims Through-Put:**

- 750 DGSF per inpatient bed
- 3,250 DGSF per OR
- 3,500 DGSF per OR
- Private Patient Room = 260 NSF
- Standard OR = 575 NSF (24'x24')

**Project Departmental Areas:**

- Inpatient Beds = 113,700 DGSF (150 total)
- Surgery Expansion = 14,000 DGSF
- Imaging Center = 19,000 DGSF
- Breast Center = 14,100 DGSF
- Radiation Oncology = 24,500 DGSF
- Ambulatory Clinics = 29,000 DGSF
- Infusion Center = 20,000 DGSF
- Public Amenities = 11,800 DGSF
- Admin. Services = 21,100 DGSF
- Support Services = 10,400 DGSF

**Cost / SF**

- \$350.00



### 3. SIMILAR PROJECT EXPERIENCE



330,782 sf

\$118 million

**Project Duration:**

- 2012 planning start
- 2015 substantial completion

**Basis of Selection:**

Academic medical center and ambulatory care expertise; ability to meet fast-track schedule; collaboration and partnership

**Scope of Services:**

Architecture, Programming, Planning, Structural, Interior Design

**Prime:**

Architecture, Programming, Planning, Structural, Interior Design

**Budget:**

- \$165 million budget

**Schedule:**

- Design: 18 months estimate
- Construction: 20 months estimate

**Performance-Based Design Solutions:**

- B3 Minnesota State Energy Code
- Flexible clinic module and workspace
- Universal Grid
- LEAN planning
- Intuitive wayfinding

**Reference:**

Suzanne Smith  
University Architect  
University of Minnesota  
(612) 624-8663  
sdsmith@umn.edu

## UNIVERSITY OF MINNESOTA ACC

Minneapolis, Minnesota

Replacing a patchwork of overcrowded and outdated campus facilities, the new ACC provides the University of Minnesota with an opportunity to reimagine their patient experience and the way they deliver care. With patient- and family-centered care at the foundation of every decision, more than 200 physicians, advanced practice providers, clinical and operational leaders, and staff were involved in developing plans for the new facility.

Clinical program elements of the ACC include improved efficiencies and patient flow, and fast turnaround of outpatient procedures; operating suite; procedure center; imaging suite; clinical laboratory; cardiac diagnostics; neuro diagnostics; cancer center; materials management; central sterile; and ambulatory clinics.

Designed to create a safe, welcoming and accessible environment for patients and their families, the building includes 164 exam, 13 specialty exam, and 139 diagnostic and treatment rooms, and the new health care delivery model promotes a collaborative, multi-disciplinary environment integrated with education and research. The building's design is flexible and easily adaptable to accommodate changes in program development, best practices and innovations of care into the future.

**Grossing Factors NSF to DGSF  
DGSF to GSF:**

- Building Grossing Factor = 1.37

**Benchmarks Area Per Patient Room OR  
Dims Through-Put:**

- Ambulatory OR = 600 NSF

**Project Departmental Areas:**












- Ambulatory Clinics = 126,918 DGSF
- Diagnostic/Treatment = 80,487 DGSF
- Clinical Support = 6,455 DGSF
- Public Spaces = 7,969 DGSF

**Cost / SF**

- \$357.00



### 3. SIMILAR PROJECT EXPERIENCE

PROJECT		PROJECT COMPONENTS											
		Academic Medical Center	Attach to Existing Chassis	Inpatient Beds Med/Surg	Inpatient Beds ICU	Surgery	Diagnostic Imaging NM	MRI	Lab	Pharmacy	Admin Conf Public	Support Dock Materials	Parking Garage
	Alegent Creighton Health New Academic Medical Center Omaha, Nebraska	●	●	●	●	●	●	●	●	●	●	●	●
	Mount Sinai Medical Center Inpatient Tower Expansion Miami Beach, Florida	●	●	●	●	●	●	●	●	●	●	●	●
	St. Anthony's Medical Center Inpatient/Surgery Expansion St. Louis, Missouri	●	●	●	●	●	●	●	●	●	●	●	●
	University of Kansas Inpatient/Surgery Expansion Kansas City, Kansas	●	●	●	●	●	●	●	●	●	●	●	●
	Centre hospitalier de l'Université de Montréal, Academic Medical Center Montréal, QC, Canada	●	●	●	●	●	●	●	●	●	●	●	●
	Advocate Lutheran General Hospital Children's Hospital Patient Tower Park Ridge, Illinois	●	●	●	●	●	●	●	●	●	●	●	●
	Froedtert Health/Medical College of WI Center for Advanced Care Milwaukee, Wisconsin	●	●	●	●	●	●	●	●	●	●	●	●
	Northwestern Memorial Prentice Women's and Children's Hospital Chicago, Illinois	●	●	●	●	●	●	●	●	●	●	●	●
	Advocate Good Samaritan Hospital Pavilion Vertical Expansion Downer's Grove, Illinois	●	●	●	●	●	●	●	●	●	●	●	●
	University of Chicago Medicine Center for Care and Discovery Chicago, Illinois	●	●	●	●	●	●	●	●	●	●	●	●
	Northwest Community Hospital South Pavilion Arlington Heights, Illinois	●	●	●	●	●	●	●	●	●	●	●	●





Seidman Center

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CannonDesign's clients consist of 75%  
of the U.S. News & World Report's  
Top Academic Medical Centers.





## 4. PROJECT APPROACH

### Differentiating Qualities of CannonDesign

CannonDesign is a **HEALTHCARE** firm – 60% of our volume of work comes from the healthcare segment. But we are more than a healthcare design firm. Because we understand that facility, care delivery, and operations are inextricably linked, we have evolved into a full-service healthcare consultancy that assists our clients with a complete continuum of issues.

Our innovative healthcare advisory practice emerged out of an idea that *the services we provide to clients need to be integrated and need to embrace “ideas” rather than the traditional thinking of what a design firm has been.* For many years we have witnessed a system of project definition and delivery that is less than optimal, including addressing pieces of the problem rather than embracing the problem as a whole. At CannonDesign we are advocates for a *new manner of working, one that integrates healthcare professionals and CannonDesign’s design professionals to examine how transformation of healthcare delivery can impact and be impacted by changing how we approach the planning process.*

We believe a healthcare project is about far more than bricks and mortar – it is about how we rethink the hospital and healthcare services; it is about changing the process. Like most healthcare organizations, XXXX is facing a reality that many healthcare professionals will be retiring at the same time that demand for healthcare will be increasing with the aging of the baby boomer generation. The two coupled, along with an increasing focus on performance and quality measures, result in a necessity for doing business in a different manner. Other key areas we consider include:

- Aligning the hospital, physicians, and clinical staff across the continuum of care
- Using evidence-based design to improve quality and patient safety
- Improving efficiency through optimized delivery models and productivity
- Developing integrated information systems
- Revolutionizing the care model
- Managing increasing population demographics
- Incorporating telehealth
- Doing more with less

### Knowledge of Healthcare Operational Models

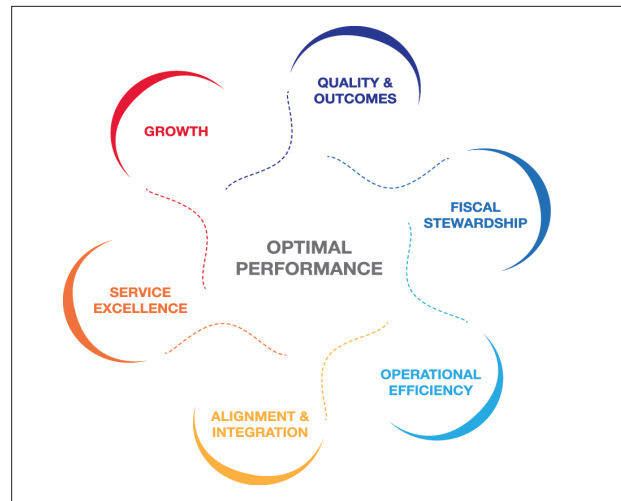
CannonDesign has the world-class academic medical center design experience, with a specialty in patient bed towers, needed to make this project an unqualified success. As a testament to our leadership, CannonDesign has completed work at 14 of the top 17

academic medical centers in the U.S. according to U.S. News and World Report’s 2012-2013 rankings.

Over the last five years, CannonDesign has completed more inpatient bed facilities in the metro Chicago area than any other firm encompassing over 3,000 inpatient beds, 6 million square feet of space, and representing a value of over \$2.5 billion dollars.

We actively participate in continuing research into the functionality, efficiency, safety, etc., of the design of inpatient units. We have also been involved with Pebble Projects through the Center for Health Design.

Future healthcare facilities are no longer being driven by space. In fact, the most successful acute care environments of the future understand that time, cost, and optimal patient experience will drive successful healthcare facilities.



Spaces in today's healthcare facilities need to:

- Create an innovative model of care
- Advance clinical quality
- Deliver more coordinated and integrated care
- Put patients, families, and safety first
- Promote attention to primary/secondary prevention
- Advance the practice of multidisciplinary care
- Be environmentally sustainable
- Provide full service line integration
- Allow for change in volumes and procedures
- Be directly accessible from dedicated parking
- Incorporate state-of-the-art systems, medical records, communications, data transmissions, etc.
- Use optimum structural module for flexibility in layout
- Use direct and easy wayfinding
- Employ efficient layout to maximize direct physician/patient contact time

- Provide direct access to patient units
- Minimize individualized space
- Be flexible to convert/expand easily
- Adapt to evolving technologies and equipment

### Performance-Based Planning

CannonDesign believes that a healthcare project is about changing the process to **focus on what matters to patients, families, physicians, and staff**. It is about accepting that "good enough" is never good enough. It is about **optimizing the delivery of care to achieve higher quality outcomes at lower cost**.

We have defined our mission clearly with a focus on quality - ever mindful that the ultimate measure of quality is always client satisfaction. As a quality leader, we seek to serve other quality leaders, working continuously to advance state of the art healthcare. In every case, our goal is to build a long-term relationship based on client confidence and trust in our performance.

Our methodology is clinically-driven, led by a board-certified academic emergency medicine physician internationally recognized for his expertise in process redesign and informed by healthcare's emerging realities. We are driven to deliver innovative, cost-effective solutions that challenge traditional thinking. Focused on how healthcare needs to do things tomorrow, our approach is collaborative and interdisciplinary, focused on **performance metrics in growth, service excellence, alignment and integration, quality and outcomes, fiscal stewardship, and operational efficiency**.

The CannonDesign team assumes the role of patient, visitor, and provider. Our clinical and subject matter experts apply a stringent litmus test, providing targeted feedback across all areas of performance, and deliver critical insight and innovation to create an optimized experience for your patients, providers, and staff. From here, solutions are tested against the backdrop of the mission, vision, and principles that speak to the core of who and what XXXX is – and will be – in the future.

Most importantly, our project methodology is designed to ensure that all relevant stakeholders from XXXX are at the table throughout the project. Our intent is to advance innovative solutions through a collaborative process grounded in shared decision-making by your stakeholders. The CannonDesign team is focused on asking the right questions and ensuring your collaborative teams explore, understand, and decide the best path forward. **We lay out the framework. XXXX make the decisions. We ensure those decisions are translated into the planning and design processes, resulting in optimized investments in your environment of care.**

## Case Study

### PROJECT HISTORY

A medium teaching hospital in the Midwest was struggling with a facility renewal project, while reimbursements, profits and market share were declining, to the point where the client was maintaining one day of cash on hand. CannonDesign was engaged to perform an operational assessment to determine how to realign the delivery system and models of care to more appropriately align with the community needs, and to determine operational and care model changes required to streamline the current care delivery process and to develop care models and functional services to be incorporated into the facility renewal project.

### PROJECT RESULTS

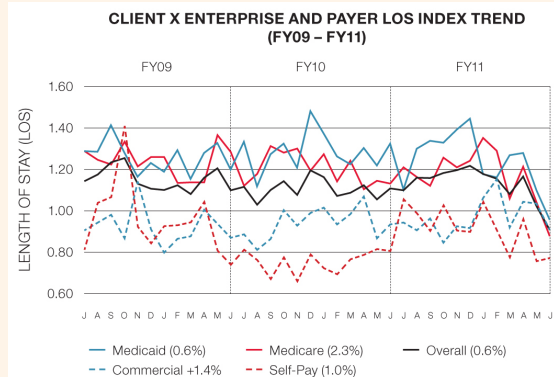
Our analysis revealed several operational and functional care model changes which could be implemented by the client to reduce operational expenses and future capital costs.

**Operational Issue:** One-third inpatient admissions were an avoidable admission or had a length of stay less than 24 hours.

**Recommendation:** Develop a Clinical Decision Unit to support the care delivery process, avoiding inappropriate admissions.

#### Results:

- Reduced bed needs by up to 23 inpatient beds
- Operational cost savings of up to \$3 million annually
- Capital cost savings of ~\$5 million



	Clinical Quality & Outcomes	Fiscal Stewardship	Operational Efficiency	Physician & Staff Alignment	Service Excellence	Growth
Overall	●	●	●	●	●	●
Inpatient Units	●	●	●	●	●	●
Emergency Department	●	●	●	●	●	●
Ambulatory Clinics	●	●	●	●	●	●
Surgical Platform	●	●	●	●	●	●
Catheterization Labs	●	●	●	●	●	●
Imaging	●	●	●	●	●	●
Laboratory	●	●	●	●	●	●
Pharmacy	●	●	●	●	●	●

Compatibility for Optimized Clinical Operation

● Optimized    ● Acceptable    ● Modifications Recommended



## 4. PROJECT APPROACH

### Planning & Program Validation April 30, 2014 to June 13, 2014

The Planning phase sets the foundation and direction for the entire project. We would develop a work plan and schedule outlining in detail the steps and tasks necessary to complete the work. For this project we suggest a series of up front meetings to help set the foundation for the project.

- **Kick-off meeting**  
We envision the kick-off meeting as the first of a series of meetings we conduct to gain insight, confirm project direction, review design work, and inform leadership. This first meeting will provide the opportunity for the XXX team and the Design team to meet. In this meeting we would review strategic direction, budgets and any constraints we need to know about to continue our design work. We will walk through the project process, reviewing the work plan and preliminary schedule developed for the work.
- **Vision Session –Define the vision for this project**  
Based on the previous meeting, this meeting will define the vision for the project. The implementation planning of the new bed tower project is an exciting time, but must be tempered with reality. We need to set design goals and expectations. Here is where our disciplined approach connects vision with a sound decision-making process, where we evaluate current situational needs and strategic long term wants.

Our team at CannonDesign is skilled at facilitating and leading and coordinating multiple constituency group discussions to glean the pertinent facts from all stakeholders. We are skilled at helping our clients balance wants and needs, in order to deliver a project on time and on budget, yet, maintain the project's vision – its heart and soul.

- **Benchmarking**  
With its vast experience in academic medical centers, CannonDesign will provide benchmarking data for a variety of topics that are germane to the project. Some benchmarking may include:
  - Cost data
  - Size of patient rooms
  - Toilets inboard or outboard
  - Central or decentralized nursing models
  - PAR strategies
  - "How to" implementation based on other projects



- **Peer Charette Workshop – Academic Medical Centers: Benchmarking against peers**  
This workshop will be arranged for XXXX with our former clients and colleagues representing the top academic medical centers in the country, creating an opportunity for idea exchange and learning from peers on the topics of interest for XXXX at top medical centers. This workshop will be instrumental in our early process efforts in defining the strategy and key program elements that are consistently evidenced in top academic medical institutions.
- **Operational Workshops**  
CannonDesign is ready to lead a series of operational workshops outlined in the RFP on a series of subjects. Our subject matter experts will inform and lead your operations group in setting another building block for the foundation of the project.
  - User-centered experience/satisfaction (may include patient advocates)
  - Operational Efficiency/Lean Work Flow
  - User Safety and Environmental Health
  - Life-Cycle cost efficiency
  - Green Design/Environmental sustainability
- **Validate program**  
Once the vision, benchmarking, strategy, and operations are developed we can embark on the program validation. This phase will consist of a series of meetings with key XXXX stakeholders. We envision this as a 3-week effort to validate the program in a series of concentrated meetings where our planners and programmers will meet with XXXX Administration and key stakeholders to develop the final program to size the building.

- **Program estimate**  
With keeping to budget being an important aspect of all projects CannonDesign undertakes, we would recommend a program estimate to validate against the budget. At this time early decisions can be made.
- **Code review**  
Code reviews at this early stage will enhance the design and limit surprises that sometime occur if this step is missed.
- **Concept Design**  
The concept design phase will start the “pencil to paper” design of the project. We will develop block and stack options based on program, and look at massing, elevation studies, materials, siting, adjacencies, and connections back to the campus. We anticipate four (4) meetings to review concepts and have open and honest discussions with the XXXX team.
  - Up to three Concept plan layouts
  - Concept massing
  - Preliminary elevations
  - Preliminary site plans
  - Basis of Design Document
- **Deliverables:**
  - 3 concept design options
  - Final Space Program
  - Performance Based Strategies
  - SF Program/Concept budget check
  - Owner Project Requirements
  - Basis of Design Document

### Schematic Design

**July 1, 2014 to December 31, 2014**

Schematic Design Phase:

The schematic design (SD) phase of the project will entail development of the selected concept design outlined in the planning and program validation phase.

- **Schematic Design Tasks: (as outlined in Exhibit G of the RFP)**
  - SD User group meetings (3 rounds of meetings)
  - SD Documentation – Incorporation of Owner provided consultant’s work
  - Review with utility companies
  - Sustainability incorporation
  - Support CON drawings
  - Value Engineering ideas
  - QA peer reviews at 50%, 75% and 100%
  - SD narratives
  - SD cost estimate
  - Presentation to XXXX

- **Deliverables:-(as outlined in Exhibit G of the RFP)**
  - Schematic level floor plans, elevations, sections, site plan
  - SD narrative and updated Basis Of Design
  - SD cost estimate
  - User group meeting minutes

Schematic Design Notes:

- The use of BIM: We are planning to start the BIM model early in the design phase. The advantages of BIM to XXXX would be the ability to understand the spatial qualities of the design, track the program, develop spreadsheets, and develop costing models early in the design.

During the document phase, coordination is enhanced thru the “clash detection” features of the program.

During construction, the contractors will request the model to develop their shop drawings. We have had many discussions with contractors and clients on the benefits of the BIM model and we understand what each entity is looking for. On most of our projects we have seen a dramatic decrease in RFI’s and ASI’s due to the use of BIM.

CannonDesign, NMH, and Lend Lease/Pepper Construction recently won the 2014 AIA Technology in Architectural Practice (TAP) award for integration of BIM and its use for the NMH Outpatient Care Pavilion.

- IDPH – Our experience has taught us to meet with IDPH early in the project to hear any concerns they may have with the project or approach. Items like how the facility can be kept open during construction and how patient safety will be maintained is high on the list of the regulators at IDPH.
- Health Facilities and Services Review Board – Our recommendation would be to obtain an early read of the project from the HFSRB. Sometimes a design CON is submitted at this early stage.
- Local AHJs – It is also a good idea to review the project with the local AHJ’s to inform them of the project and hear their concerns.
- Selection of the CM early in the process – in most of our projects, the CM is brought on early in the project to assist the Owner and design team in
  - Constructability and phasing
  - Scheduling
  - Budget estimating - for CON purposes
  - Value engineering

## 4. PROJECT APPROACH

We are hard pressed to think of a large project where this was not the case. We feel that integrating the CM into the team early in the project benefits the project. By going the conventional Design/Bid/Build route, one may obtain a lower cost, but the value may not be there.

### Design Development

**July 1, 2015 to December 31, 2015**

Gap in schedule – there is an approximate 6-month gap in the design schedule between the end of SD and the start of DD for XXXX to develop the CON submittal. Our recommendation would be to try to get an early read for the viability of CON approval of the project to mitigate the risk of the CON and allow the project to benefit from the 6 month schedule pick-up. 6 months of construction escalation and interest would cover the design fee risk tenfold.

Design Development Phase - The design development phase will define the floor plan, ceilings, walls, materials, and MEP systems for the project.

- **Design Development tasks: (as outlined in Exhibit H of the RFP)**
  - DD User group meetings (4 meetings)
  - DD Documentation - Incorporation of Owner provided consultant's work
  - Sustainability incorporation
  - Value Engineering ideas
  - QA peer reviews at 50%, 75% and 100%
  - DD level specifications
  - DD cost estimate
  - Presentation to XXXX
- **Deliverables: (as outlined in Exhibit H of the RFP)**
  - DD level documents - Developed floor, ceiling, finish – plans, elevations, engineering drawings
  - DD level specifications
  - DD cost estimate
  - User group meeting minutes

Design Development Notes:

Development of a GMP at DD – We noticed that the GMP is not scheduled to be developed until 50% CDs are complete. It has been our experience that most Owners prefer to develop the GMP at the DD document stage.

### Construction Documents

**January 1, 2016 to July 1, 2016**

Construction Document Phase – When implementing master plan projects there are inevitably several CD packages required to structure the work. For the construction documents we have broken up the deliverable into three bid packages included in the base fee to properly execute the construction sequence as follows:

- **CD Package #1 – Enabling work (assuming it is included in the RFP scope of work)**

This is the first bid package for site clearing, new drives and entrances for existing buildings, temporary dock, heliport relocation, infrastructure installation for the new building

- **CD Package #2 – New Bed Tower**

New support base, D&T, Surgery, parking garage, bed tower with vertical expansion, horizontal connections to existing buildings and future additions

- **CD Package #3 – Semi Private bed renovation**

Work to upgrade the semi-private to private rooms

The Construction Documents are the instruments of service that the contractor will bid and build from. The CD packages will also be used for permitting which normally occurs at the same time as the bidding period. The Contract Document package consists of drawings and specifications.

- **CD tasks:**

- CD meetings (2 to 3 meetings)
- CD Documentation - Incorporation of Owner provided consultant's work
- Sustainability incorporation
- Value Engineering ideas
- QA peer reviews at 50%, 75% and 100%
- Presentation to XXXX
- Specifications

- **Deliverables:**

- Contract Documents for Basic Services - Incorporation of Owner provided consultant's work
- Specifications
- Meeting minutes for design meetings

Construction Document Notes

Speed to construction Fast Track Method - In many of our projects, CannonDesign has developed and used a "universal grid" concept which will allow most program elements, whatever they may be, to fit within the structural grid. The team develops a foundation package, shell and core package, and an interior build out package. In many instances CannonDesign is able to develop a foundation package for the project to start construction within 6 to 8 months of starting the project. Recent projects that have utilized this method:

- BJC – Institute of Health
- NMH Outpatient Care Pavilion – 998,280 sf
- University of Minnesota Ambulatory Care Center – 330,800 sf



A photograph of a modern, curved medical building with multiple levels of windows and a brick base. The building is set against a clear blue sky. The number '5' is visible in the top right corner.

5

"A medical center's brand influences how it is perceived by internal and external users. For patients, it is the promise and delivery of a positive and quality experience; for staff, it represents the system's culture and mission."



## 5. BUDGET AND CODE COMPLIANCE

### Steps CannonDesign Takes to Understand Client Expectations on Budget

CannonDesign will listen, understand the expectations, and help evaluate the budget by bringing to XXXX our experiences and benchmarks for communicating value, not just the cost. We recognize XXXX's desire to provide the highest quality of care at the lowest possible cost. Working with XXX, consultants, and the construction manager, we are committed to reinforcing this definition of value throughout the project. The greatest opportunity to control cost is in the initial stages of the project. CannonDesign believes that making timely decisions during planning and design processes is a critical element of value management.

The budget is communicated to the team early in the concept phase. It is a pre-requisite to adhering to the budget. Our in-house estimating team will assist the design team in controlling and managing the budget, by providing preliminary cost options for the design team to bring to XXXX.

**Maximize and Maintain Quality Design While Maintaining Tight Budget Constraints** CannonDesign prides itself on designing high quality projects within the set budgets for all the work in the office. As with any project, there will be trade-offs and compromise on the XXXX bed tower expansion and renovation. Our designers, planners, interior designers, and architects understand that achieving quality in key areas of the project will require looking for value in other areas. We will work as a team with XXXX and the construction manager to identify appropriate cost metrics, to benchmark against, and achieve or better these metrics.

At the University of Minnesota the design team traded off the glass originally selected for a less expensive glass to afford a higher quality curtain wall. For interior work the natural slate floor was traded off for a less expensive large format porcelain tile to afford higher end lobby wall finishes. Our cost estimating team helped the design team with these options that were approved by the Client

### Proven Track Record Working within Budget

CannonDesign's philosophy has always been to design to the budget. Our projects have consistently come in within the budget. Adherence to budget is one of the top priorities at CannonDesign.

### Value Engineering Approach to Value Engineering

Value engineering is a technique for analyzing materials, systems, services, and designs in terms of their ability to provide a high level of function and quality while maintaining the lowest possible overall initial and life-cycle cost.

At CannonDesign, value engineering is integrated with our design and estimating functions. Opportunities to

optimize value occur throughout the design process. The ability to analyze an infinite number of estimated details facilitates our analysis of alternative functional requirements to achieve the lowest cost. Through value engineering we can regularly identify substantial construction cost savings of as much as 40% and provide owners with a very efficient decision-making tool.

### Functional Analysis

During preliminary engineering and design, our value engineering efforts begin with functional analysis - the determination of the intent and function of a material, system, service, or design.

### Brainstorming

Once an understanding of purpose and function is achieved, input from all members of the project team is sought, beginning a flow of ideas on possible means of achieving the required functions. The results of this process are augmented with historical records of past value engineering solutions and ideas from subcontractors, suppliers, and other specialists.

### Feasibility Analysis

The ideas put forward during brainstorming are scrutinized in a process we call feasibility analysis. This process, which requires input from all project team members, determines the ability of a solution to meet a project's needs, budget, and design intent.

### Value Analysis

Concepts that survive the feasibility analysis are tested to establish first cost and operating/maintenance (life cycle) and a "should cost" study based on past experience with similar materials or systems is performed. The results of this process, referred to as value analysis, give the client the ability to make informed decisions regarding the most appropriate and economical materials, systems, services, and designs for the project.

Value engineering is not merely a means of cutting costs. When properly administered, this technique will maintain the programmatic and aesthetic qualities of a project, maximizing the value received by the client, while minimizing overall construction, operational, and maintenance costs.

CannonDesign projects completed within the last three to five years that best represent our firm's experience designing within tight budgets for projects of similar size and scope include:

- NMH Prentice Women's Hospital
  - Value engineering at all stages of the project
  - Validating budget at program, concepts, SD, DD and 50% CD
  - Reconciliation of CM and Design Team's cost estimates
- NMH Outpatient Care Pavilion
  - Value engineering at all stages of the project
  - Validating budget at program, concepts, SD, DD and 50% CD
  - Reconciliation of CM and Design Team's cost estimates

- University of Minnesota Ambulatory Care Pavilion
  - Developed value analysis studies for various structural systems
  - Value engineering at all stages of the project
  - Validating budget at program, concepts, SD, DD and 50% CD

### **Compliance with State, Federal, and the Regulating Health Care Agencies' Requirements**

CannonDesign has worked successfully with the IDPH and Illinois's HFSRB (CON) process on numerous planning, zoning, and building permitting projects. Specifically related to healthcare, we have successfully helped our clients gain state approvals for their respective projects.

#### **Health Facilities and Service Review Board (HFSRB)**

- Expertise and knowledge in helping clients navigate the Illinois CON process
- Proven record of 14 successful CON applications in recent years for client's projects
- Projects are programmed functionally and operationally with requirements of CON

#### **Illinois Department of Public Health (IDPH)**

- Our team has worked successfully with IDPH over the last 25 years, with a collective experience of over 75 years
- Our team has help develop the new state standards and requirements for square foot allowances and planning guidelines
- Our approach is to meet with IDPH early in the project to understand their perspectives and what they feel will be issues for their viewpoint -

#### **Code Consulting – Unincorporated Cook County**

Our Code consultant, XXXX, is presently working on the XXXX campus and is intimately familiar with the Unincorporated Cook County Code codes and the code reviewers. We understand that the Applicable Codes for this project will include both locally and nationally applicable codes and standards. Locally, the XXXX site is situated in unincorporated Cook County. Therefore, it will be subject to compliance with the Cook County Building and Environmental Ordinance (CCBEO), the most recent published version of which is dated 1997. There have been numerous minor adjustments and changes over time that will need to be obtained and reviewed for impact upon the project. In addition, the Broadview Fire Department is the primary responding authority in fire emergencies.

Nationally, the Illinois Department of Public Health (IDPH) and the Center for Medicare/Medicaid Services (CMS) both currently adopt and enforce the 2000 Edition of NFPA 101. It may be advisable to seek and obtain a categorical waiver to utilize the 2012 NFPA 101 for design of the bed tower based on its impending adoption by CMS.

Based on recent project experience on the XXXX campus (XXXX project), the Cook County Building Department is not in favor of granting equivalencies. The CCBEO is an archaic version of the Chicago Building Code that is deep in compartmentation, with virtually no compromise of code recognized trade-offs for fire sprinkler protection. For instance, corridors will be required to be fire rated assemblies under the CCBEO, which significantly limits flexibility in the manner in which patient rooms are able to open to the corridors. In Rolf Jensen's meetings with the Cook County Building Department, their design team was told that they essentially needed to change the CCBEO if they wanted to do something that was not currently outlined in the document. Their approach would be to identify these items early in the project to start the potential code revision process where it makes sense to the Client and project.

#### **Quality Assurance**

CannonDesign's comprehensive quality assurance process is led by a cadre of senior professionals who, in conjunction with regional and office quality leaders and individual design teams, are responsible for the overall quality of every project in all of CannonDesign's 17 offices.

By emphasizing the importance of individual accountability throughout the entire firm, CannonDesign's executive leadership has created a culture of quality that consistently fulfills client goals and expectations with excellent design solutions.

In-house **peer reviewers** help oversee and guide the project team with a series of independent, multi-disciplinary peer reviews at key milestones outlined in the RFP and our schedule. **Our in-house peer review technical leader, Geoff Walters**, will administer CannonDesign's standards and technical quality control procedures. Technical leaders perform a series of quality reviews at each established quality review milestone.

#### **Quality Assurance Steps:**

1. **Preconstruction phase quality reviews**, undertaken prior to the release of construction documents, are convened and moderated by design leaders, technical leaders, and in-house peer reviewers, with required follow-up and documentation to resolve outstanding issues and confirm adherence to the quality process.
2. **Mid-phase pin-up quality reviews**, performed at project milestones, assess progress relative to the work plan, interdisciplinary coordination, team interaction and communication, outstanding issues, and status of key deliverables. Each review concludes with development of an action plan. The frequency and number of pin-up reviews within a phase are established by CannonDesign's quality guidelines.

## 5. BUDGET AND CODE COMPLIANCE

3. **End-of-phase submittal quality reviews**, performed near the end of each project phase, focus on the work product and deliverable and assess design, code, constructability, and coordination issues. End-of-phase deliverables are submitted to the client only after this submittal quality review is completed and any outstanding issues are resolved. Our **technical leaders** and **project architects**, however, use a “hand’s-on” approach for providing continuous assistance and guidance to the team while the documents are being prepared. The approach mitigates the team member going down the “wrong path” resulting in redoing the work.
4. **The Quality Monitoring System (QMS)** is used to plan and communicate the pin-up and quality reviews detailed in the firm’s quality process document. Projects are detailed in the QMS in terms of reviews required, delivery method, number of releases or bid packages, quality team members’ roles and responsibilities, and scheduled pin-up and quality assurance reviews. Quality leaders work with project managers to establish and maintain updated information in QMS to stay abreast of project milestones and review and plan workloads accordingly.

### **Coordination and Quality of Documentation**

Projects are subjected to continuous quality review and oversight during bidding and construction phases. Our **CA team leaders, Jim Skalla (Exterior Architect) and Richard Click (Interior Architect)**, are also the Project Architects in charge of the quality and content of the documents. They are most knowledgeable about the documents and will bring this knowledge to the construction phase of the project.

The CA team leaders manage pre-bid conferences, review addenda, convey contract changes, evaluate bidders and bids, review cost adjustments, and observe work. Scope changes are subject to the same rigor of quality review as the original design. RFIs and change orders are tracked in the construction phase to measure the firm’s success in meeting quality assurance goals.

### **Careful coordination and quality of documentation is important to limit the CM’s RFI’s and change orders.**

The firm wide data gleaned from this approach yields valuable guidance and lessons that further hone and refine CannonDesign’s practice of continuous quality improvement and ensure the continued quality of future project deliveries.

CannonDesign’s consultants are also included in our quality assurance process. At the end of the construction document phase, each consulting firm provides the project manager with a signed statement affirming that the consultant has followed its own internal quality process and checked its products prior to delivery. During pin-up and quality reviews, the consultant’s work is checked for coordination and scope

compliance, and consultants’ presence is required at each pin-up to ensure effective communication of all issues and directives.

### **CannonDesign Healthcare Projects in Illinois**

Since 1958, CannonDesign has completed hundreds of healthcare projects throughout the State of Illinois. These have ranged from a small 2,000 sf clinic renovation to an over 1,000,000 sf new patient care tower. With our Chicago office within 10 miles away from the XXXX campus, our team members can easily travel by car, cab, or train to assist you at a moment's notice.

CannonDesign's Illinois healthcare clients include:

- Advocate Health
- Advocate Children's Hospital
- Advocate Christ Medical Center
- Advocate Good Samaritan Hospital
- Advocate Illinois Masonic Medical Center
- Advocate Lutheran General Hospital
- Advocate Trinity Hospital
- Cancer Treatment Centers of America
- Children's Hospital of Illinois
- Delnor Community Hospital
- Northwest Community Healthcare
- Northwest Community Hospital
- Northwestern Medical Faculty Foundation
- Northwestern Memorial Healthcare
- Northwestern Memorial Hospital
- OSF Saint Francis Medical Center
- OSF St. Joseph Medical Center
- Presence Health/Resurrection Health Care
- Resurrection Saint Joseph Hospital
- Rush-Copley Medical Center
- University of Chicago Hospital
- University of Chicago Medicine
- University of Illinois at Chicago
- U.S. Department of Veteran's Affairs



## 5. BUDGET AND CODE COMPLIANCE

### We Know Illinois.

CannonDesign has completed **HUNDREDS** of projects in Illinois for the last 56 years out of our Chicago office. The value of this work is in the **TENS OF BILLIONS** of dollars.

*Recent Illinois bed tower projects completed by CannonDesign.*



**Advocate Lutheran General Hospital  
Children's Hospital Patient Tower – Completed: 2009**  
Park Ridge, Illinois

New \$155 million, 430,000 sf, 290-bed LEED Gold tower including 15-bed PICU with family accommodations (sized for 23 PICU beds), 11-bed general pediatric unit, 4-bed intermediate care unit, 22-bed ICU and 10-bed interventional unit sized for 32 ICU beds, three 34-bed nursing units and a 28-bed mother-baby unit; emergency, surgery, radiology and heart institute.



**Northwest Community Hospital  
South Pavilion – Completed: 2010**  
Arlington Heights, Illinois

\$250 million, 225,000 sf, 250-bed, LEED Gold patient care tower for women's and children's services containing inpatient units, dedicated pediatric emergency department, ICU, labor and delivery, surgery and diagnostic imaging.



**University of Chicago Medicine  
Center for Care and Discovery – Completed: 2013**  
Chicago, Illinois

New 10-story, 1.2 million sf pavilion offers 240 private inpatient and intensive care beds including 52 intensive care beds, specialty and hybrid ORs, general, gastrointestinal, bronchoscopy, interventional radiology procedure rooms, and state-of-the-art imaging capabilities.



**Northwestern Memorial Health  
Prentice Women's and Children's Hospital – Completed: 2007**  
Chicago, Illinois

\$550 million, 947,000 sf, LEED NC Silver, 328-bed hospital provides healthcare to women through all stages of their lives. Home to one of the largest comprehensive breast centers in the Midwest; capacity to accommodate 13,600 deliveries per year; 86-bassinets neonatal intensive care unit; dedicated women's health center; education and conference center; on-demand bed-side food service; full-service retail center.



**OSF Saint Francis Medical Center / Children's Hospital of Illinois  
Patient Care Tower – Completed: 2010**  
Peoria, Illinois

\$250 million, 200,000 sf, 616-bed patient care tower at Children's Hospital of Illinois, the only comprehensive pediatric specialty and sub-specialty services provider in Central Illinois. The new tower consolidated inpatient services including PICU, NICU and general pediatrics, as well as created a separate entrance and lobby to promote the brand of CHOI as a tertiary center of excellence.



Tomorrow's inpatient bed tower begins with considering time, cost, and optimal patient experience.



A photograph of a modern, multi-level atrium. The space is characterized by large, floor-to-ceiling windows that offer a view of the outdoors. The ceiling is adorned with numerous blue bird sculptures in flight. The architecture features curved wooden railings and columns, some of which are wrapped in a light-colored material with a circular perforated pattern. The overall atmosphere is bright and airy, with natural light streaming in from the windows.

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Every design decision we reach influences people's lives. We work to empower the patient, the visitor, and the caregiver.



## 7. PROJECT SCHEDULE / WORK PLAN

### Schedule Analysis:

The detailed "Gantt chart" schedule shows detailed schedule/work plan consistent with the schedule timeline described in the RFP. *We recognize that the schedule advanced in the RFP is based on XXXX's fiscal calendar, and as such, the design and construction phases reflect capital allocation. This was reiterated during the site visit. CannonDesign is committed to supporting this calendar, but also recognizes the potential benefits of an accelerated schedule should XXXX elect this option.*

CannonDesign believes that there are ways to accelerate the project. Any acceleration to the schedule will provide immense value to XXXX in reduction of construction escalation costs, potential interest costs, and income generated from the project earlier than anticipated.

### Strategy for Accelerating the Schedule:

#### *Fast Track Construction – Universal Grid Concept*

In many of our projects, CannonDesign has developed and used a "universal grid" concept which will allow most program elements, whatever they may be to fit within the structural grid. The team develops multiple bid packages – a foundation package, shell and core package, and an interior build-out package. In many instances, CannonDesign is able to develop a foundation package for the project to start construction within six to eight months of starting the project.

#### **UNIVERSAL GRID© BJC INSTITUTE OF HEALTH AT WASHINGTON UNIVERSITY**

Our copyrighted Universal Grid (UG) planning module comprises an optimum set of vertical and horizontal dimensions for the structural bay of a building. Its application has demonstrated the ability to reduce by 60% the typical 10-18 month time span from planning to groundbreaking. This module has been applied as the building block for prototypical designs of a wide range of healthcare facility uses, including multi-acuity inpatient nursing care, ambulatory care, wet-bench

research, medical offices, surgery and interventional radiology.

In the process, it has been vetted for engineering soundness and efficient, cost-effective construction. The result of this physical planning module allows for almost infinite adaptability and cost savings by bringing your project online sooner. Ultimately, an early construction start is accommodated since the Universal Grid allows the structural bay to be established, thus facilitating issuance of early site/utility, foundations and structural packages.

The Center for Advanced Medicine at Washington University in St. Louis was based on the Universal Grid approach facilitating a groundbreaking within five months, saving the client \$16.5 million dollars. A fast track delivery/package delivery strategy and schedule allowed for occupancy eight months early and an estimated revenue capture of \$275,000 per day or \$8.25 million dollars per month. Containing major hospital ancillaries as well as the state-of-the-art basic research labs, the facility will be easily convertible to new healthcare service lines in the years to come.

Rather than constraining the design effort, the Universal Grid's modular approach can actually liberate it. Projects across the country employing the Universal Grid have demonstrated a market responsiveness not only to a range of potential uses but also to a range of locations, sites, and aesthetic considerations. Our most successful work brings together programs that support and advance our client's immediate goals, while providing future flexibility.

### Fee Adjustments:

Multiple bid packages are an increase in effort and coordination to the design team. We will be open to discuss the design team's effort in comparison to the value of the reduction in escalation, reduction of potential interest and the early income that XXXX will receive by starting completing the project earlier.

## 9. OTHER INFORMATION

### Building Information Modeling (BIM)

CannonDesign works 100% in BIM. Our platform is Revit 2014, and we are integrated across all disciplines on the collaborative, coordinated development of the project model on this platform. We routinely upgrade our Revit software as new releases become available to stay current with the advances available to our integrated team.

Our preferred process for sharing the model with the CM is to establish early in the design process, in coordination with the CM, how we can best structure the model and time the sharing of that model with them and their prime subcontractors to best support the development of the project. If, for example, we have established that the foundation and superstructure package would be beneficially handled as an early-release package, we will ensure that the structural model is properly configured and cross-referenced within the context of the overall project, so that the early release package can be effectively produced and the structural model can be shared as a standalone project component to support coordination efforts and compress the submittal schedule.

Moreover, once we establish, early in the pre-construction process, the manner in which the design model will most effectively support CM and subcontractor utilization in construction, we will build those attributes into the model's development, so that reformatting will not be required and beneficial utilization of the model to the furthest extent possible will not be compromised. The BIM environment offers the design and construction team valuable opportunities for effective coordination as well as time-saving strategies to benefit the construction schedule. By working collaboratively to leverage those opportunities most effectively, we're able to deliver

a better end product that is ready for occupancy in advance of what might otherwise be possible.

Design coordination is always necessary during the design phases. With BIM, regular model-based coordination reviews involving all team members is critical to the success of the project. In partnership with our engineering and construction/trade partners, we have developed a system of collaborative design. Typically, team coordination meetings are conducted weekly (using Navisworks software that highlights any and all clash detections or discrepancies in architectural, mechanical, electrical, plumbing and structure drawings), but the size and complexity of a project may warrant a more or less frequent meeting schedule. While the length of the coordination meeting may increase or decrease over the course of the design phase, it is important to maintain the frequency of the meetings in order to ensure thorough coordination of all disciplines. This process has proven to be successful in minimizing change orders in the field as well as leading to creative solutions and details.

In addition, CannonDesign provides the most efficient and effective ways of illustrating ideas in 3-dimensional formats. Concepts and ideas are created in any phase of design and production using Sketch Up, Revit (BIM), 3D Studio and Studio Max, Rhino 3D, and other related software to build a virtual model of the proposed design. The project model is depicted in presentation formats for use in developing the design with user groups and leaders to better understand the design. We have, on occasion, developed the 3-D model at design meetings to obtain instant feedback and user validation on progress and design.