



**The Miriam:
Building for the Next 100 Years**

Intro to Speakers



Christy Murphy, LEED AP
Managing Director, Vertex



Heather Giampietro
Director of Capital Projects/Facilities,
Brown University Health



Jennifer Arbuckle, AIA, NCARB, LEED AP
Senior Principal, E4H Architecture

Agenda

1 – Design Challenges

Planning

Studies

Data-driven analysis

2 – Process & Solutions: Engagement Planning

Staff

Leadership

Community

Regulatory

3 – Outcomes & Achievements: Project Successes

Communication

Flexibility

Design Solutions

Design Challenges: **SAME PROBLEMS**

What are we solving for?

SITE

Compact footprint
Residential neighborhood
Tight zoning
Future-ready

PHASING

Remain fully operational
Enabling projects
Innovation vs real-time use
Efficiency & flexibility

INPATIENT BEDS

Address lack of “available” beds
Maximizing private rooms
How many – bed study analysis
Modernized patient rooms

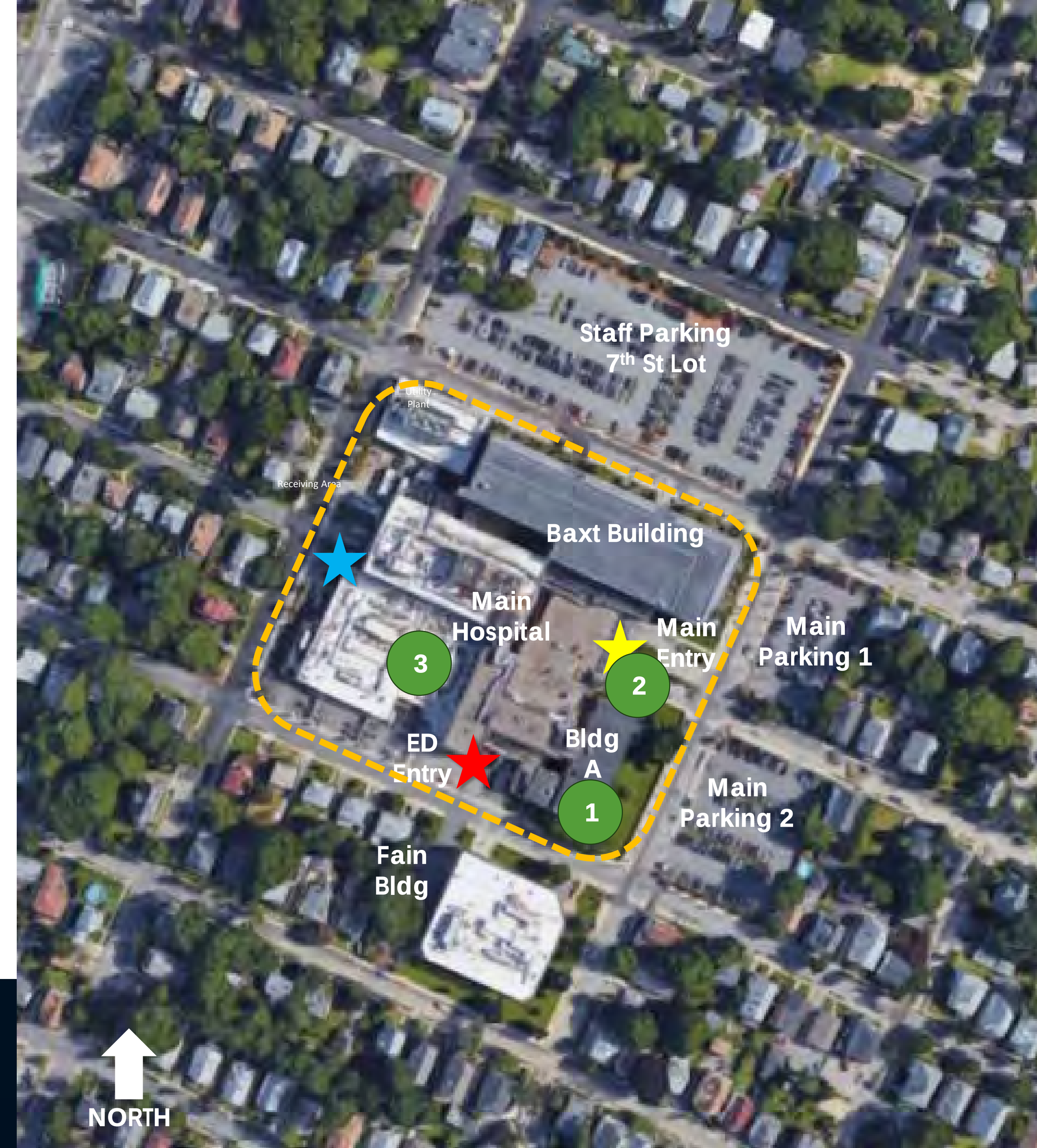
EMERGENCY DEPARTMENT

Disconnected layout
Treatment evolution/new room types
Clinical workflow/supports
Improved ED throughput

Existing Site Plan

Existing Conditions:

- Very tight site, maxed out with buildings & parking
- Residential neighborhood:
 - o Maintaining quiet neighborhood
 - o Ensuring privacy
 - o Limiting parking issues
 - o Part of permit approvals process (IMP)
- Height limitations from Zoning Code
- Considered options:
 - o 1) Building A footprint
 - o 2) Over Main entrance
 - o 3) On top of existing roof areas



Phasing

The only place to build this project is in front of the ED, adjacent to (and encroaching on) the Main Entrance, and surrounding an exit stair that serves the basement, 3 floors of Inpatient Nursing Units, and the Laboratory.

- Keeping mechanical/electrical systems operational
- Maintaining ED Walk-in and Ambulance entries
- Creating safe egress paths during construction
- Elevator access to Patient Floors
- Staff/visitor access to/from parking areas
- Keeping streets open around the hospital block
- Connecting utilities
- Demolishing Building A
- Breakthrough renovations in existing areas
- Very tight urban construction site
- Minimal parking impact



SAME PROBLEMS. **HIGHER STAKES.** **BETTER SOLUTIONS.**

Inpatient Beds

The decision was made to maintain the bed count but create new private rooms, allowing existing doubles to decant and effectively doubling the availability of private patient rooms.

Drivers:

- Utilization rates were higher than normal (+90%) and increasing every year
- Existing double rooms were small by current standards, and create usual bed use bottlenecks (gender, acuity, diagnosis)
- Nursing units were small (staff-inefficient) and lacking support space
- Creating throughput problems in ED when beds “unavailable”
- How do we get to all private room model?

The Miriam Hospital Master Plan

Bed Count Summary

e4h

ENVIRONMENTS FOR HEALTH ARCHITECTURE

Proposed Bed Count (by Location)					Relocate all beds to new area		
					Decant Doubles to Singles		
					No change		
Floor	Unit Type	Current Count*	Bldg A Replacement * (2022 Option)	All Private Room Model (2022 Option A)	Mixed Single / Double Room Model (2022 Option B)	Mixed Single / Double Room Model (2022 Option C)	Mixed Single / Double Room Model (2022 Option D)
2E	ICU	16	16	16	16	16	16
2W	SCU	20	20	17	20	20	20
2B	CCU	9	9	0	9	9	0
2A (new)	Med/Surg/Intermediate	0	28	28	28	28	28
3N	Surgical (Baxt)	36	36	36	36	36	36
3E/3W	Medical	68	68	34	34	68	68
3B	Surgical	13	13	0	13	13	0
3A (new)	Med/Surg/Intermediate	0	28	29	29	29	29
4E/4W	Medical	60	60	32	32	32	60
4B	Hem/Onc	25	25	0	25	0	0
Grand Totals		247	303	192	242	251	257
			note 1	note 2			

* Existing beds are mixed between double/single rooms. All new beds are private rooms.

Note 1 - you may choose to take beds out of service (such as units 2B, 3B, or 4B) or decant doubles to single rooms to modify bed counts, but the existing bed counts remain until you do so

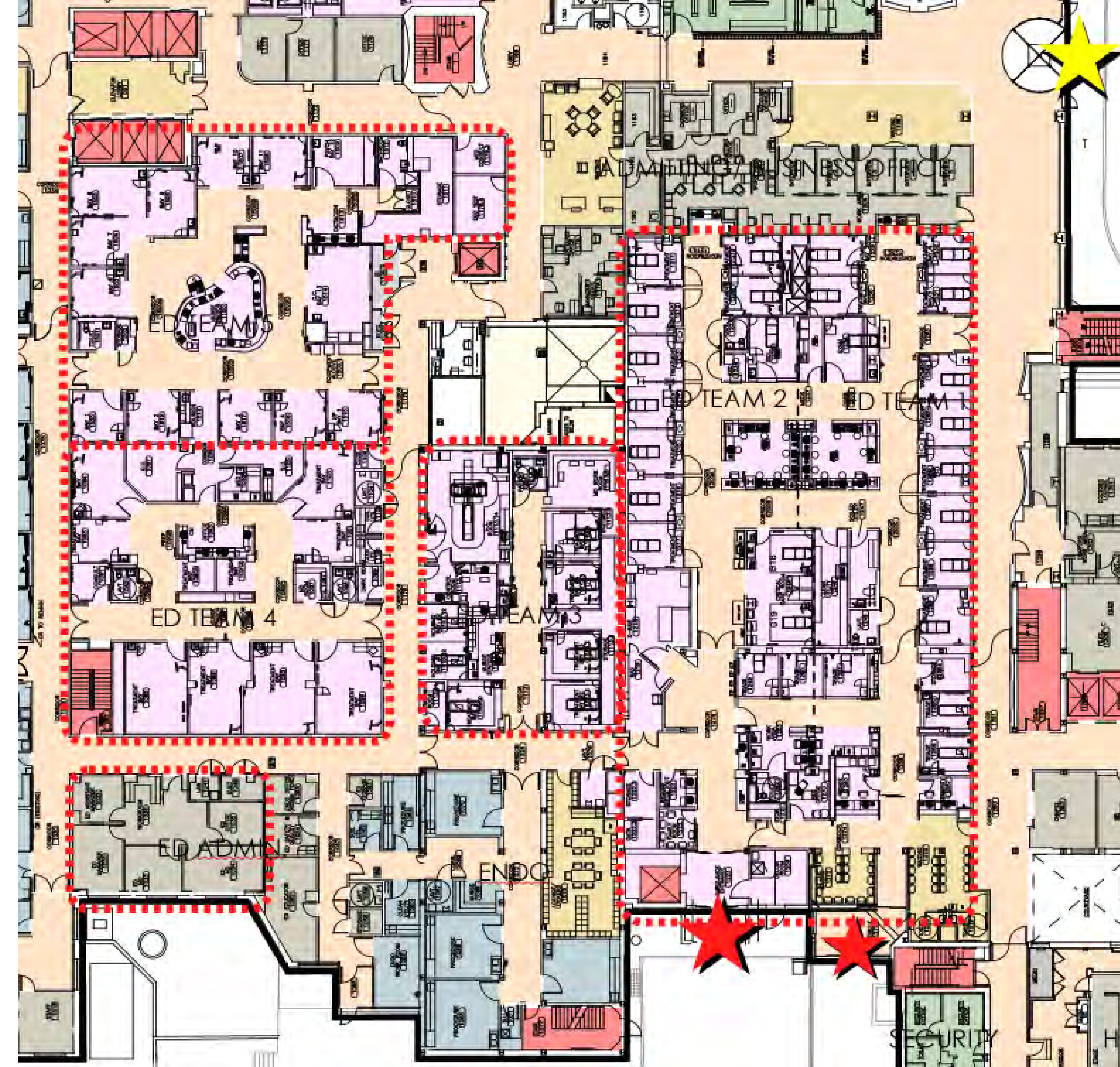
Note 2 - in this option, you would be very close to all Private rooms. There would be (2) Hem/Onc rooms and possible a couple of SCU rooms that would still be doubled up. The downside is that you're still keeping the Hem/Onc rooms on 4B operational.

Emergency Department

The existing ED consisted of 5 pods of varying size and type of Exam Room, with public hallways running between them.

Drivers:

- Steady volume growth year over year, with space getting more limited
- Main public corridors intersecting space; interrupting workflow
- Support space lacking
- Overcrowding when beds not available or surging
- Adequate (appropriate) rooms for Behavioral Health patients
- Rightsizing the quantities and type of treatment spaces



Process & Implementation: **BETTER SOLUTIONS**

How did we do it?

REGULATORY

Do your homework and build your case
Strong relationship with state for CON
Institutional Master Plan (IMP) for local approvals
Fast permitting approvals

NEIGHBORHOOD

Discuss options early in planning
Invite input and collaboration
Respond immediately to concerns
Invite shared success

DESIGN INPUT

End user engagement critical to success
Contribute ideas/suggest improvements
Clinical + support + facilities teams all included
Representation matters *or*
Own the design solutions

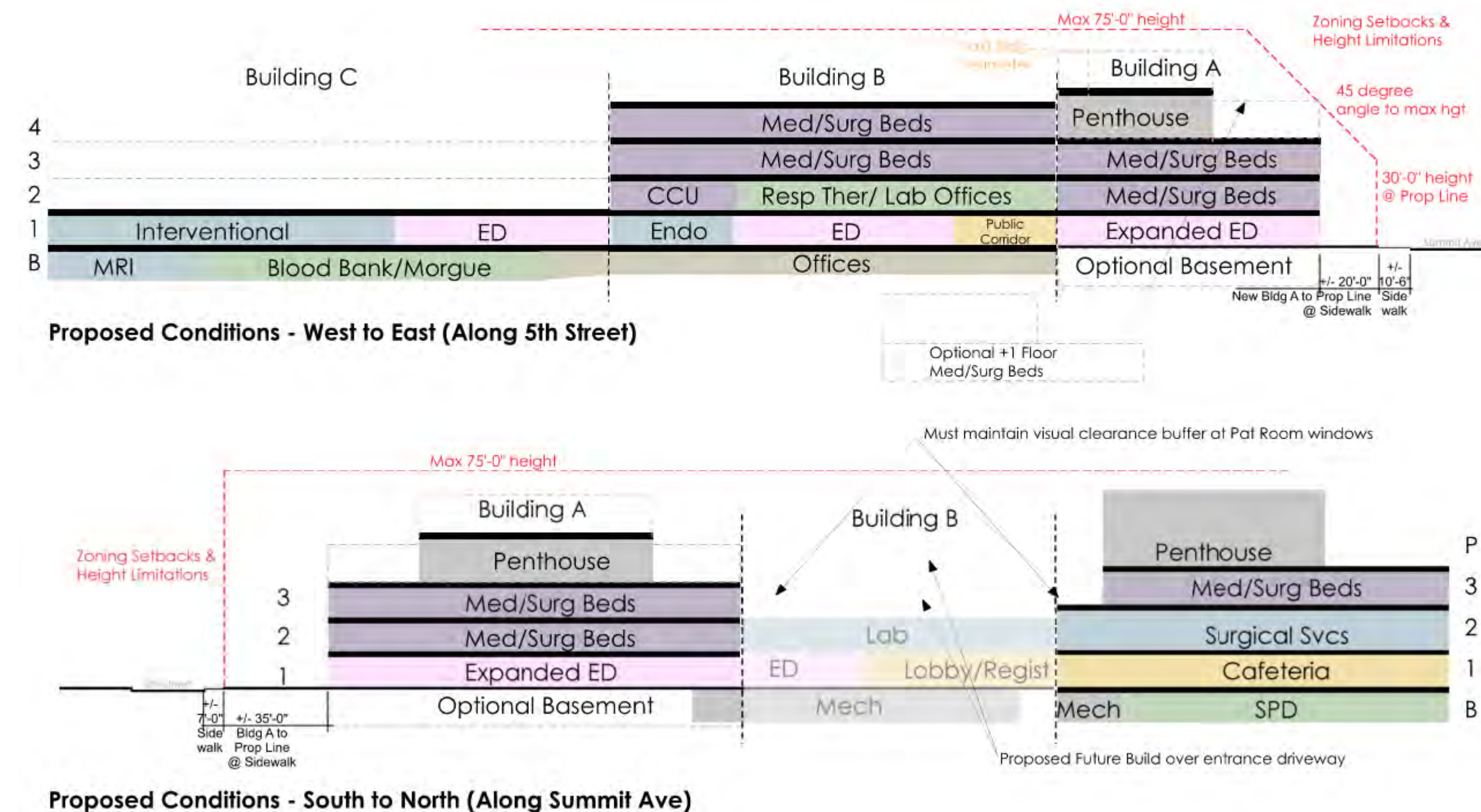
COMMUNICATION

Removing Building A = moving people working in it
Relocation logistics were complex and multi-campus
Team effort needed ahead of demolition (the easy part!)
Listen, understand, respond

Regulatory

Local and State permitting processes
(+ trade permits)

- Providence IMP in place, updated regularly = clear guidelines for new structures
- Develop and maintain good working relationships with officials
- Understand their perspective – develop documentation to clearly demonstrate that requirements are met
- BUH and The Miriam are good neighbors and actively work with city enforcement to address all issues
- Be ready to pivot – new Rhode Island Energy Code, plan around future codes



Neighborhood

TMH has a long history of meeting monthly with neighborhood groups to ensure good relationship.

- During design, invited neighbors to review and comment on proposed design and made changes to address ideas and concerns
- Actively engaged neighbors in garden/landscape design around perimeter
- Honored historical connection to Jewish community and “their” hospital
- Understand emotional connection to Building A (100 years old!) and its artwork and memorials



SAME PROBLEMS. **HIGHER STAKES.** **BETTER SOLUTIONS.**

Design Input

Project really began with master plan completed in 2019. Leadership established goals and approved project scope.

- User group empowered to make clinical design decisions
- Invited all stakeholders into process
 - o Clinical
 - o Facilities
 - o Support (Dietary, Pharmacy, Security, Admissions, EVS, Supply Chain)
- Engagement with teams = ownership of design solutions
- Walking through new workflows with end users equals buy-in from all stakeholders
- Weekly and bi-weekly meetings were held to keep design process moving; with sign-offs required at each phase milestone
- All projects have to pivot – ability to respond quickly can save time and money

Marked up planning graphic - TBD

Communication

Prior to demolition of Building A, those working in the building had to be moved out. Adjacent departments would be affected by this major addition to an existing building. A multi-disciplinary team was required to make it happen.

- Relocations to new spaces (on or off-campus)
- Some temporary locations until new building completed
- The building needed to be abated before demolition
- A large number of artwork, recognition plaques, and memorial contributions also needed to be inventoried and stored (or repurposed).
- The Miriam Lab serves the hospital plus entire OP system (41 locations). It must operate!



SAME PROBLEMS. **HIGHER STAKES.** **BETTER SOLUTIONS.**

Outcomes & Achievements: **HIGHER STAKES**

SITE

Maximized footprint
Final building on campus
Garden & Landscaping
Building the Right Thing

FLEXIBILITY

New clinical workflows
Spaces that allow for future care models
Organized approach allows quick pivots
Future Successes Start Here

CLINICAL + DESIGN

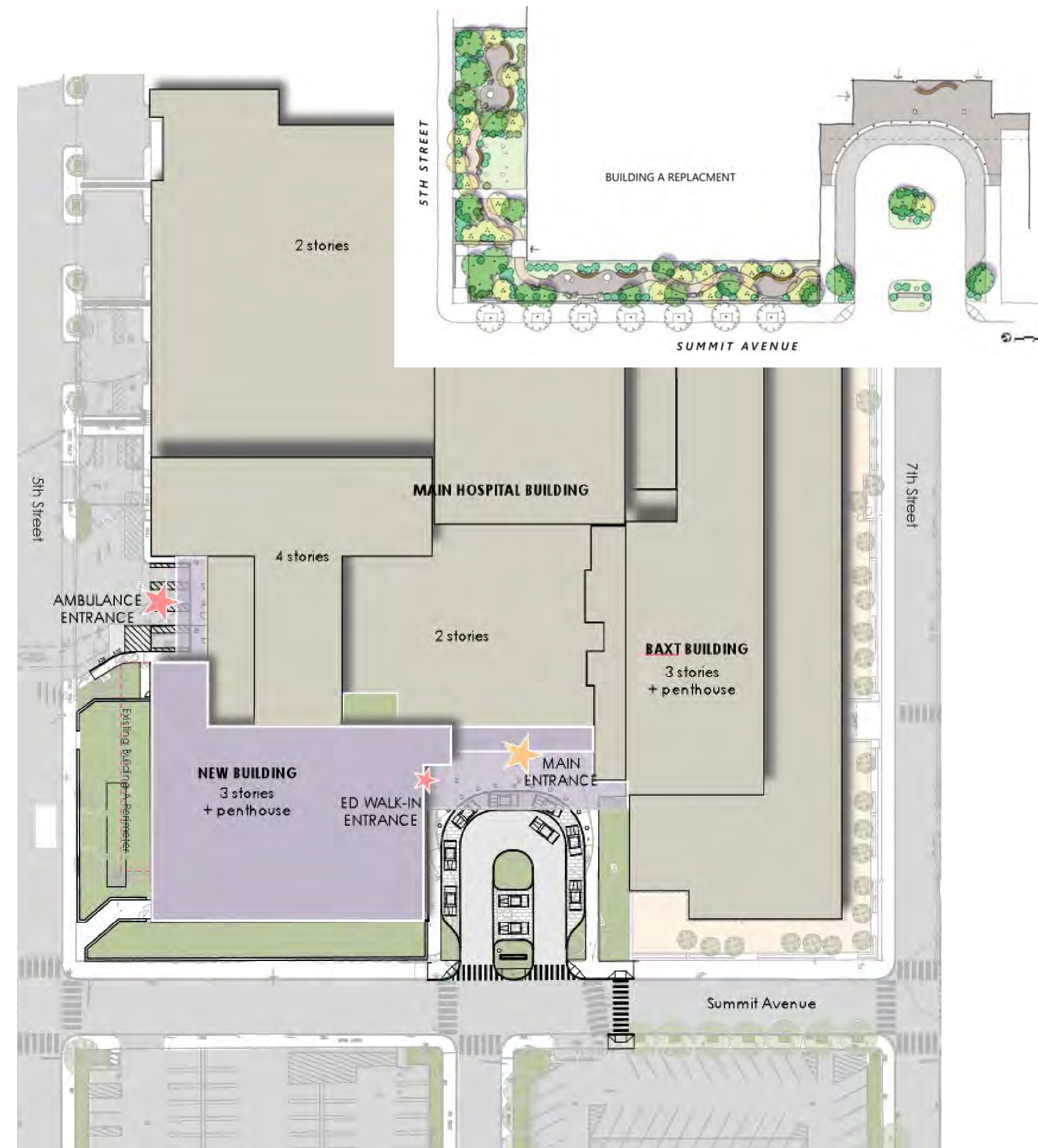
State of the Art private Patient Rooms
Emergency Department throughput
Modernized, secured entrances
Swing space for Future needs
Patient & Staff Satisfaction

COMMUNICATION

Everyone owns the solutions
Managing the budget
Engagement at all levels – all feel heard
Stronger Relationships

Site Achievements

- Maximized footprint in alignment with Baxt Building / C Building
- New Main Entrance with Walk-In ED Entrance
- Enhanced security at entrances
- New garden / landscaping area around perimeter expands on Baxt street edge design, creates respite space for community



Clinical + Design Outcomes

New Emergency Department space includes:

- 58 new treatment areas
 - o 16 O.E.T rooms
 - o 6 pass-thru Triage rooms
 - o 18 Vertical Treatment bays
 - o 8 Behavioral Health rooms (swing to regular Treatment use if not needed); multiple “lockdown” configurations
 - o 8 Results Waiting bays
 - o 1 true P.O.S. room
 - o 1 dedicated Large Treatment Room
 - o Improved 8-bay Stretcher Holding Area at Ambulance entrance

Goals Achieved:

- Contiguous ED space
- Separated Walk-in / Ambulance entrances
- Direct elevator to Nursing Units above and support areas below
- Modern treatment spaces that flex to meet needs



SAME PROBLEMS. **HIGHER STAKES. BETTER SOLUTIONS.**

Clinical + Design Outcomes



Clinical + Design Outcomes



Clinical + Design Outcomes

Inpatient Nursing Units include:

- 2 floors, 49 new Med/Surg beds total
- Ability to swing to Intermediate Care if needed
- All private rooms
- Will decant 49 doubles into singles

Goals Achieved:

- Bed count remains the same, but throughput improved with +/- 100 “new” private rooms
- Improved staffing efficiency
- Improved staffing support
- Direct connection to ED



Clinical + Design Outcomes



Clinical + Design Outcomes



Clinical + Design Outcomes

New entrances:

- New main entrance and “public face”
- Updated, improved drop-off area
- ED walk-in entrance separate, but obvious

Goals met:

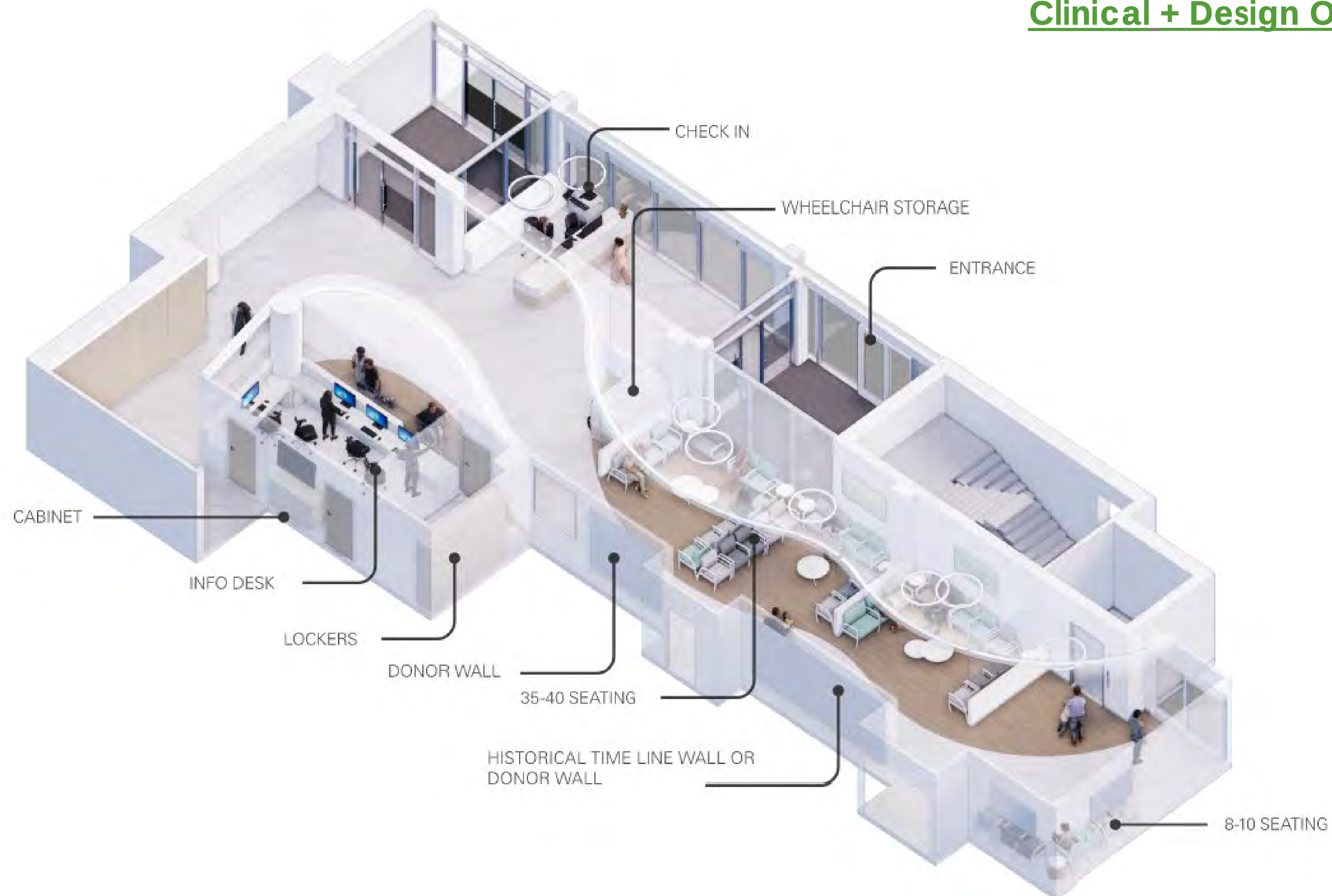
- Consolidated, controlled public access to building spaces
- New security features, while still welcoming
- Patient focused spaces



Clinical + Design Outcomes



Clinical + Design Outcomes



Clinical + Design Outcomes

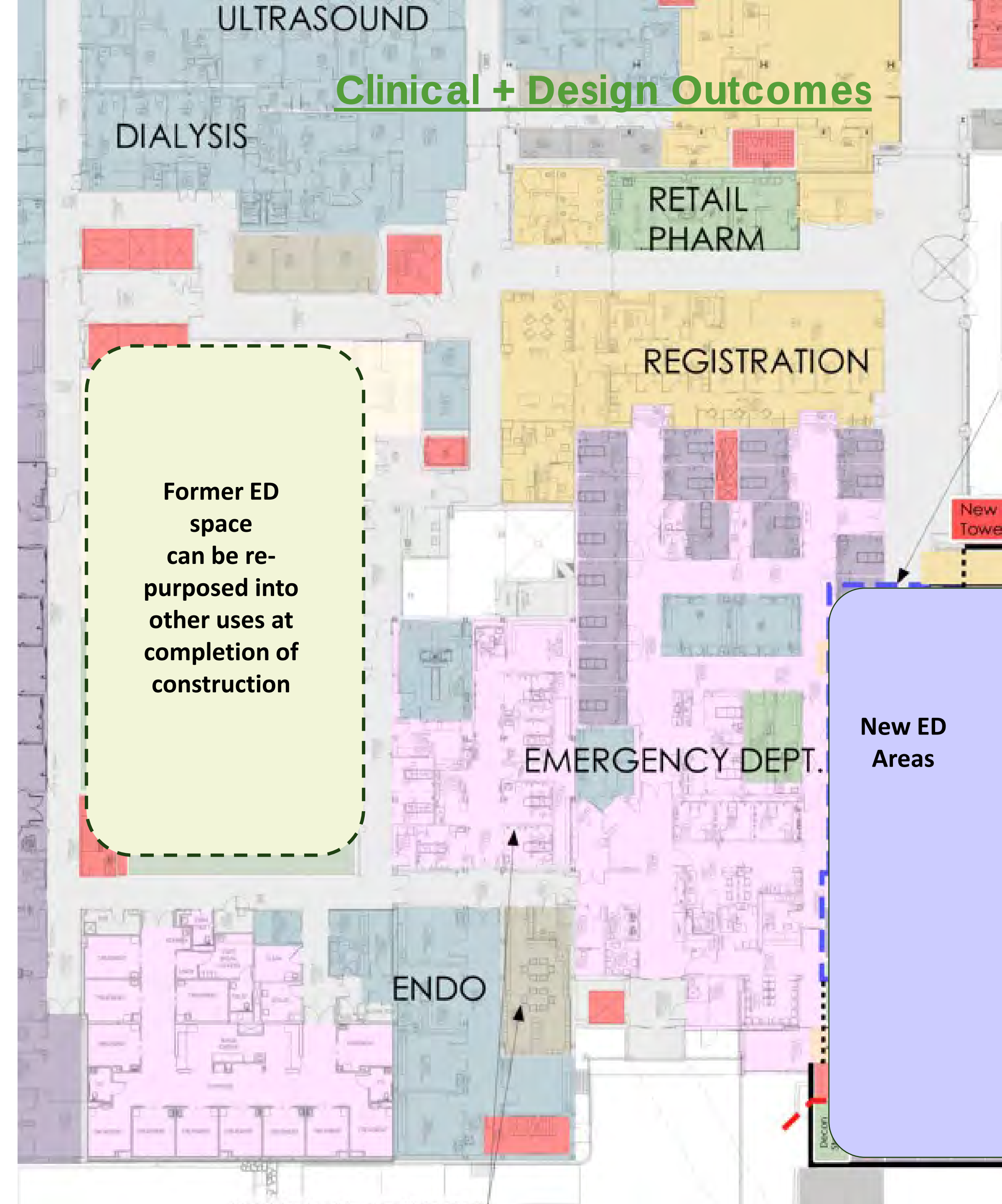


Flexibility for Future Success

Design began with a master plan, ending with:

- Major elements intact
- Preserving path to future space needs
- Landlocked campus with room to adapt
- Creating modern spaces
- Building infrastructure that supports anticipated future demands

Clinical + Design Outcomes



Communication

Engagement:

- Honesty – it's not all good news, every day
- Solutions focused
- Trust your team

Budget:

- Costs up, up, up despite cuts in design scope
- Changes in code
- Enabling projects
- CM partnership

Strong Relationships:

- With patients and families – loyalty to “our hospital”
- With staff – designed around their needs
- With neighboring community – staying responsive
- Owner/OPM/Design team/CM – true partnership



SAME PROBLEMS. HIGHER STAKES. BETTER SOLUTIONS.

Summary Where we're at....



Scheduled for Completion April 2028