

The logo for LEO A DALY, featuring the name in white, uppercase, sans-serif font on a red rectangular background.

LEO A DALY

A photograph of a modern, multi-story hospital building at dusk. The building features a prominent glass facade with blue lighting accents. A sign on the building reads "CHI Health Clinic". The sky is a deep blue, and the building's interior lights are visible through the glass windows. The foreground shows a paved area and some landscaping.

Integrating An Academic Medical Center with a Private Hospital While Improving Outcomes and the Patient Experience

Speakers

Jeff Monzu, AIA, NCARB

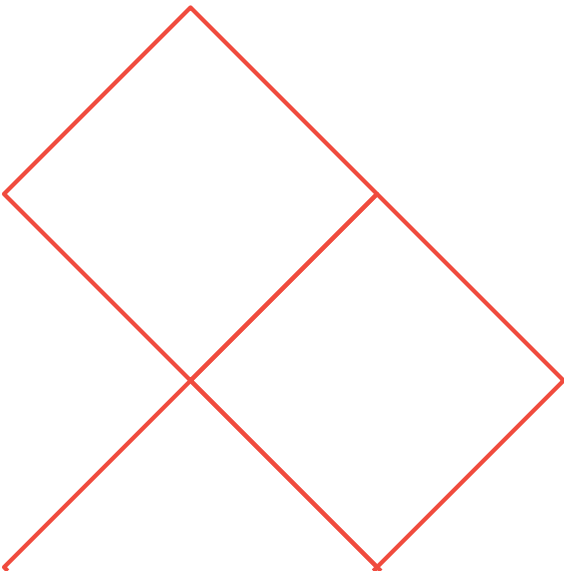
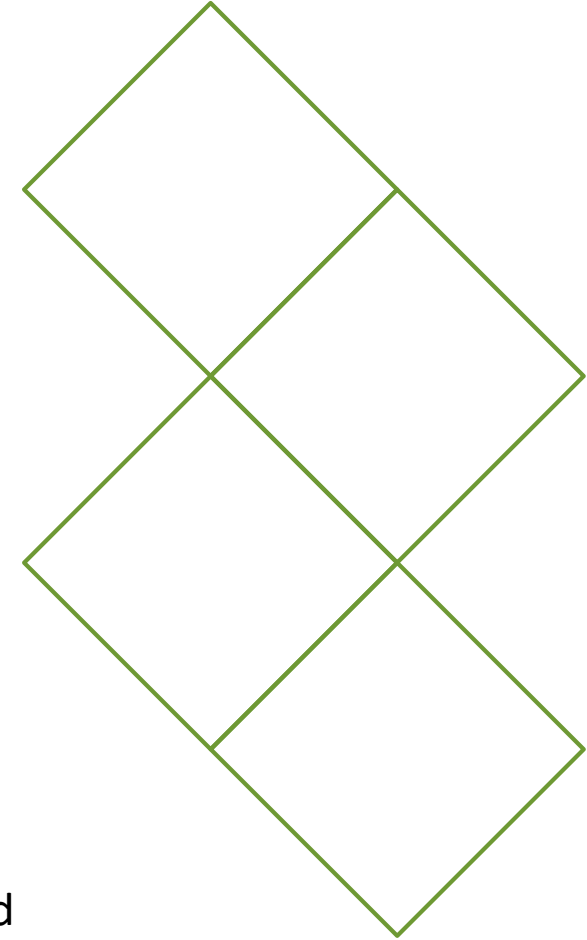
Vice President and Senior Project Manager, LEO A DALY

Kristi Nohavec, PE, AIA, LEED AP

Associate and Market Sector Leader, LEO A DALY

Devin Fox, MD, MBA, FACP

Vice President — Medical Operations, Chief Medical Officer and
Assistant Dean — Patient Safety and Quality, CHI Health Creighton
University Medical Center-Bergan Mercy Campus and Creighton
University School of Medicine



Learning Outcomes

1. Develop design strategies to improve educational training for students, residents, and staff at your campus medical center that will, in turn, improve patient outcomes. How to make it happen.
2. Describe how to integrate two organizations to design optimal education environments that benefit students and patients alike. The challenge of merging cultures.
3. Create environments conducive to training medical leaders in an immersive, real-life setting.
4. Gain tools to accurately measure how building design improves medical education and patient outcomes after the hospital and medical school merger is complete. What was learned.



Purpose (what):

Consolidate an academic teaching hospital on a private medical center campus to rethink established processes and to achieve greater efficiency.

Relevance/ Significance (why)

In an increasingly complex healthcare market, we must continue to focus on innovation in healthcare education that improves patient care and prepares physicians for the challenges that lie ahead. These hospitals were also part of a large system within the Omaha market and there was an increased need to improve and consolidate duplicate operations.

Strategy and Implementation (how)

We brought the right people to the table. Consolidating a teaching hospital and a private, faith-based healthcare institution involved reconciling two ways of operating. Having the right strategic decision makers at the table during master planning allowed the two to come together, update their processes and address improvements to the overall patient experience.

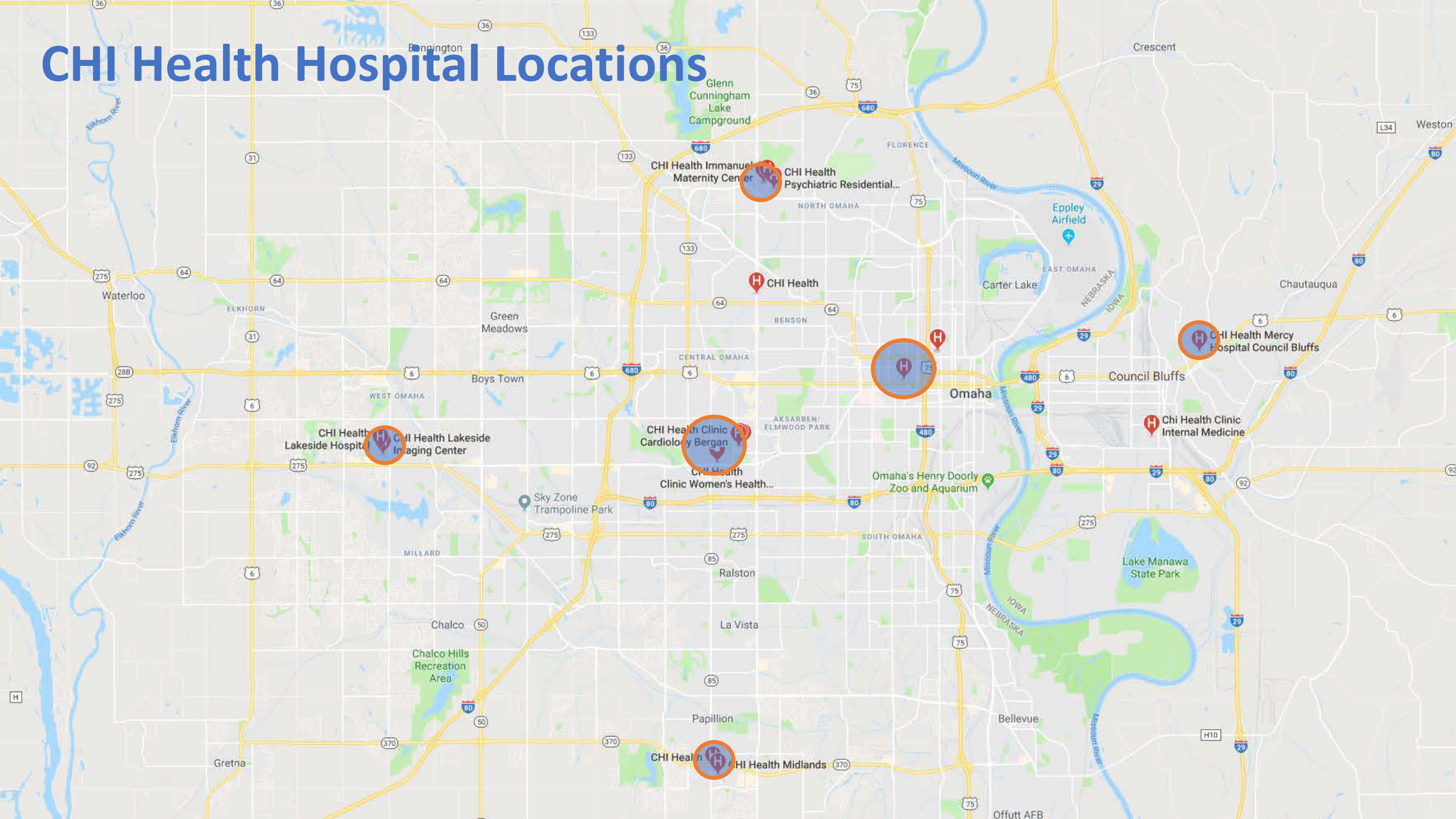


First, Some Project Background...

1. A merger of CHI Health Creighton University Medical Center Hospital and CHI Health Bergan Mercy Medical Center to the Bergan Campus.
2. Why –
 1. Operations/ Patient Service
 2. Education
 3. Clear traffic patterns for outpatient and inpatient processes on campus
3. School of Medicine Outreach
4. Free- Standing ED/Clinic to serve the area of CUMC – Separate Project

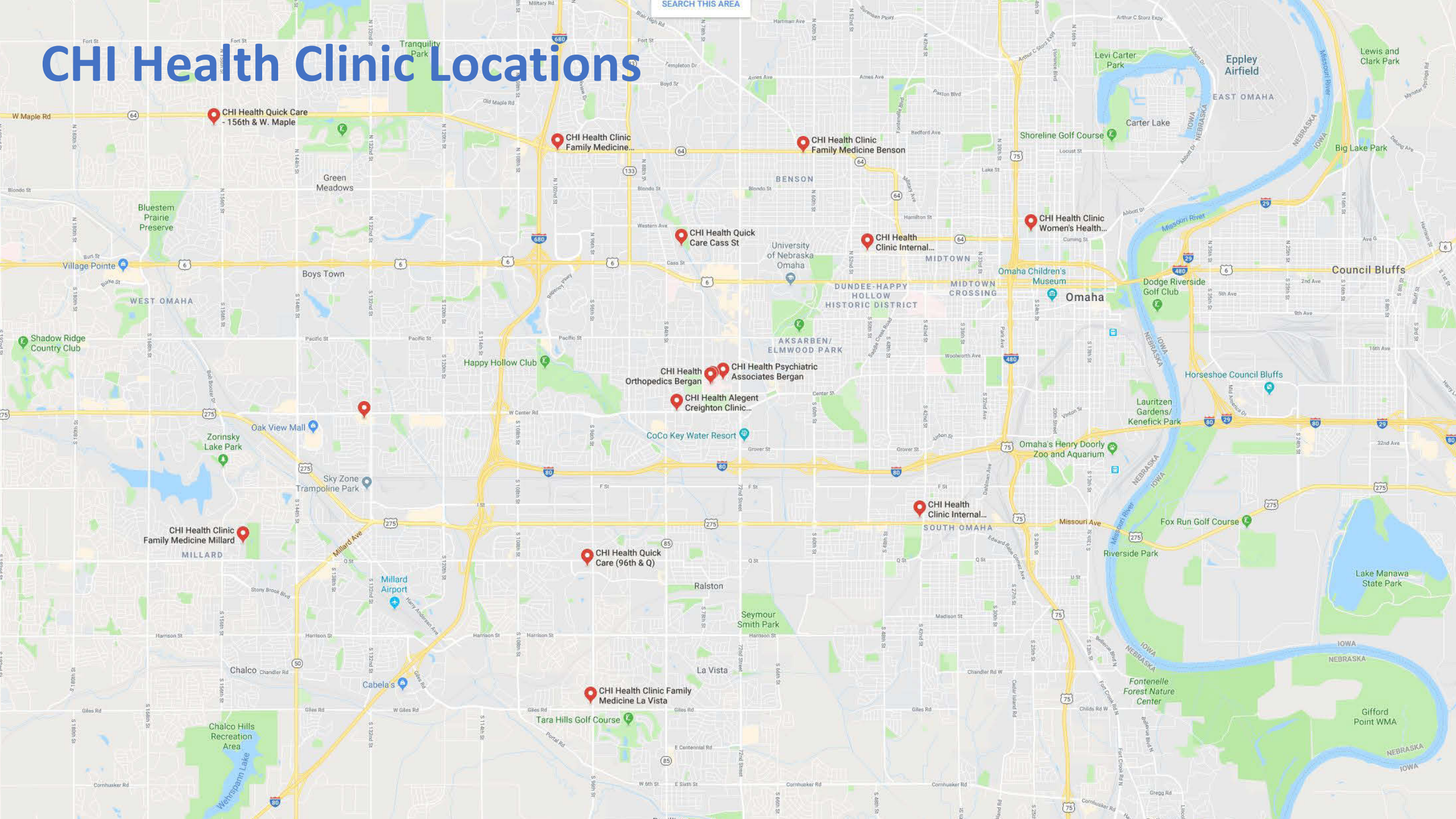


CHI Health Hospital Locations



CHI Health Clinic Locations

SEARCH THIS AREA



CHI Health Quick Care
- 156th & W. Maple

CHI Health Clinic
Family Medicine...

CHI Health Clinic
Family Medicine Benson

CHI Health Quick
Care Cass St

CHI Health
Clinic Internal...

CHI Health Clinic
Women's Health...

CHI Health Clinic
Family Medicine Millard

CHI Health
Orthopedics Bergan

CHI Health Psychiatric
Associates Bergan

CHI Health Alegent
Creighton Clinic...

CHI Health
Clinic Internal...

CHI Health Quick
Care (96th & Q)

CHI Health Clinic Family
Medicine La Vista

Introduction

Creation of Alegent Creighton Health

- 2009: Discussions of strategic affiliation
- April 24, 2012 : Signed a Letter of Intent with Tenet Healthcare and a Memorandum of Understanding with Creighton University
- April – July 2012: Due Diligence: Limited or no access to facilities or substantive data requested from Tenet
- July 24: Signed a long-term (49 year) strategic affiliation agreement with Creighton University and the purchase agreement with Tenet, the majority owner and operator of CUMC, for the acquisition of the hospital
- September 1: Closed on all agreements and assumed full ownership and operation of CUMC and CMA



Rick Hachten & Fr. Tim Lannon
April 24, 2012



Creighton University Medical Center
September 1, 2012

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- The integration of CUMC and CMA with Alegent Health and Alegent Health Clinic has created a unique opportunity to re-evaluate our current models of clinical care delivery and medical education in light of the future health care environment
- Since our integration as Alegent Creighton Health, our world has further changed / evolved:
 - Change in sponsorship – CHI
 - Vertical and Horizontal Integration
 - Continued cost and reimbursement challenges
- We needed to frame the discussion around the needs of the entire enterprise, not one entity, campus or person
 - Ideal future state for all of Alegent Creighton Health
 - Implications on any / all specific sites, services or providers
 - Implications / opportunities given integration with CHI / CHI-Nebraska

Options for AMC

1

CUMC as the AMC

- Upgrade / renovate facilities to bring up to Academic Medical Center standards
- Keep all acute services; add additional CV surgery
- Build new MOB for dislocated MD's

2

Move AMC to Bergan

- Make Bergan the primary site for tertiary / academics
- Create new, ambulatory replacement facility at or near CUMC site
- Build new clinical / academic building at Bergan site

3

Build a new AMC

- Create new, ambulatory replacement facility at or near CUMC site
- Build a new hospital designed for future needs
- Sized appropriately for reduced acute care need
- Designed for higher acuity (*relocated from all other sites*) and optimum academic experience

AMC Options Presented

Options: 1

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- Upgrade / renovate facilities to bring up to Academic Medical Center standards
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Cost: \$270M

EBIDA*: \$15.3M

Timeline: 7-8 Years

2

Move AMC to Bergan

- Make Bergan the primary site for tertiary / academics
- Create new, ambulatory replacement facility at CUMC site
- Build new clinical / academic building at Bergan site

Cost: \$114 - \$135M

EBIDA*: \$50.9M

Timeline: 2-3 Years

3

Build a new AMC

- Keep services, as is, at CUMC for a period of time
- Build a new hospital designed for future needs
- Sized appropriately for reduced acute care need
- Designed for higher acuity (*relocated from all other sites*) and optimum academic experience

Cost: \$299 – \$490M

EBIDA*: TBD

Timeline: 4-6 Years

* Through FY16

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Option 2: Bergan as AMC

a. Build /renovate space for a largely ambulatory facility on or near the current CUMC site

\$10.8 -20.1M **

- *Approx. 54-74,000 s.f.*
- *Ability to house 27 FTE MD's*
 - *Primary Care & Specialty Care*
- *Free-standing emergency department*
- *Diagnostics / Imaging Center*
- *Pharmacy*

b. Renovate /expand Bergan Mercy

\$45-50M

- *Level I Trauma*
- *Expand ED / ICU*
- *Consolidated CV / OB*

c. Build/renovate a building for academic / clinical needs \$54-60M

- *Approximately 242,000 sq. ft. (a new 120,000 sq. ft facility)*
- *Ability to house approx 100 physicians*
- *Academic space to support faculty, residents and students*

d. Selectively deploy some programs to other ACH sites, as necessary and appropriate

\$4-5M
Incremental

** Assumes use of existing CUMC site / land

Financial Assumptions

Revenue	77% of volume retained
Capital	\$114 - \$135M
EBIDA (thru FY16)	\$50.9M

Implications

- 2-3 years to get Bergan ready
- Without ED as part of replacement facility - vulnerable to volume shifts to other area providers
- Major culture change

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Physician and Employee Input Option 2

Alegent + Creighton Health
On a mission

Supports:



Advantages:



Disadvantages:



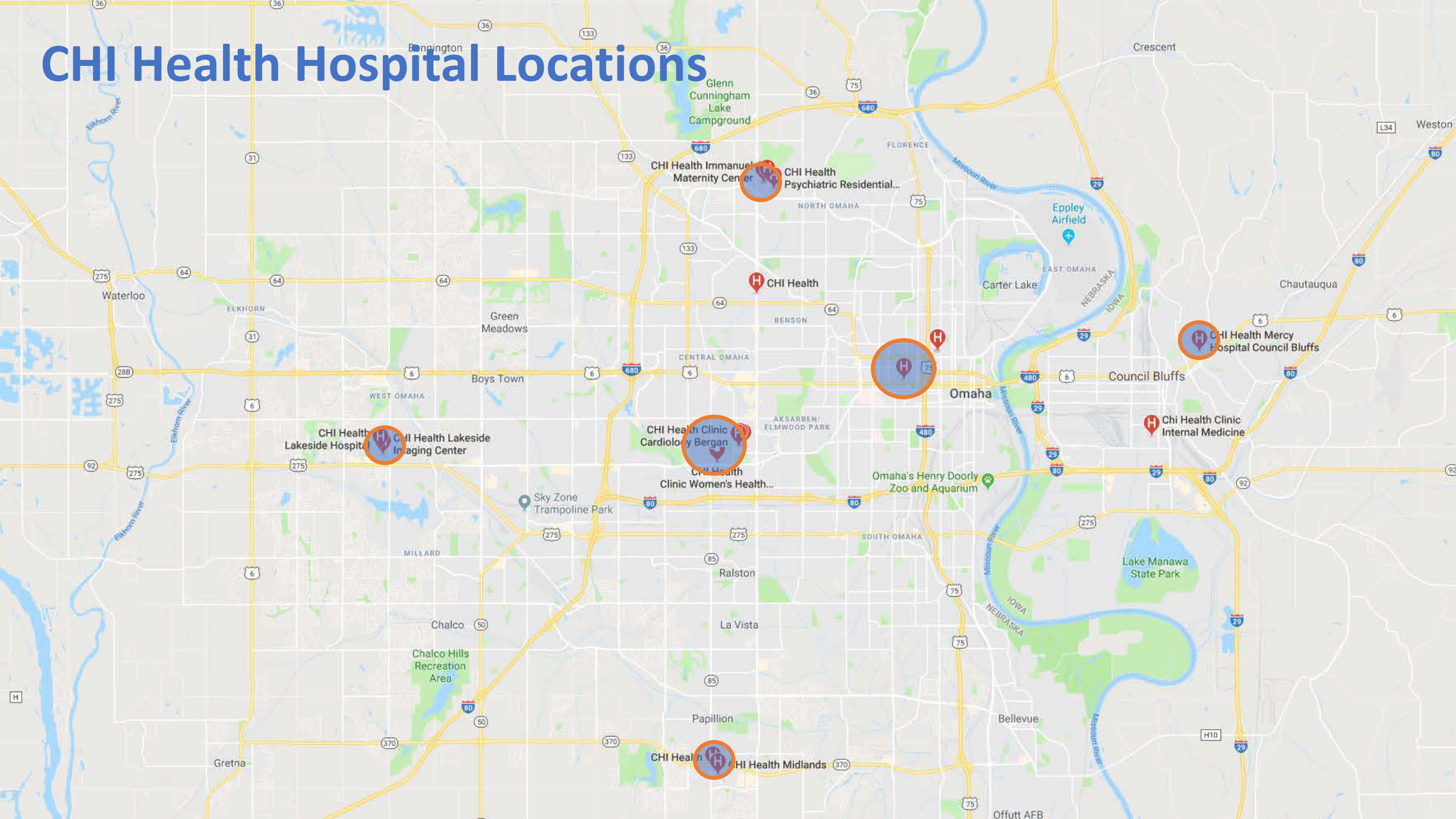
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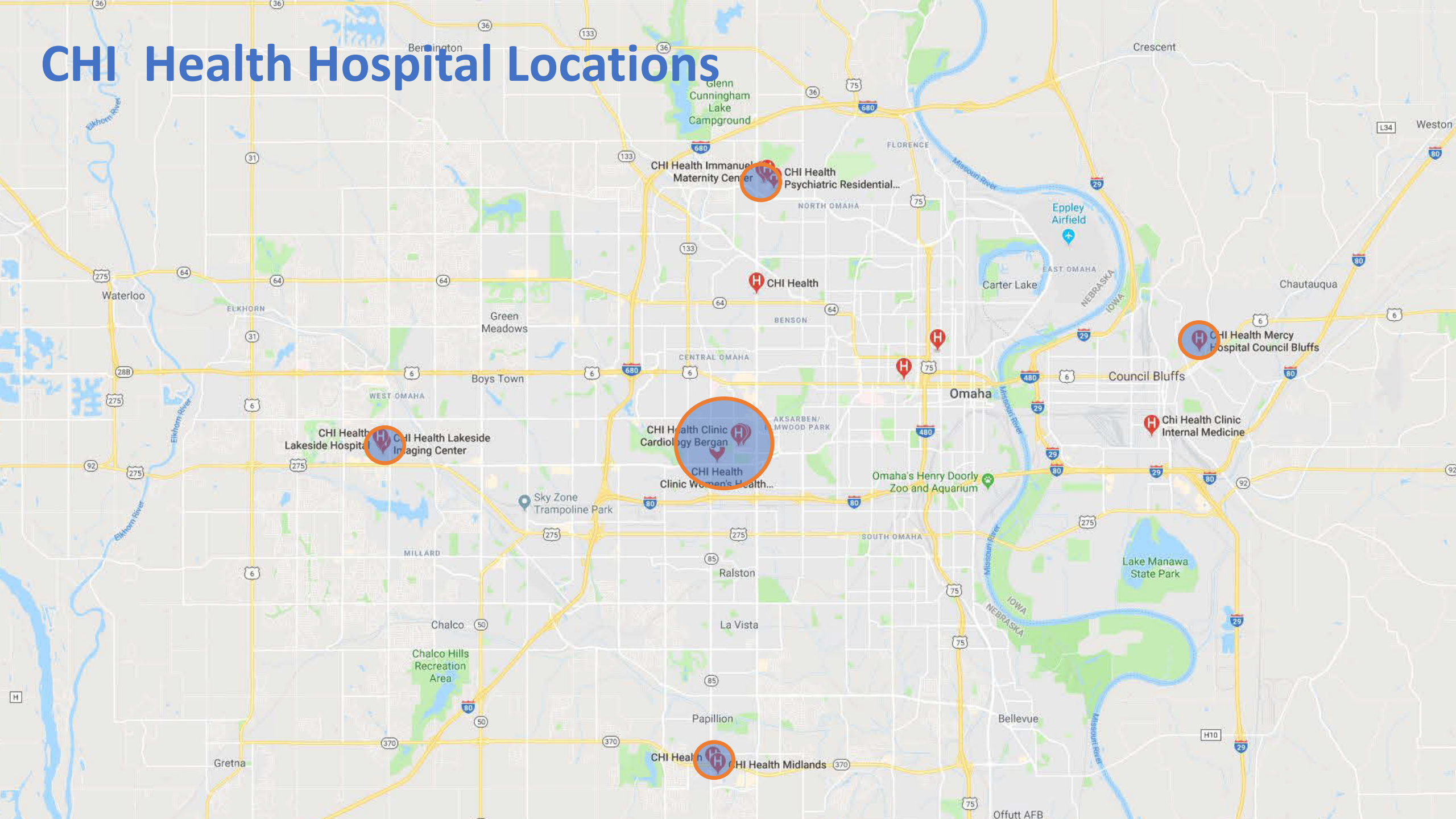


The Society for College
and University Planning

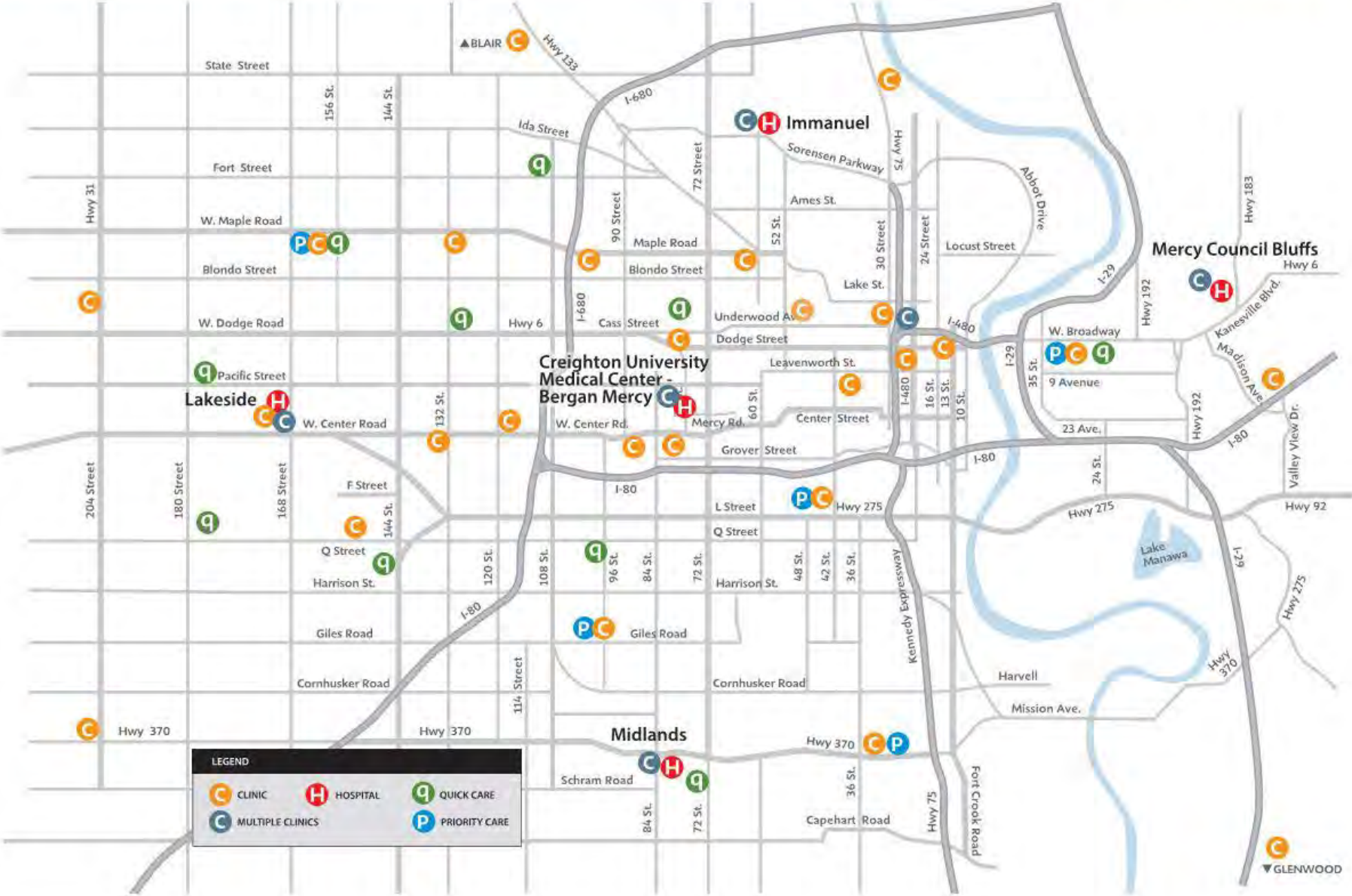
CHI Health Hospital Locations



CHI Health Hospital Locations



CHI Health Metro Locations



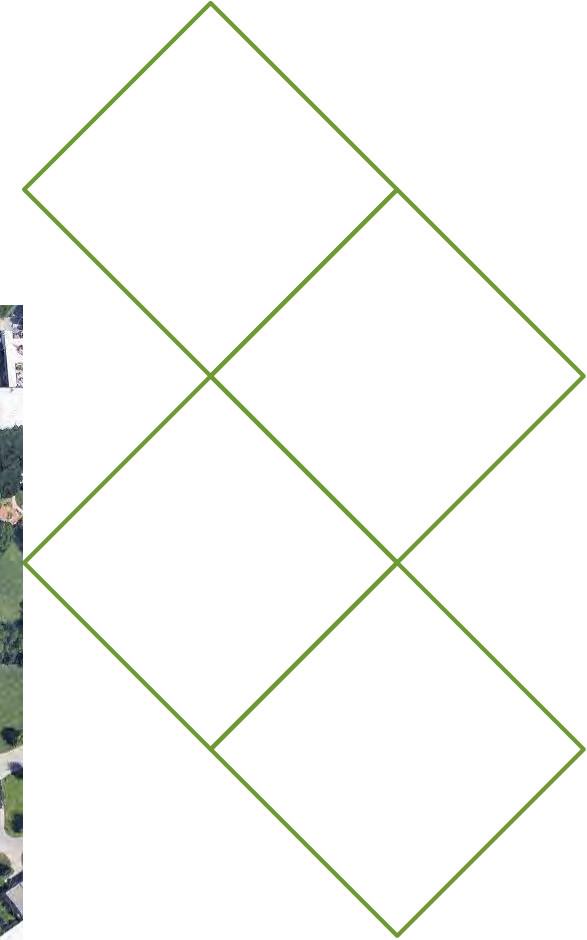
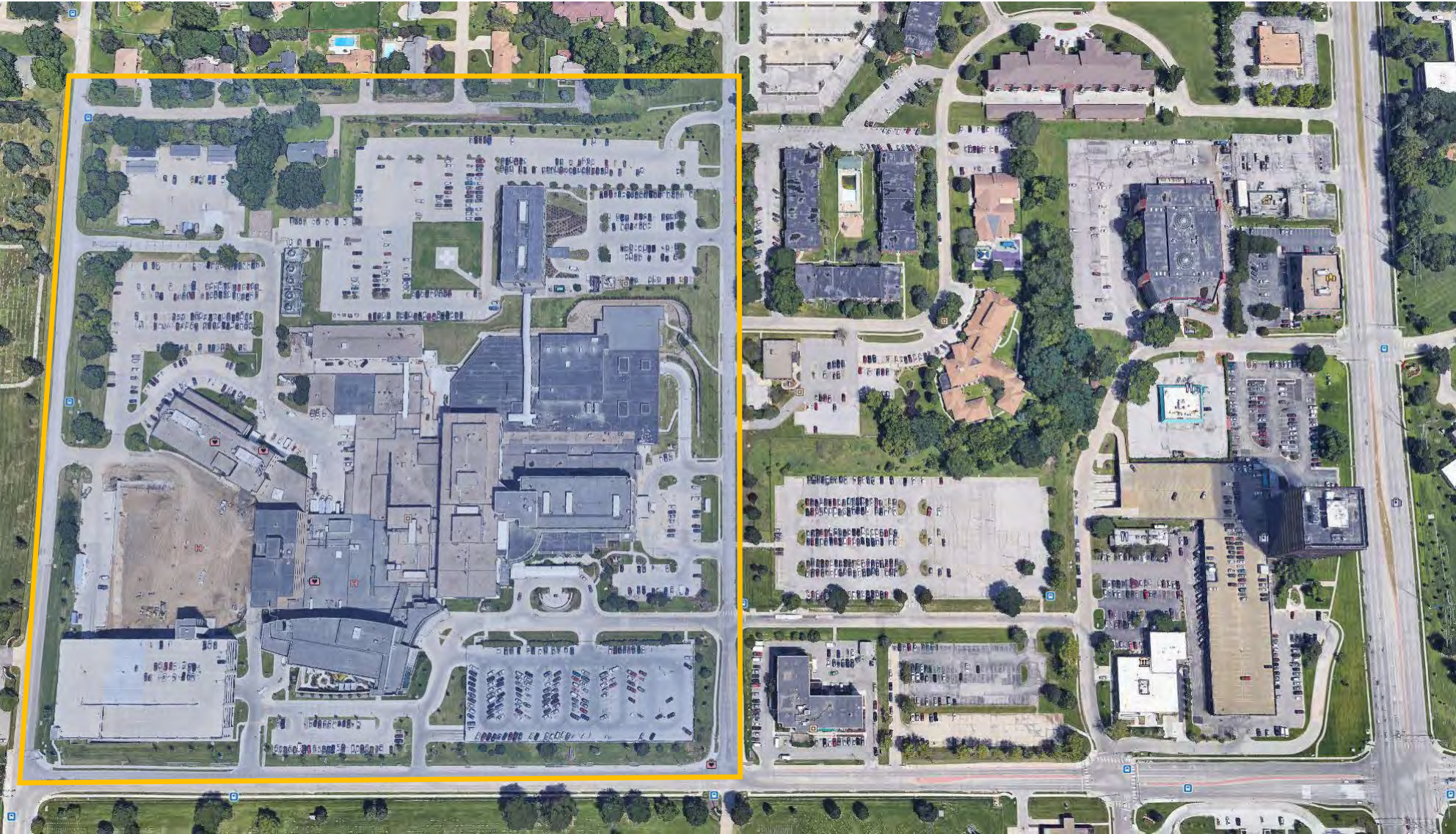
CHI Health CUMC Bergan Mercy Campus



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CHI Health CUMC Bergan Mercy Campus

Roughly 36 Acres



The Society for College
and University Planning

Emergency & Trauma Department

Space	# Rms	Rm SF	Net SF	Description/Comments	FGI (2010) Minimum Requirements	CHI Standard
Garage						
Ambulance bays	4	600	2,400	4 ambulances		
		Subtotal	2,400	NSF - not included in DGSF calc's below		
Ambulance Entrance						
Storage	1	100	100	for clean supplies & touchdown space		
EMS	1	100	100			
Garage vestibule	1	250	250		6' min clear width - entire pathway to/into trauma treatment room	
		Subtotal	450	NSF		
Waiting/Reception/Triage						
Entry vestibule	1	150	150		6' min clear width - entire pathway to/into trauma treatment room	
Wheelchair storage	1	80	80			
Security station	1	80	80	include emergency equip, located in ED lobby		
Waiting	68	20	1,360	2 seats per room (includes WC's & circulation)		
Public Toilets	2	250	500	2 stalls/fixtures + sinks + vestibule		
Family Toilet	1	100	100			
Vending Alcove	1	65	65	2 vending machines		
Reception	1	200	200			
Registration	2	60	120			
Consult/family room	2	150	300			
Supply / Work room	1	65	65	for reception/registration supplies/copier		
Triage room	2	120	240	1 per 8 rooms / overflow exam	120sf min clear flr area	
		Subtotal	3,260	NSF		
Trauma/Major Treatment						
Trauma/Resus room	2	450	900	Two rooms sized for 2 patient treatment spaces in each room. Evaluate possible fixed X-Ray	250sf min clear flr area, min 5' clear all sides of stretcher	
Scrub alcove	1	40	40			
Observation	1	50	50	OPD observation		
Equipment storage	1	150	150	adjacent to trauma rms.; 75sf per room		
Large Treatment Room	1	225	225	Adjacent to Trauma and colocated w/ ED large treatment rooms. Ortho procedures, provide plaster trap at sink.	120sf min clear flr area; bariatric trtmt rm: 200sf min clear flr area, 12' min clear dimension, min 5' clear all sides of stretcher	
Patient toilet	1	65	65	oversized for assistance	min 1 per 8 treatment rooms	
Staff work area	6	50	300			
Quiet work /Team area	4	50	200	PACS viewing station		
Medication Room	1	100	100			
Clean Linen alcove	1	30	30			
Clean Supply	1	120	120	35sf per treatment room		
Soiled Utility	1	65	65			
Stretcher alcove	1	40	40	2 stretchers		
Crash Cart	1	15	15			
Staff toilet	1	55	55			
Housekeeping	1	65	65			
		Subtotal	2,420	NSF		

Program

In association with Cannon Design



Emergency & Trauma Department						
Space	# Rms	Rm SF	Net SF	Description/Comments	FGI (2010) Minimum Requirements	CHI Standard
Psychiatric Area						
Sub-waiting	1	80	80	4 seats		
Psychiatric safe hold room	2	140	280		60sf min clear flr area, wall length: min 6', max 11'	
Handwash sink alcove	2	15	30			
		Subtotal	390 NSF			
Ambulatory Emergency/Urgent Care Area						
Large Treatment Room - High Acuity, Bariatric, Resus	2	225	450	200sf clear plus space for cabinetry	bariatric trtmt rm: 200sf min clear flr area, 12' min clear dimension, min 5' clear all sides of stretcher	
ER Exam Rooms	17	140	2,380	Provide a Computer Station between Exams and in the Exam room	120sf min clear flr area	
Isolation anteroom	1	50	50			
Isolation patient toilet	1	55	55			
EENT Exam room	1	140	140		120sf min clear flr area	
Gynaological exam room (SANE)	1	140	140		120sf min clear flr area	
GYN toilet/shower	1	80	80	access from GYN exam		
Patient toilets	6	55	330		min 1 per 8 treatment rooms	
Staff work area	18	50	900			
Quiet work /Team area	6	50	300	PACS viewing station		
Dispatch	1	80	80			
Medication Room	2	100	200			
Clean Linen alcove	2	20	40			
Clean Supply	2	180	360	24sf per treatment room		
Soiled Utility	1	140	140	includes waste/soiled linen holding		
POC Testing	1	50	50	Verify with Lab		
Nourishment	2	60	120	may be an alcove		
Equipment storage	2	180	360	multipurpose	10sf per bed, 25sf per bariatric bed	
Staff toilet	1	55	55			
Crash Cart	2	15	30			
Stretcher/wheelchair alcove	2	40	80			
Housekeeping	1	65	65			
		Subtotal	6,405 NSF			
Vertical Patients / Results Waiting						
Treatment Stations	6	80	480		80sf min clear flr area	
Patient toilets	1	55	55		min 1 per 8 treatment rooms	
Staff touchdown/work area	2	50	100			
Wheelchair /Equipment alcove	2	40	80			
		Subtotal	715 NSF			
Decontamination						
Decontamination room	1	120	120	entry from decontam vestibule & anteroom	80sf min clear flr area/120sf min clear flr area	
Decontamination vestibule	1	80	80	entry from outside; gowning area		
		Subtotal	200 NSF			

Program

In association with Cannon Design



Emergency & Trauma Department						
Space	# Rms	Rm SF	Net SF	Description/Comments	FGI (2010) Minimum Requirements	CHI Standard
Staff Support						
Staff Lounge	1	350	350	15 people + kitchenette	100sf minimum	
Meeting Room	1	400	400	16-18 people		
Provider Work room	1	100	100			
On Call	1	100	100			
Toilet/shower On call	1	75	75			
Staff lockers - Male	40	3.5	140	"Z" Lockers		
Toilet/shower - Male Staff	1	120	120			
Staff lockers - Female	40	4	140	"Z" Lockers		
Toilet/shower - Female Staff	1	120	120	40 lockers, coats, scrubs; 1 shower + 1 toilet		
Subtotal			1,545 NSF			
Teaching						
Shared Office	1	100	100			
Shared resident work area	8	40	320	touchdown space, locked personal storage, etc.		
Subtotal			420 NSF			
Administrative Area						
Manager Office	1	120	120			
Medical Director Office	1	120	120			
Shared Office	2	100	200	Supervisor, educator, pharm, resp, soc work, etc.		
Subtotal			440 NSF			

Net SF 16,245
Grossing 1.40

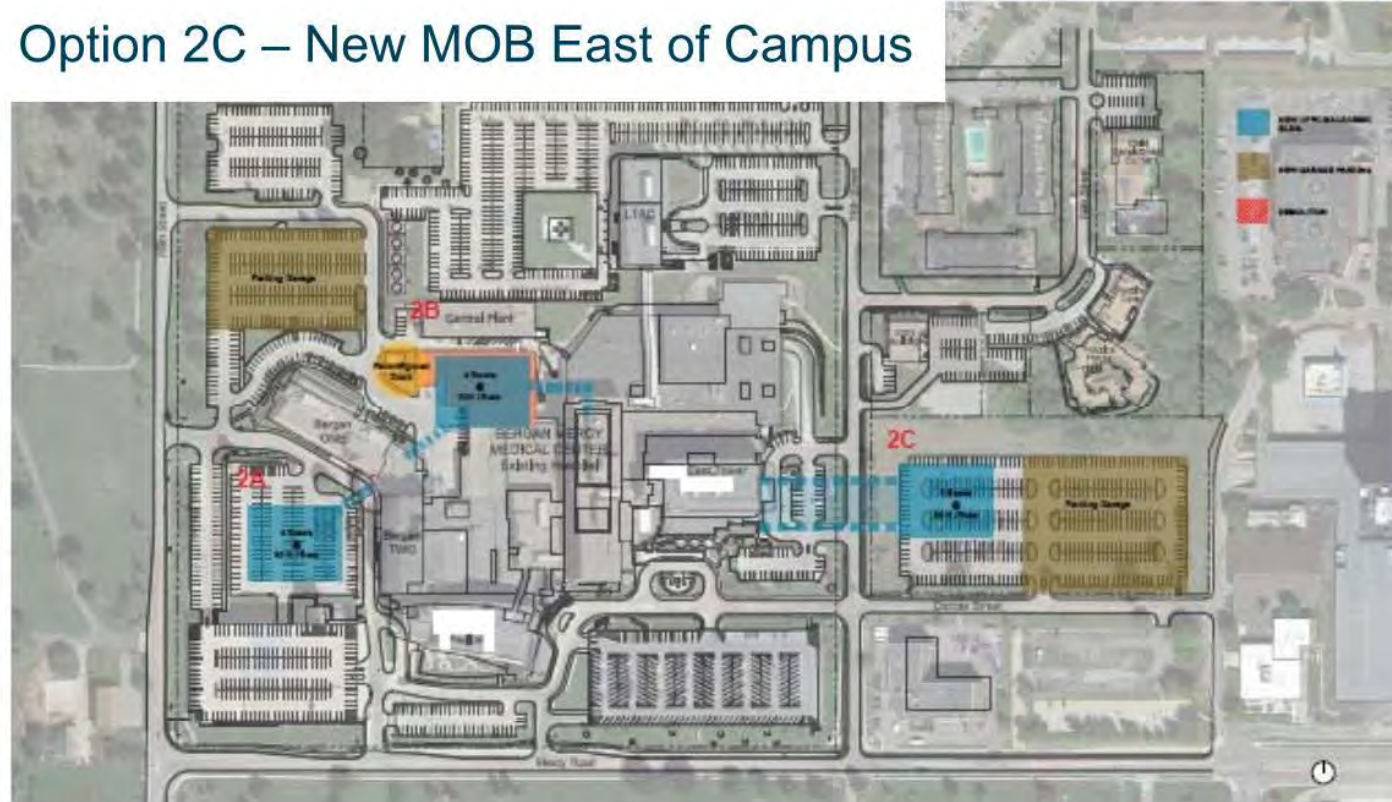
EMERGENCY/TRAUMA TOTAL DGSF 22,742

Program

In association with Cannon Design

- Bergan Mercy Campus Total Program of :
- 142,000 GSF of new clinic building
 - 6,000 GSF of new ED (mostly garage)
 - Roughly 200,000 SF of renovations

Option 2C – New MOB East of Campus

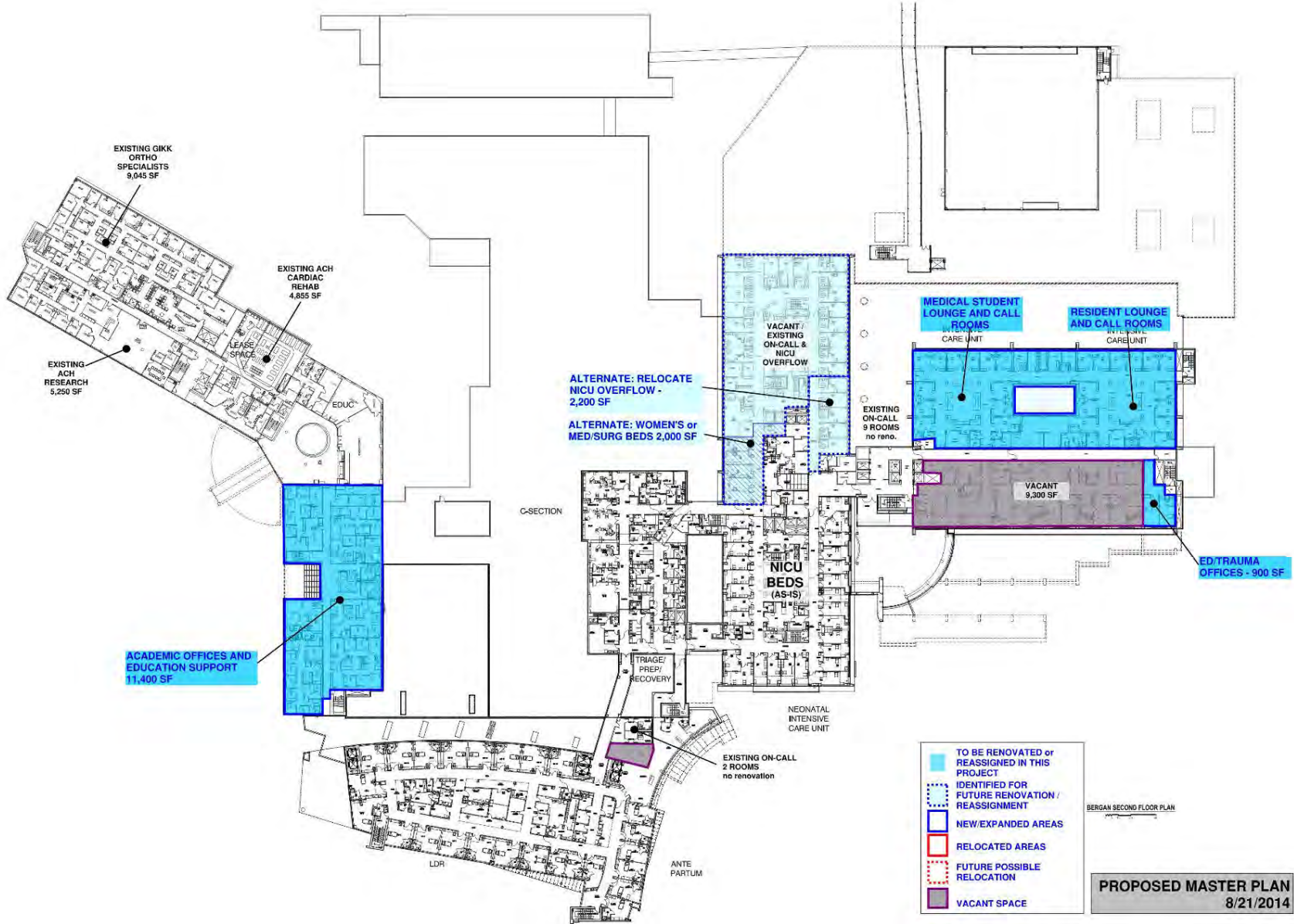


OPTIONS 2A, 2B & 2C

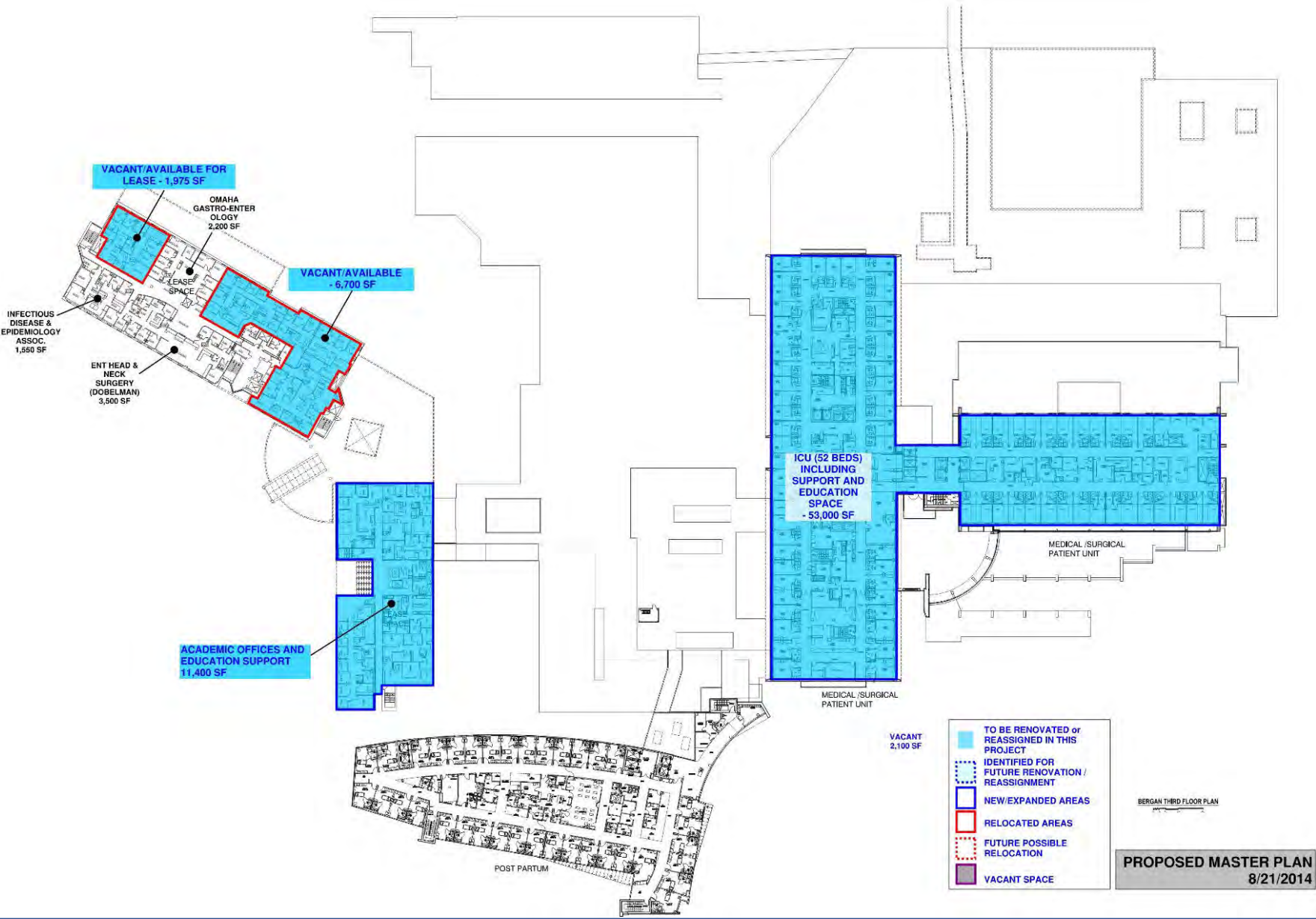
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On a mission

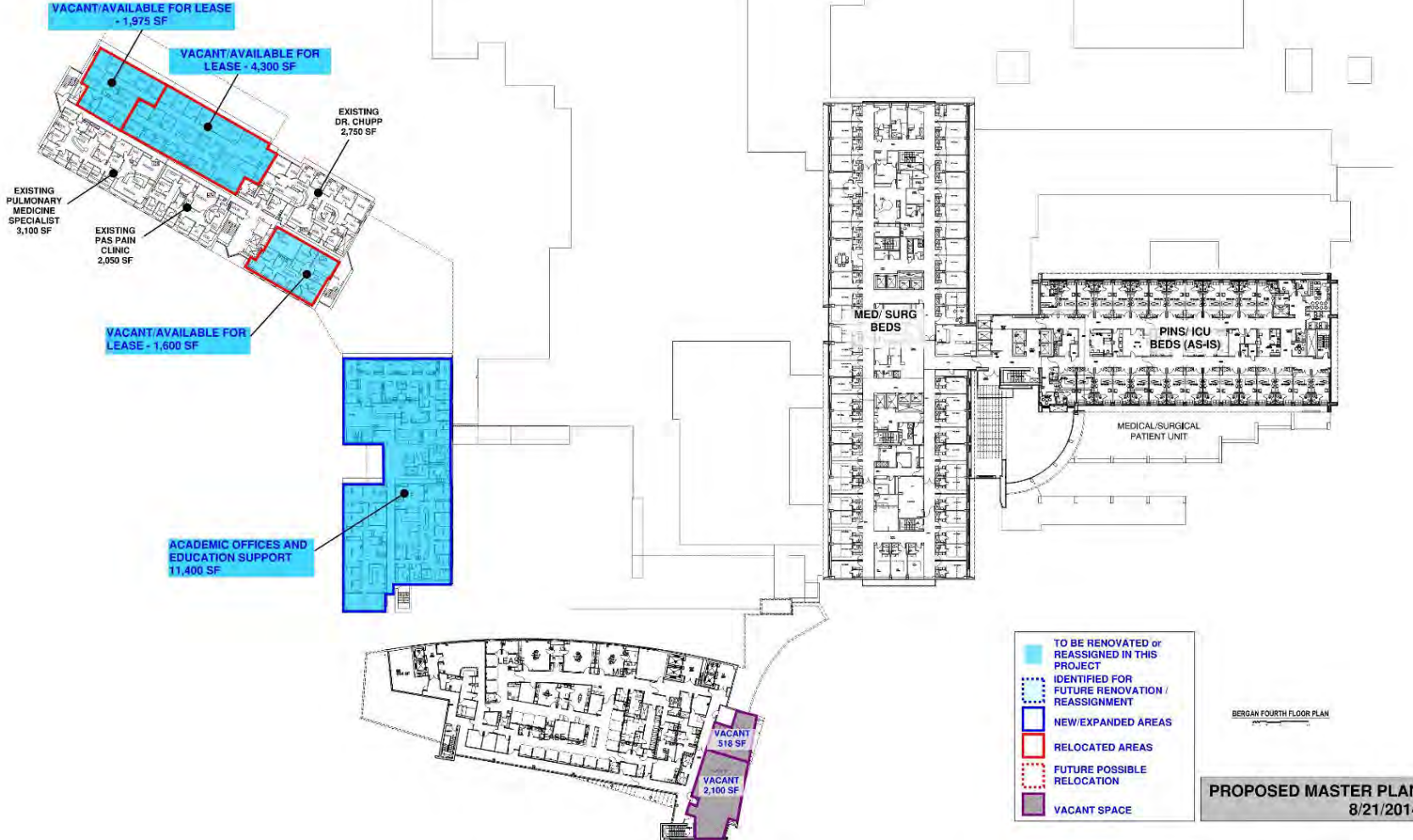
Master Plan



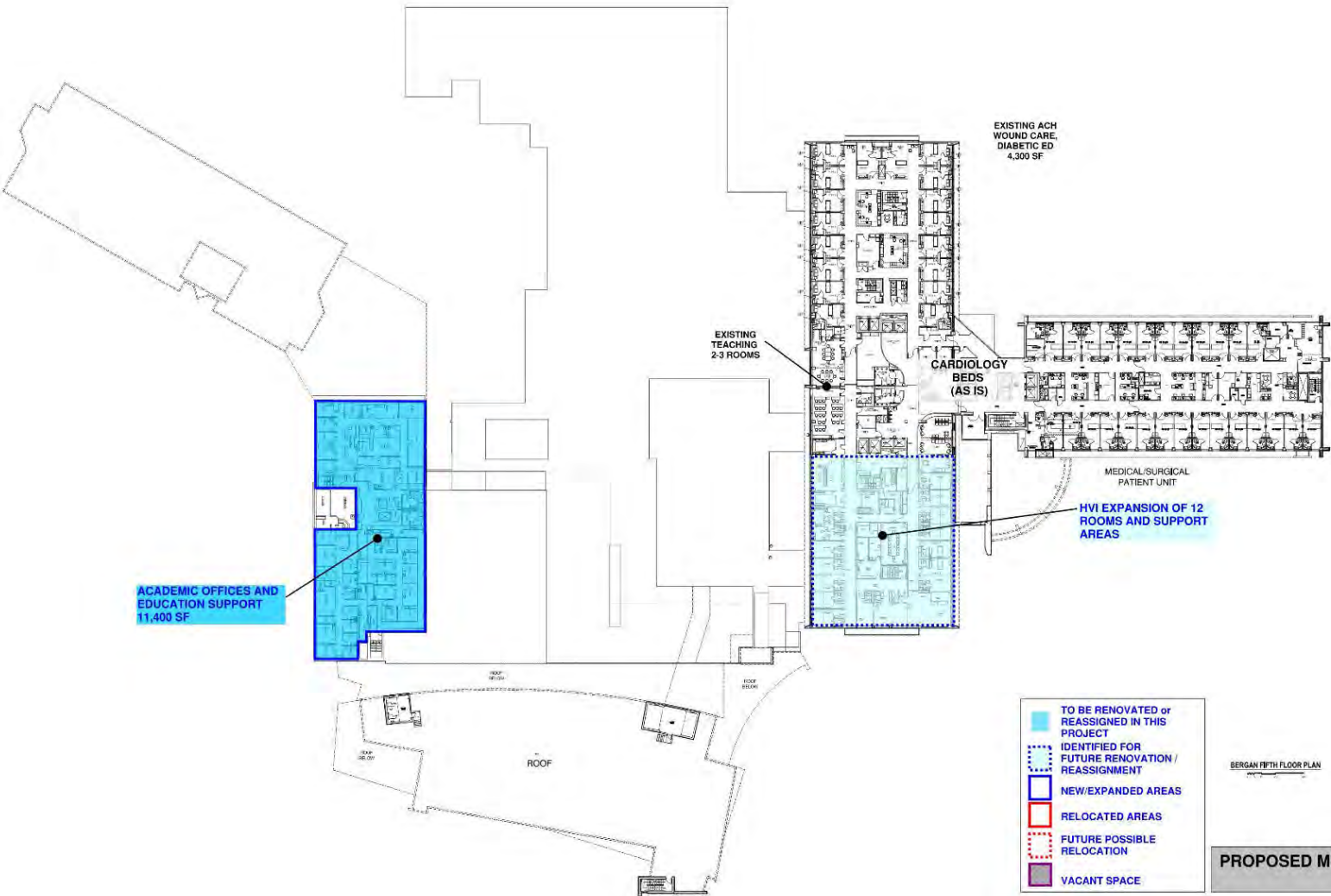
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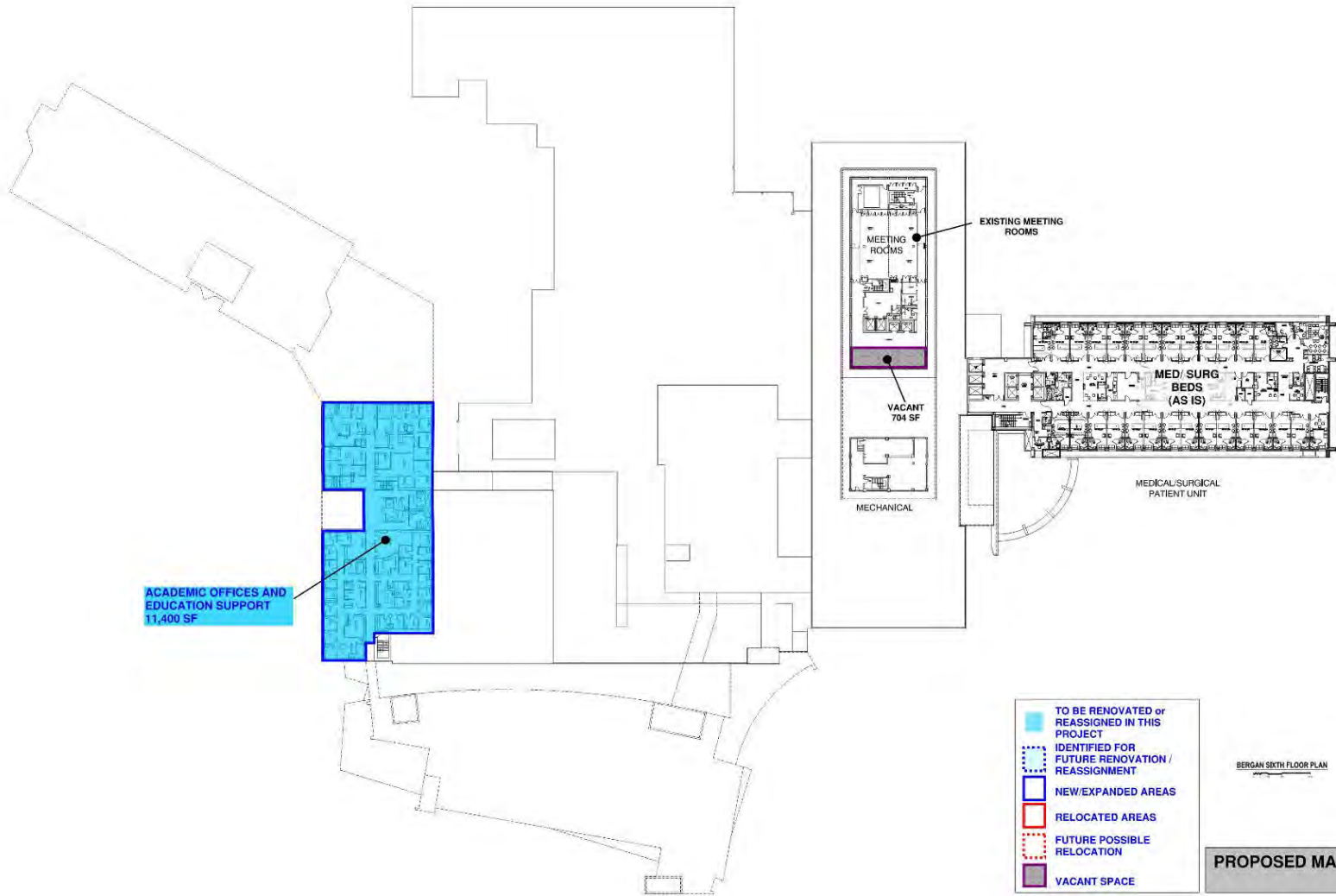
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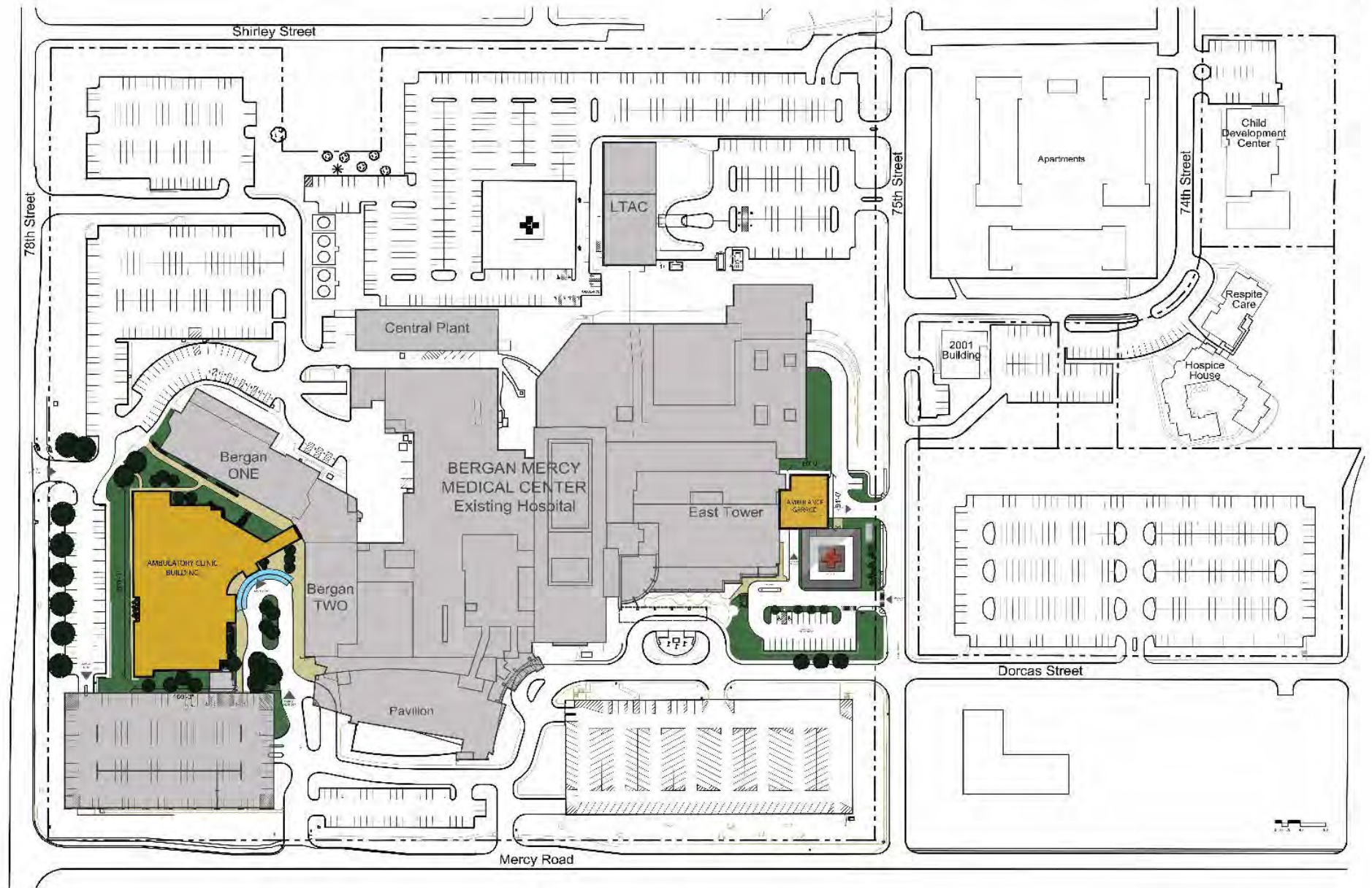
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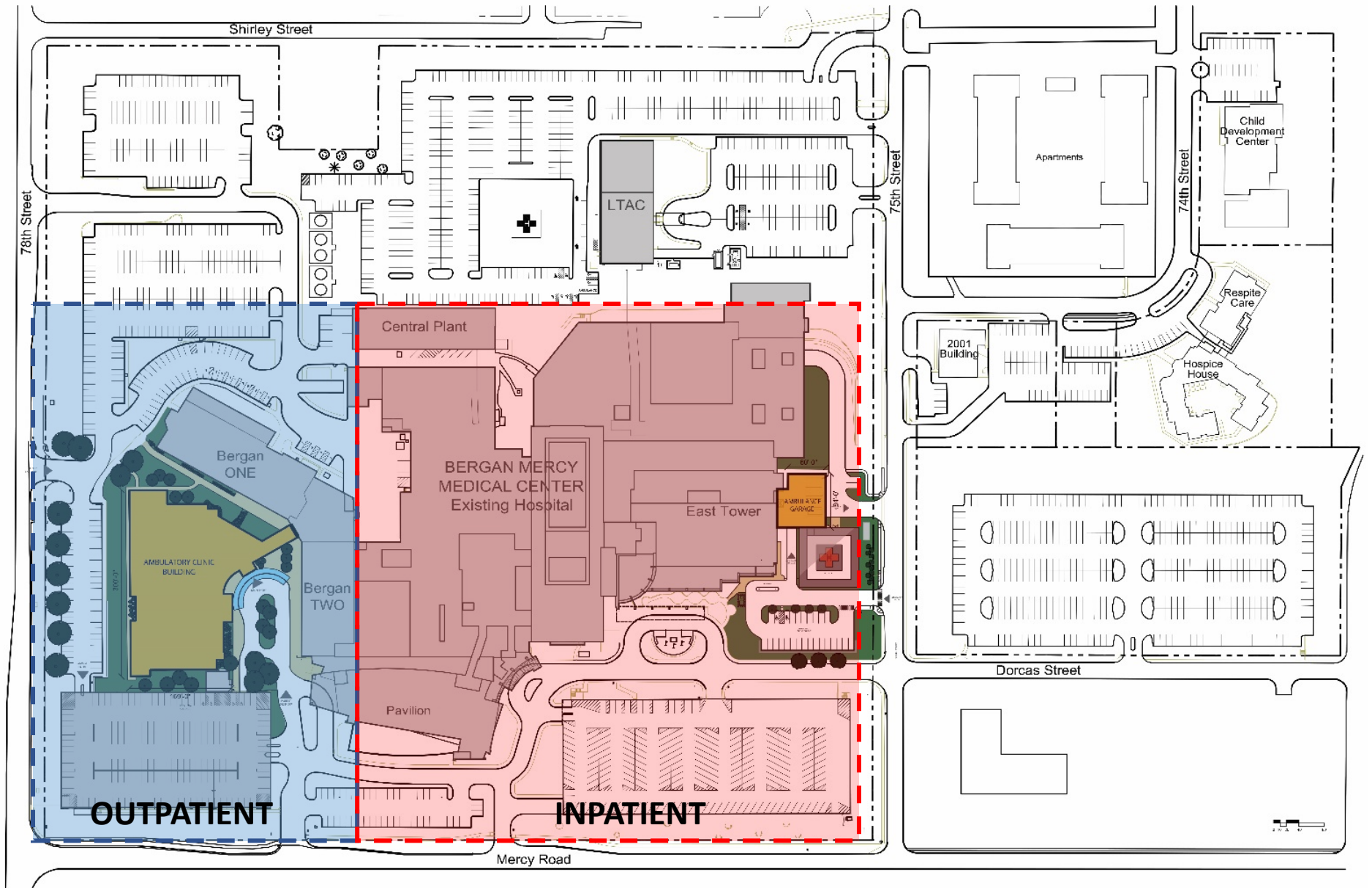
Master Plan



Site Plan



Site Plan



More Project Background...

1. Primary Hospital Departments affected

1. Emergency
2. Trauma- helicopter access
3. Intensive Care Department
4. Lab
5. Surgical and Radiology Support
6. Central Sterile Processing
7. Resident support on Med-Surg Units



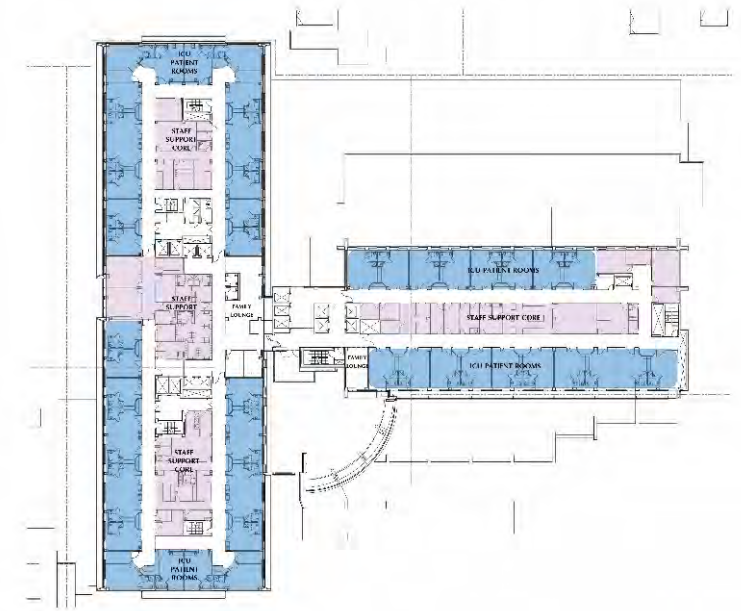
Hospital Spaces



- 4 TRAUMA BAYS
- 22 ED TREATMENT ROOMS
- 6 VERTICAL TREATMENT ROOMS
- 11 CDTU ROOMS

EMERGENCY / RADIOLOGY

LEVEL 1



- 52 ICU PATIENT ROOMS WITHIN 3 WINGS
- 5 ISOLATION ROOMS
- TEAM WORKROOMS

ICU

LEVEL 3





C

FOR YOUR USE

1 infant Ambu bag
1 ped Ambu bag
only

EMERGENCY



8:15

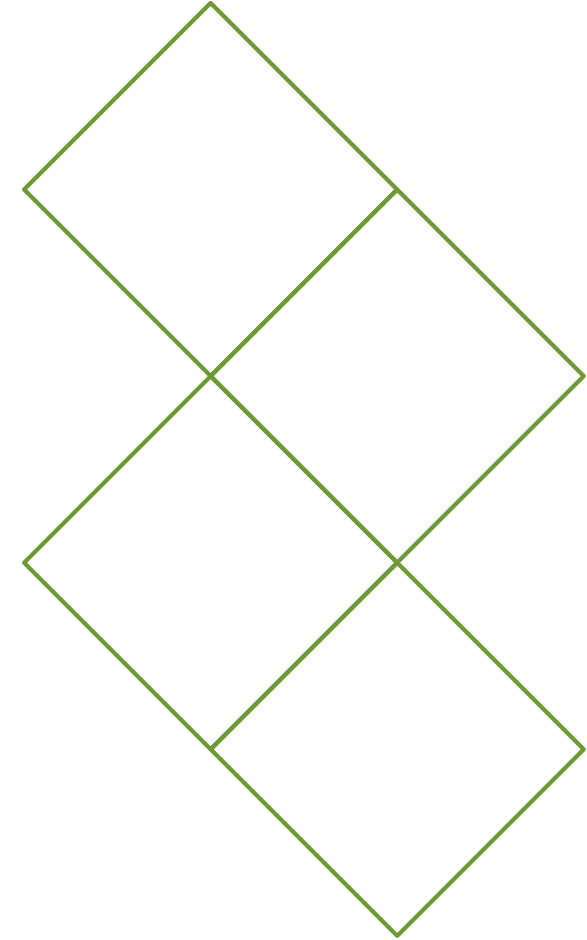


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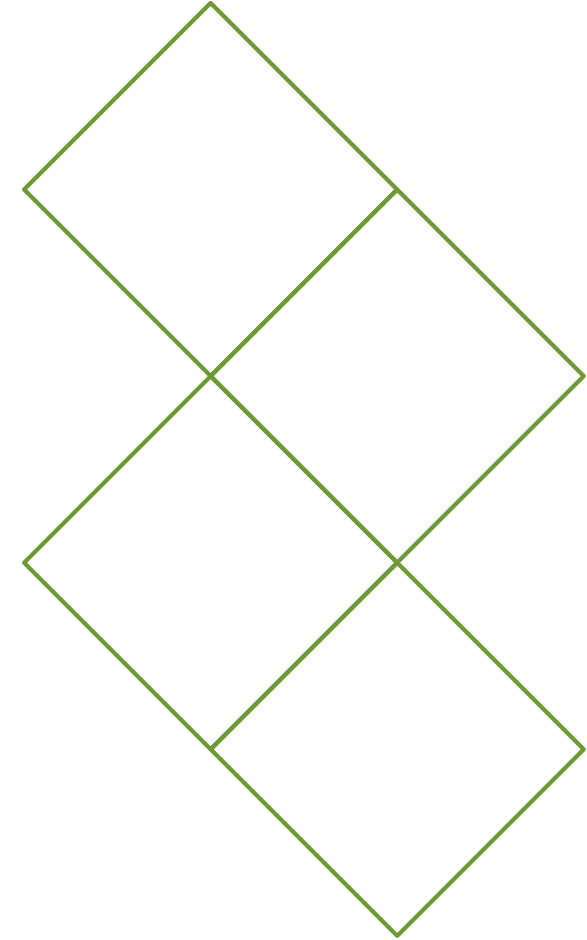
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EXIT

EXIT

EXIT TO LOBBY



EMERGENCY

EMERGENCY

Midwest
MedAir

N535MW

Hospital Spaces

HOSPITAL SPACES

