

New Hospital Tower Rush University Medical Center

Chicago, IL, United States



SQ FT
830,000 BGSF
386 BEDS



OWNER/AFFILIATION
Rush University



ARCHITECT(S)
Perkins+Will



COMPLETION DATE
2012



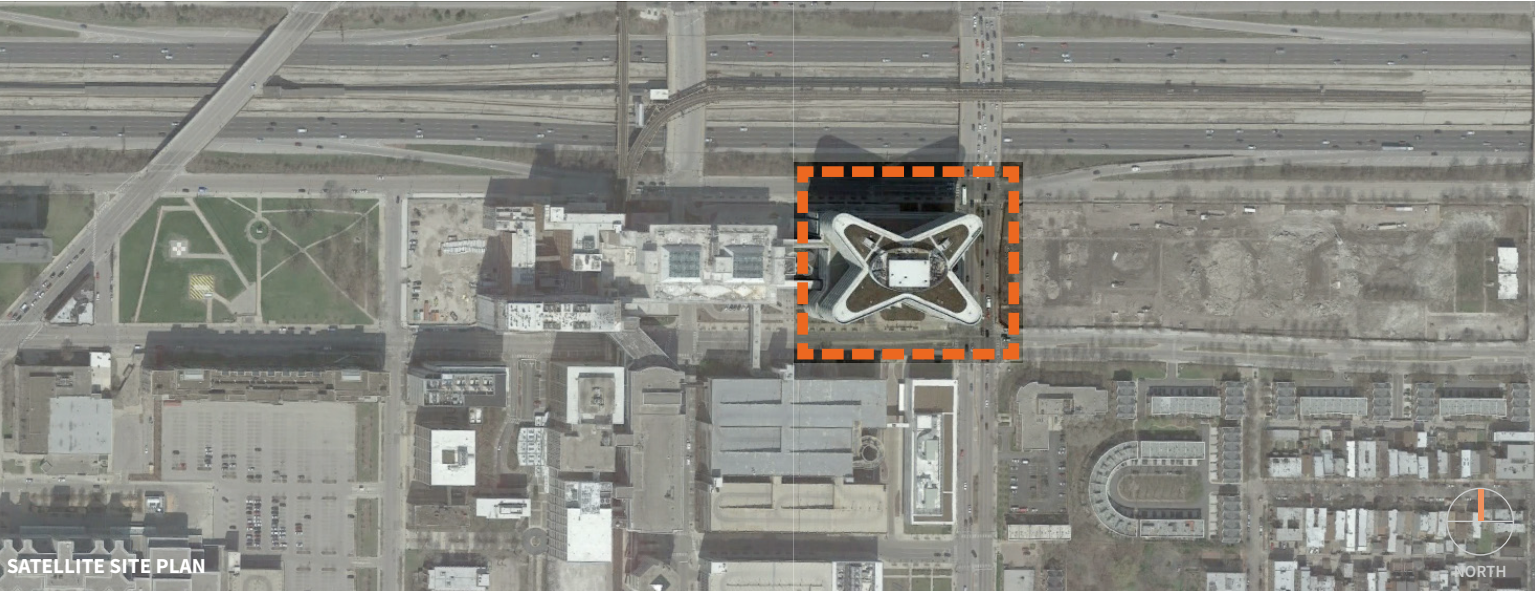
"BILLBOARD" IMAGE



SOUTHWEST ENTRANCE FACADE



NORTHEAST FACADE



SATELLITE SITE PLAN

ABOUT | DESIGN INTENTIONS

This hospital is part of a campus-wide transformation project, which also includes an orthopedic building, parking structure and new loading and delivery systems. The **830,000-square-foot hospital** consists of **386 patient beds** along with **diagnostic and treatment facilities**, such as **surgery, radiology and emergency** departments. The hospital is sited adjacent to the Eisenhower Expressway (a major arterial feeding the central area of Chicago) on the north, Ashland Avenue on the east and Harrison Street, the major internal street for the Rush Campus, on the south.



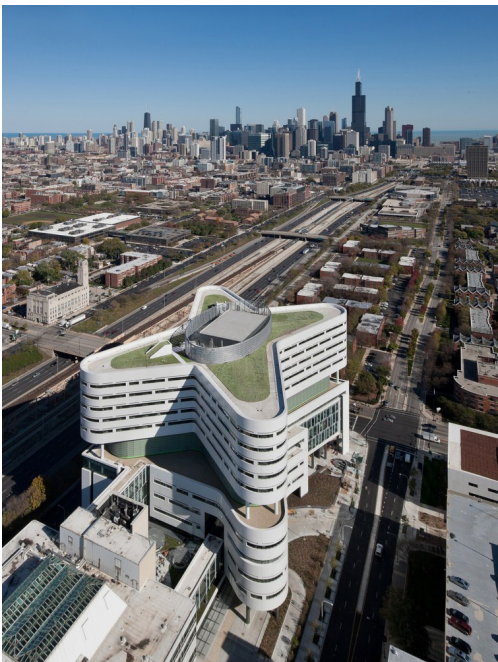
AERIAL VIEW

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SITE PLAN



AERIAL VIEW WITH GREEN ROOFS



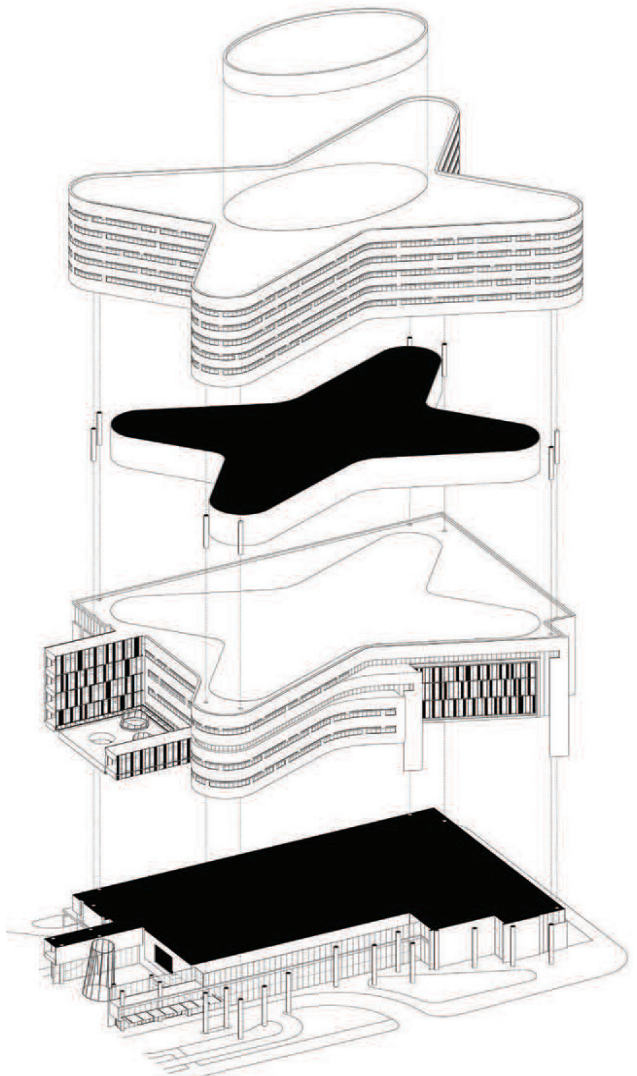
DESIGN STRATEGIES

The organizational concept consists of a **rectangular seven-story base**, containing new **diagnostic** and **treatment facilities**, topped by a **five-story curvilinear bed tower**.

The **base connects to existing diagnostic treatment facilities** to create a new continuous interventional platform.

Part of the **ground level of this base contains an emergency department**, which has been designed to be an advanced emergency response center for the City of Chicago.

The **geometry of the bed tower maximizes views and natural light for patient rooms** while also creating an environment for efficient and safe health care.



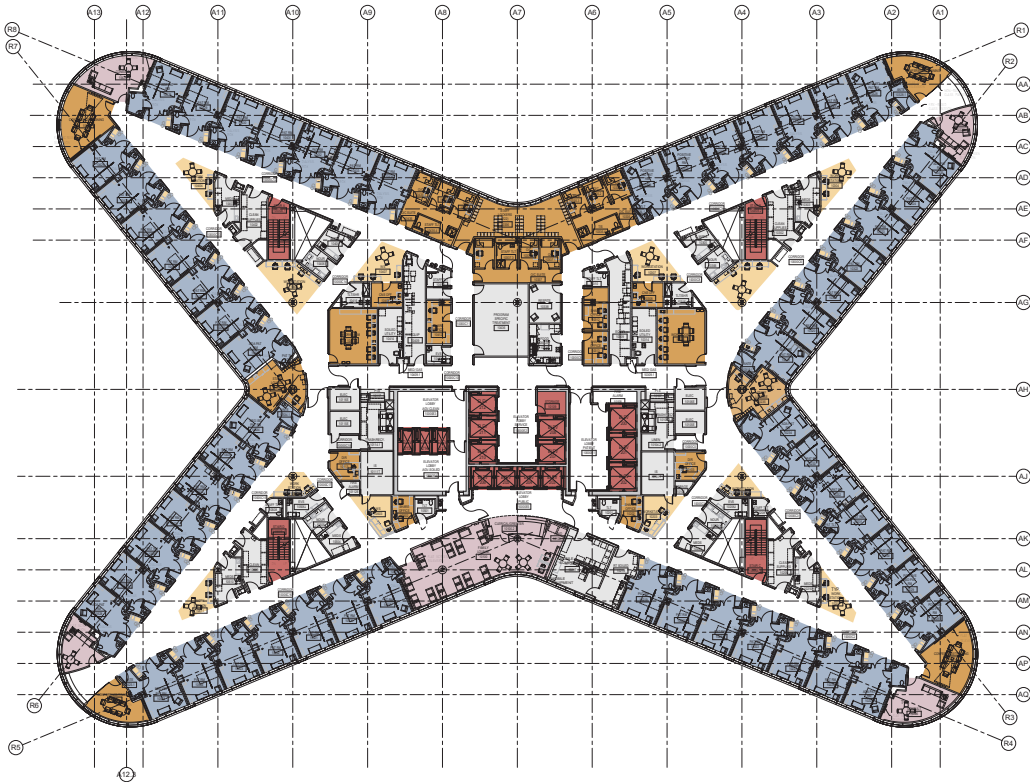
ISOMETRIC VIEW

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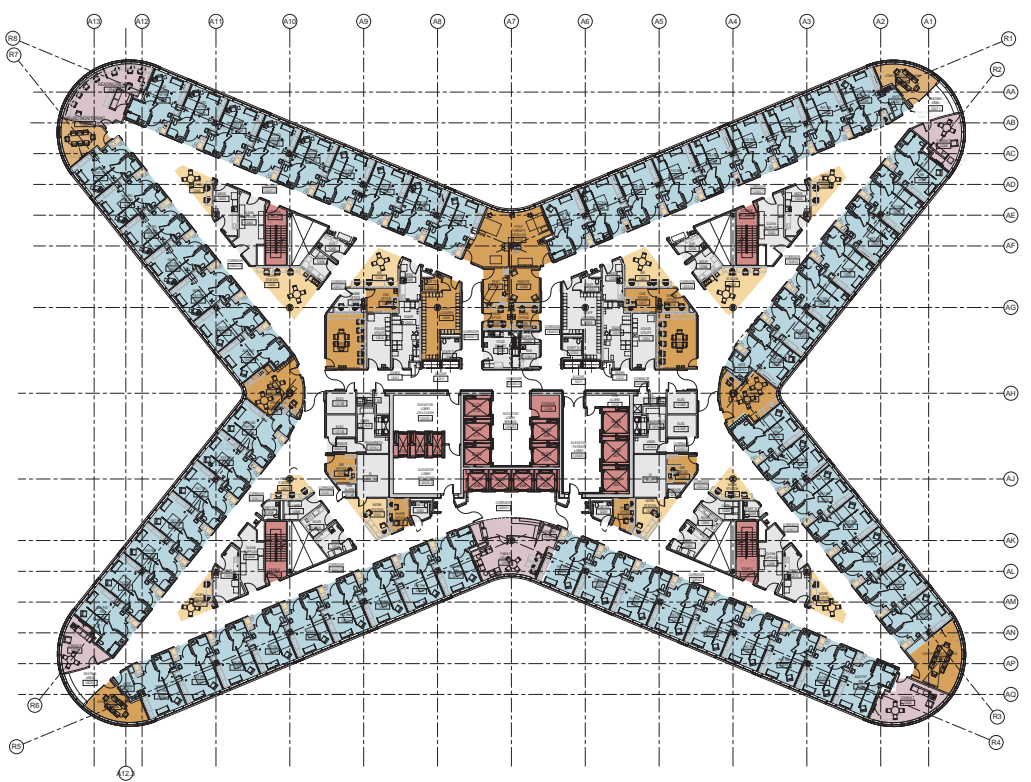
KEY SPACE :

- ICU Patient Room
- Nurse Work Station
- Clinical Support
- Support Services
- Patient/ Family Area
- Vertical Circulation

LEVEL 10 ICU:



LEVEL 12 MED/SURG:



KEY SPACE :

- Med Surg Patient Room
- Nurse Work Station
- Clinical Support
- Support Services
- Patient/ Family Area
- Vertical Circulation

Image Sources: <https://www.archdaily.com/443648/new-hospital-tower-rush-university-medical-center-perkins-will>

DEPARTMENTAL GROSS SQUARE FOOT TAKE-OFFS

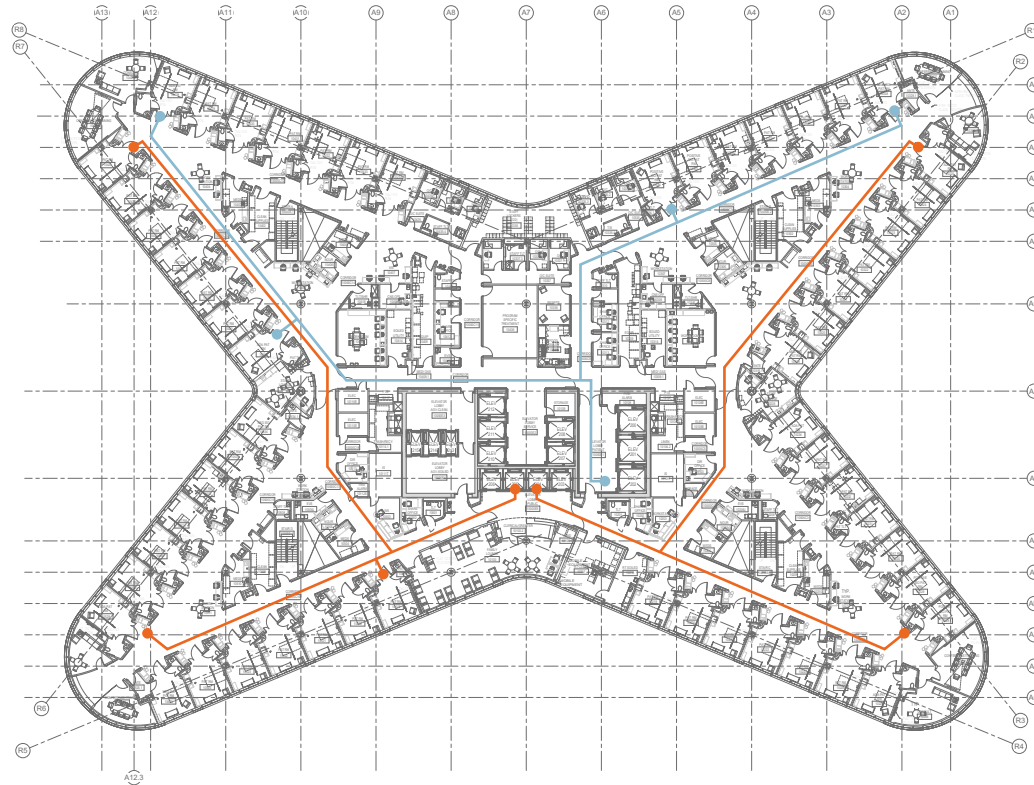
	Net	Gross	N/G ratio
ICU/Acuity Adaptable Unit	14195 SF	21683 SF	1.53
Med/Surg Unit	14228 SF	22198 SF	1.56

KEY SPACES:

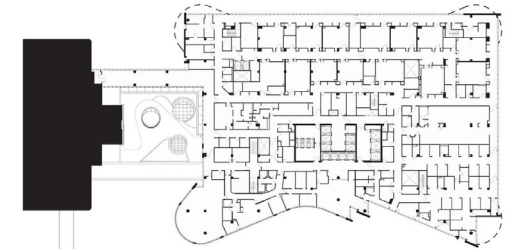
- ▶ Med/surge patient room(260sf)
- ▶ ICU/Acuity Adaptable patient room (244sf)
- ▶ Prefab patient toilet (42sf)

TRAVEL DISTANCE ANALYSIS

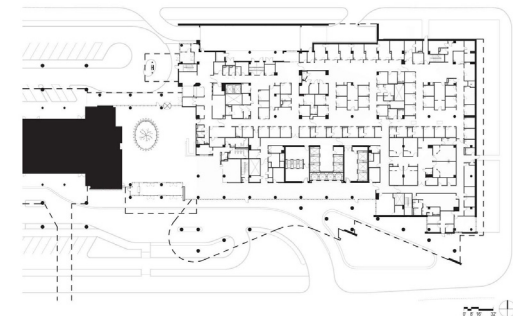
- Public Elevator to ICU/Med/surg room 68-249ft
- Patient Elevator to ICU/Med/surg room 142-264ft



Typical Bed Floor



Level 04



Level 01



SECTION THROUGH LOBBY ATRIUM & GARDEN

The east elevation works in tandem with the orthopedics building to create and reinforce the new entry boulevard from Ashland.

The **south elevation weaves the rectilinear and curvilinear geometry of base** and bed tower together to scale the building down to relate to the environment of the entry boulevard.

The **difference in north and south elevation** also responds to the **internal organizations of the base**. The simpler north elevation expresses the back of house staff connection corridors. The more layered and scaled down south facade contains the public elements of the base, such as lounges and waiting areas.

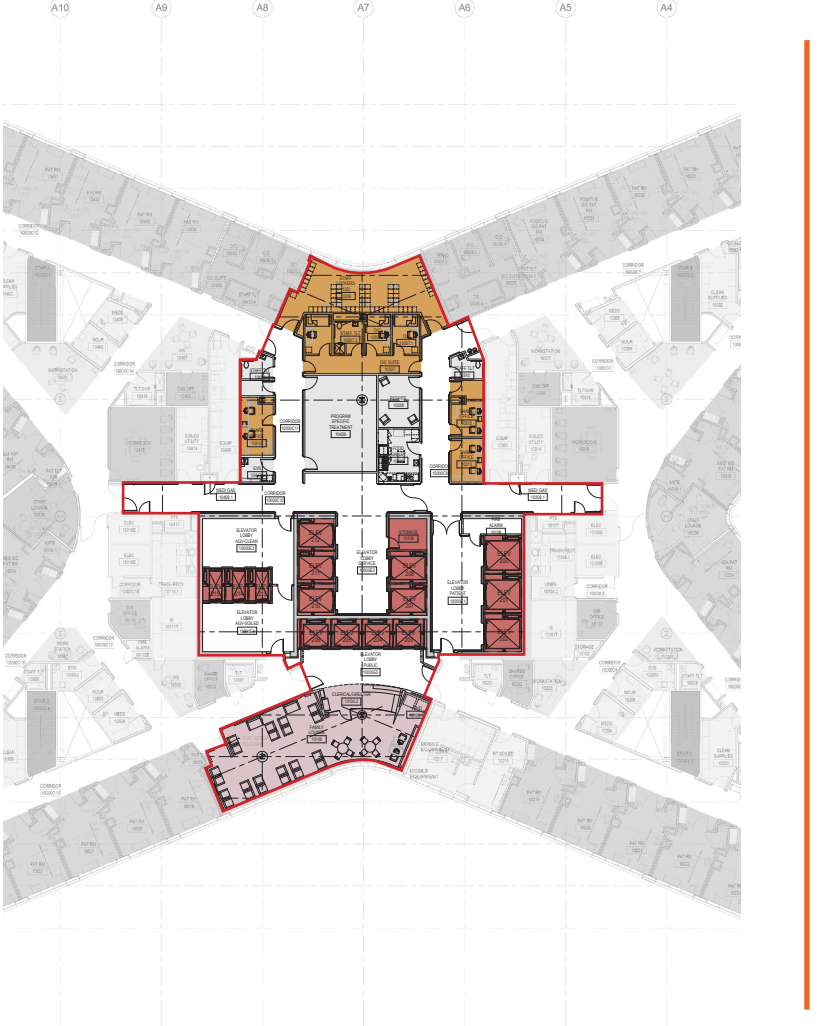
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ICU				
F10 Patient Floor - Space Program for Half				
Name	#	Net Sqft	Net Sqft Total	Note
Patient Care				
Patient Room	23	244	5612	Toilet Included 20sf
ADA Patient Room	3	269	807	Toilet Included 44sf
Neg. Iso. Patient Room	2	300	600	Ante. Room Included
Work Station Small	28	49	1372	
Work station Large	6	160	960	Average Sqft
Consult Room	2	260	520	Average Sqft
			9871	
Staff Support				
Conference/Training	2	289	578	
O/C Suite	1	448	448	
Work Room	1	366	366	
Staff Lounge	1	287	287	
offices	3	104	312	
			1991	
Support				
Equipment	1	322	322	
Clean Supplies	2	188	376	
Soiled Utility	1	176	176	
Meds	4	118	472	
Nourishment	2	80	160	
Toilet	3	58	174	
ELEC.	2	92	184	
TRASH	1	160	160	
Information Services	1	195	195	
Fire Alarm	1	27	27	
Housekeeping	1	87	87	
			2333	
			14195	
DNSF			1.53	
Multiplier			21683	
DGSF				

Department Multiplier : 1.53

*Dept. Net	+	1/2 Shared Lobby Net	=	Total Dept. Net
14,195		1/2 x 3703		16,046
*Dept. Gross	+	1/2 Shared Lobby Gross	=	Total Dept. Gross
21,683		1/2 x 8727		26,046

Overall Multiplier (Includes Shared Lobby): 1.62



Shared Between Two Departments				
Staff Lockers	1	548	548	
On-Call Suite	1	489	489	
Toilet	2	53	106	
EVS	1	63	63	
Shared Office	3	111	333	
Program Specific Treatm	1	543	543	
Respite	1	170	170	
Food Storage	1	170	170	
Storage	2	42	84	
Greeter	1	150	150	
Family Lounge	1	1047	1047	
	Shared Net		3703	
	Shared Gross		8727	w/o elevator cores

Service/Staff Elev. & Vestibule(net)	986
Patient/Staff Elev. & Vestibule(net)	954
Public Elev. (net)	685
Cart Elev. (net)	955

- ICU Patient Room
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Med Surg				
F12 Patient Floor				
Name	#	Net Sqft	Net Sqft Total	Note
Patient Care				
Patient Room	17	260	4420	Toilet Included 42sf
Neuro Patient Room	9	260	2340	
ADA Patient Room	4	280	1120	
Neg. Iso. Patient Room	2	330	660	Ante. Room Included
Work Station Small	32	16	512	
Work station Large	6	171	1026	Average Sqft
Reading/Review	1	150	150	Average Sqft
Neuro Monitoring	1	340	340	
Consult Room	1	229	229	
			10797	
Staff Support				
Conference/Training	2	210	420	
O/C Suite			0	
Work Room	1	306	306	
Staff Lounge	1	316	316	
offices	4	100	400	
			1442	
Support				
Equipment			0	
Clean Supplies	2	211	422	
Linen	1	88	88	
Meds	4	134	536	
Nourishment	2	85	170	
Toilet	2	50	100	
ELEC.	2	92	184	
TRASH	1	155	155	
Information Services	1	195	195	
Fire Alarm	1	28	28	
Elec. Pull	1	42	42	
Housekeeping	1	69	69	
			1989	
	DNSF		14228	
	Multiplier		1.56	
	DGSF		22198	

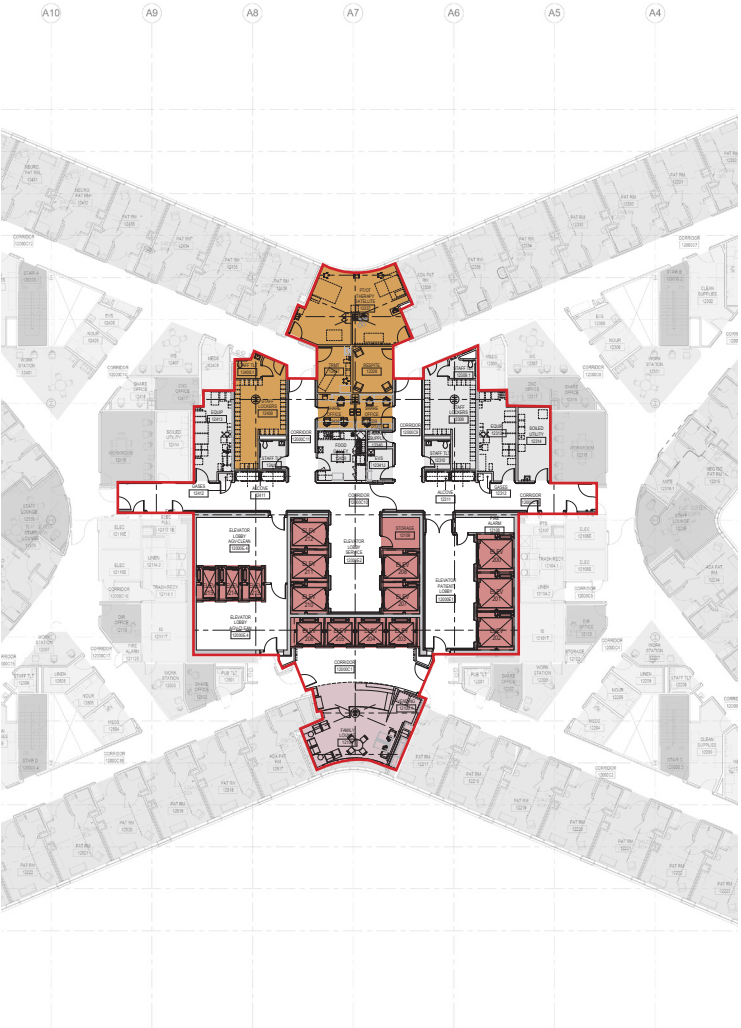
Department Multiplier : 1.56

*Dept. Net	+	1/2 Shared Lobby Net	=	Total Dept. Net
14,228		1/2 x 3456		15,956
*Dept. Gross	+	1/2 Shared Lobby Gross	=	Total Dept. Gross
22,198		1/2 x 8340		26,368

Overall Multiplier (Includes Shared Lobby): 1.65



- Med Surg Patient Room
- Nurse Work Station
- Clinical Support
- Support Services
- Patient/ Family Area
- Vertical Circulation



Shared Between Two Departments				
PT/OT therapy satellite	1	583	583	
Therapy Supply	1	32	32	
Toilet	2	60	120	
EVS	1	64	64	
Shared Office	2	98	196	
Program Specific Treatment	1	122	122	
Respite	1	147	147	
Staff Lockers	2	324	648	
Equipment	2	250	500	
Soiled Utility	2	186	372	
Food Storage	1	189	189	
Greeter	1	86	86	
Family Lounge	1	397	397	
	Shared Net		3456	
	Shared Gross		8340	w/o elevator cores

Service/Staff Elev. & Vestibule(net)	989
Patient/Staff Elev. & Vestibule(net)	957
Public Elev. (net)	684
Cart Elev. (net)	957

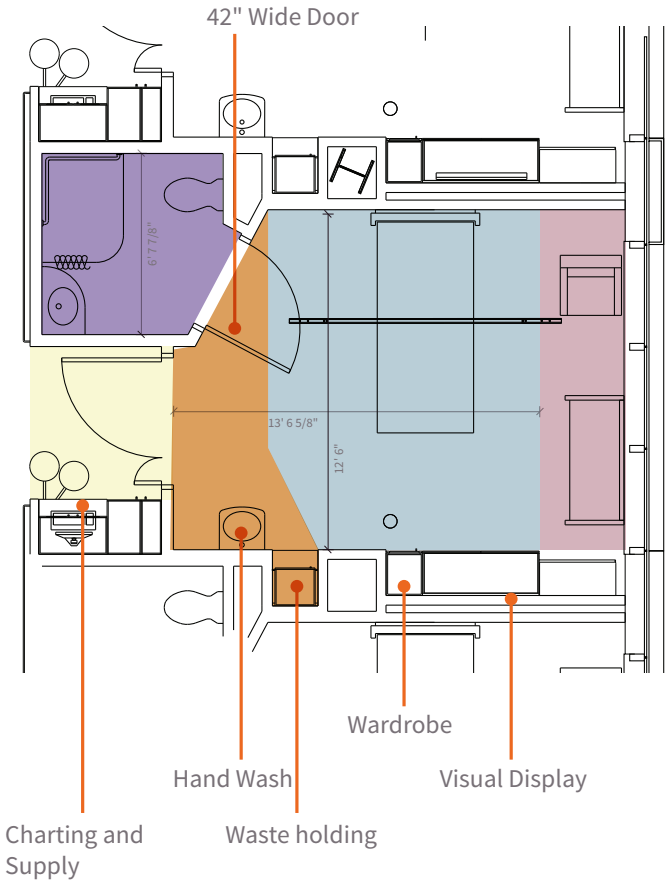
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Floor 12 - Med Surg Patient Room

- Hygiene zone 42sf
- Family zone 41sf
- Patient zone 131sf
- Staff zone 46sf
- Alcove 27sf

Med/Surg patient room
without toilet : 218sf
with toilet: 260sf
with alcove: 287sf



Floor 10 - ICU Patient Room

- Hygiene zone 20sf
- Family zone 46sf
- Patient zone 130sf
- Staff zone 48sf
- Alcove 40sf

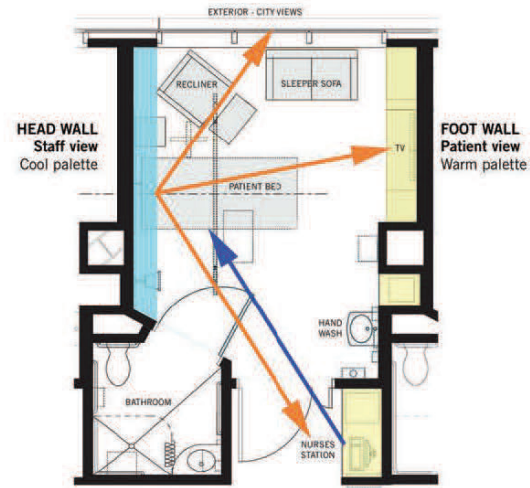
ICU patient room
without toilet : 224sf
with toilet: 244sf
with alcove: 284sf



NURSE STATION



PATIENT ROOM



TYPICAL ACUTE CARE PATIENT ROOM

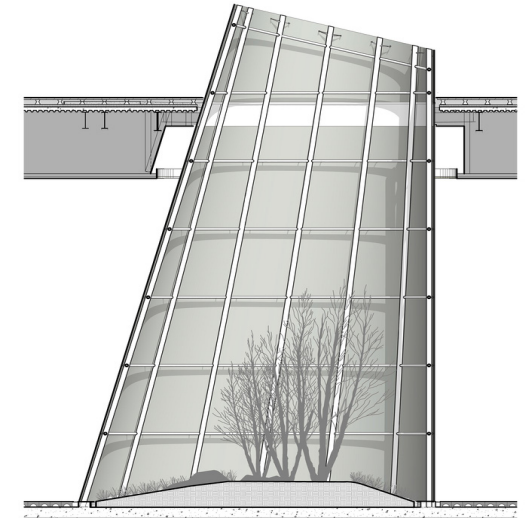


PATIENT ROOM

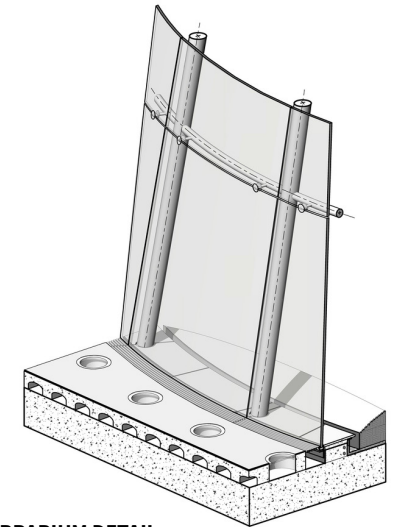


LANDSCAPED VIEW WITH TERRARIUM

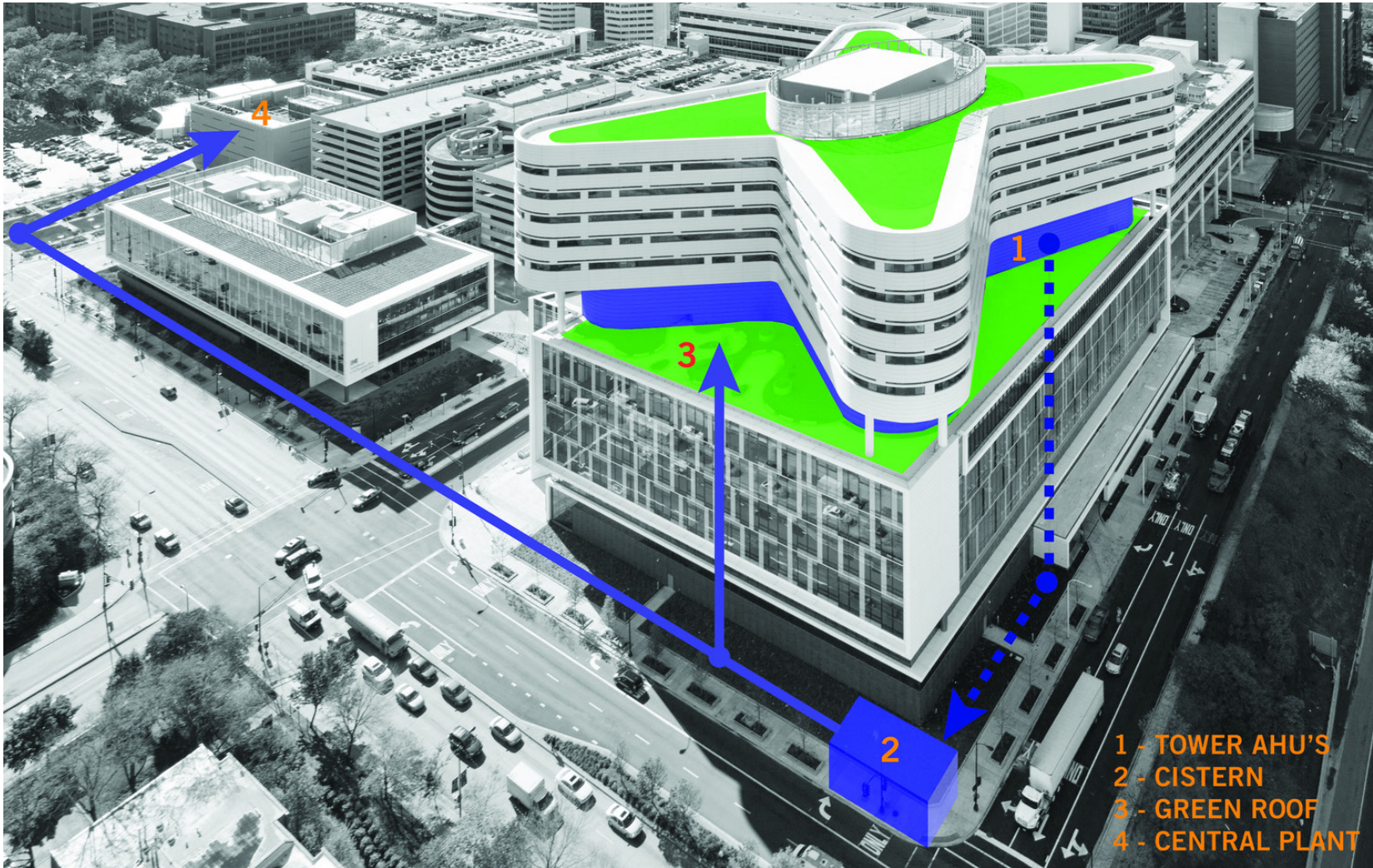
- At the junction of new and old hospital is a multi-story entry pavilion whose **roof is landscaped** to provide a patient staff garden at level four that connects by bridge to the existing parking structure and has upper level patient check-in facilities.
- Skylights act as roof garden sculptural elements and provide natural light for the entry pavilion below.** The walls of one of these skylights project down to the floor. Of the entry pavilion to introduce an exterior landscaped space without compromising internal contamination issues



TERRARIUM SECTION



TERRARIUM DETAIL



SUSTAINABILITY FEATURES



PUBLIC/ PRIVATE CORRIDORS



STRUCTURAL COLUMNS ARE OUTFITTED WITH POWER AND OXYGEN LINES TO ALLOW TREATMENT TO BE EXPANDED INTO THE LOBBY IN THE EVENT OF A LARGE-SCALE EMERGENCY.



AUTOMATED GUIDED VEHICLES (AGVS), MOBILE ROBOTS THAT TRANSPORT MEDICAL SUPPLIES, CLEAN AND SOILED LINENS, AND REGULATED MEDICAL WASTE AND TRASH ACROSS LONG DISTANCES



Rush University Medical Center | CASE STUDY ANALYSIS
AIA Academy of Architecture for Health | Research Initiatives Committee

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PROJECT SUMMARY:

Project: New Hospital Tower Rush University Medical Center
Project location: Chicago, IL
Owner/Client: Rush University Medical Center
Architect: Perkins+Will
Construction manager: Power Jacobs Joint Venture
Structural engineer: Thornton Tomasetti
General contractor: Power Jacobs Joint Venture
Electrical engineer: Environmental Systems Design (ESD)
Interior Designer: Perkins+Will
Civil Engineer: Terra Engineering
Light Designer: HDLC
Landscape Architect: Hitchcock Design Group
Photographs/Illustrations: Steinkamp Photography
Construction cost: \$398,000,000
Building area GSF: 830,000 SF
Cost per square foot: \$480/SF
Completion date: 2012



A LARGE LANDSCAPED TERRARIUM IN THE ENTRY PAVILION BRINGS THE OUTDOORS IN WHILE MAINTAINING A CONTAMINATE FREE ENVIRONMENT.



PATIENT ROOM WITH DOWNTOWN CHICAGO VIEWS

AIA/AAH DESIGN AWARD WINNER

Category: Innovations in Planning and Design Research, Built and Unbuilt

JURY COMMENT

- ▶ The jury applauds the transformation of a big box retail store into a simple, sophisticated and elegant healthcare clinic.
- ▶ From ideation to execution the layering of color and perforated skin adds architectural quality to the façade.
- ▶ The iconography is playful without being childish welcoming patients and families into the building.
- ▶ The selective use of color is balanced with a wood screen wall which anchors the interior space.
- ▶ Visibility into the basketball court from the waiting area and benches along the corridor are a nice touch.



WINDOWS AT THE TIPS OF THE BED TOWER'S WINGS ALLOW NURSING STAFF TO HAVE DAYLIGHT AND VIEWS TO DOWNTOWN.



PRIVATE NICU ROOMS LOCATED STEPS AWAY FROM NURSING STATIONS



THE EXTERIOR CORRIDORS OF THE INTERVENTIONAL FLOORS



THE EXTERIOR CORRIDORS OF THE INTERVENTIONAL FLOORS