

POSITIONING SUCCESS: HOW COMPREHENSIVE PRE-PLANNING HELPED ONE CAMPUS ACHIEVE THE IMPOSSIBLE



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POSITIONING SUCCESS: HOW COMPREHENSIVE PRE-PLANNING HELPED ONE CAMPUS ACHIEVE THE IMPOSSIBLE



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POSITIONING SUCCESS: HOW COMPREHENSIVE PRE-PLANNING HELPED ONE CAMPUS ACHIEVE THE IMPOSSIBLE

Featuring Special Guest:



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POSITIONING SUCCESS: HOW COMPREHENSIVE PRE-PLANNING HELPED ONE CAMPUS ACHIEVE THE IMPOSSIBLE

AGENDA:

1. Interactive Question
2. Setting the Stage – Introduction to Marquette and its Goals
3. Before the Storm – University Process and A/E + CM Response
 - a. Pre-design
 - b. Pre-delivery
4. Design Solution
5. Interactive Discussion + Q&A

INTERACTIVE QUESTION:

WHAT IS THE BIGGEST CHALLENGE YOU HAVE FACED WHILE COMPLETING A PROJECT WITH AN AGGRESSIVE SCHEDULE?

Green = University

Orange = A/E

Yellow = Contractor



List:

1. Name/ Organization
2. Answer

WE ARE MARQUETTE

Campus: 5M Square Feet, 73 Buildings, 110 Acres, \$2.4B replacement costs, oldest building: 15th Century

Enrollment: More than 8,200 undergraduate and 3,000 graduate and professional students

Undergraduate programs: 80 majors, 78 minors, pre-professional programs in dentistry, law and medicine

Postgraduate programs: 66 doctoral and master's degree programs, 18 graduate certificate programs, and a School of Dentistry and Law School

Faculty: More than 1,200* (689 full-time)



Marquette University Vision Statement

Marquette University aspires to be, and to be recognized, among the most innovative and accomplished Catholic and Jesuit universities in the world, promoting the greater glory of God and the well-being of humankind.

We must reach beyond traditional academic boundaries and embrace new and collaborative methods of teaching, learning, research and service in an inclusive environment that supports all of our members in reaching their fullest potential.

Marquette graduates will be problem-solvers and agents for change in a complex world so in the spirit of St. Ignatius and Jacques Marquette, they are ready in every way "to go and set the world on fire."

EXCELLENCE FAITH LEADERSHIP SERVICE



Marquette University – Beyond Boundaries





Pre-Design: 2015 Undergraduate Housing Feasibility Study

- Vision
- Benchmarks/ Quality Standards
- Program
- Module/ Configuration

Resident Amenity / Support Spaces	Net SF	Quantity	Total SF	Notes
Building Entry Lobby	600	1	600	
Multipurpose Room	1,000	1	1,000	
Community Lounge	1,000	1	1,000	
Community Kitchen	400	1	400	
Floor Lounge	300	10	3,000	1 per wing (4 pods)
Chapel	600	1	600	
Computer Lab	600	1	600	
Group Study Lounge	200	10	2,000	1 per wing (4 pods)

Residential Units	Unit Net SF	Quantity	Total SF	Beds per Unit	SF / Bed	Total Beds
9-Student Pod	1,475	40	59,000	9	164	360
RA Studio	350	10	3,500	1	350	10
Staff Apartment (2-Bedroom)	1,000	2	2,000	2	500	4

Exhibit 2 – Unit Types

CAMPUS MASTER PLAN

JANUARY 14, 2016

STUDENT LIFE REPORT



MARQUETTE
UNIVERSITY

BE THE
DIFFERENCE.

Pre-Design: 2016 Master Plan

- Create places where ideas turn to action
- Elevate the quality and vitality of the student experience
- Build Community
- Provide opportunities for engagement for faculty, staff and students
- Celebrate our Catholic and Jesuit Identity and values

Community Building

Open Space Initiatives

1. Chapel Lawn
2. Arts Allee
3. Arts District Gateway
4. North Commons
5. Eagle Field
6. Wellness Court

Circulation Initiatives

1. Marquette Walk
2. 18th Street Improvements
3. 17th Street Parking
4. 13th Street Parking
5. 16th and 17th Street Two-Way Conversion
6. Michigan Streetscape

- PROPOSED CAMPUS BUILDING
- EXISTING CAMPUS BUILDING WITH MAJOR REPROGRAMMING
- EXISTING CAMPUS BUILDING WITH MAJOR RENOVATIONS
- EXISTING CAMPUS BUILDING



Pre-Delivery: Master Plan - Priority/ Sequence

- Student Experience and Housing were priorities coming out of Master Plan
- Existing McCormick Hall identified as lynch pin to set the Master Plan in motion (sequence and high-profile site)
- Least desirable housing + high deferred maintenance
- Speed also allowed Marquette to get out ahead of escalation
- This first step actually started before Master Plan was even finalized



Pre-Delivery: Conduct A/E CM Research

- Vetting process started January of 2016
- Work concurrent with Master Plan



Pre-Delivery: Finance

- P3 Fact Finding- RFI process with national/local developers
- MU Financing- cash/bond/fund-raising
- Deciding Factors (capacity, debt, credit rating, taxes, control, schedule, quality)



Pre-Delivery:
Senior Leadership Alignment +
Board of Trustees Approvals

Comprehensive and thorough
articulation of:

- Project Goals
- Risk Analysis
- Funding/Delivery Analysis
- Recommendations



Pre-Delivery: Site Preparation

- Site of old Children's Hospital
- Infrastructure projects continued
- Geotechnical and Environmental explorations done well prior to RFP issuance
- Demolition took 9 months – was done prior to RFP issuance





Pre-Delivery: A/E and CM RFP's

- Invited national architecture firms with integrated partnership with local architecture firm (why?)
- IPD-like (team creates unique IPD strategy rather than pre-determined or dictated)
- Qualifications-based selection
- Overlapped A/E and CM RFP's



Pre-Delivery: A/E Teaming

- Project Specific Information in RFP
- Experts Vs Generalists
- Clear scope division: Putting cart before the horse

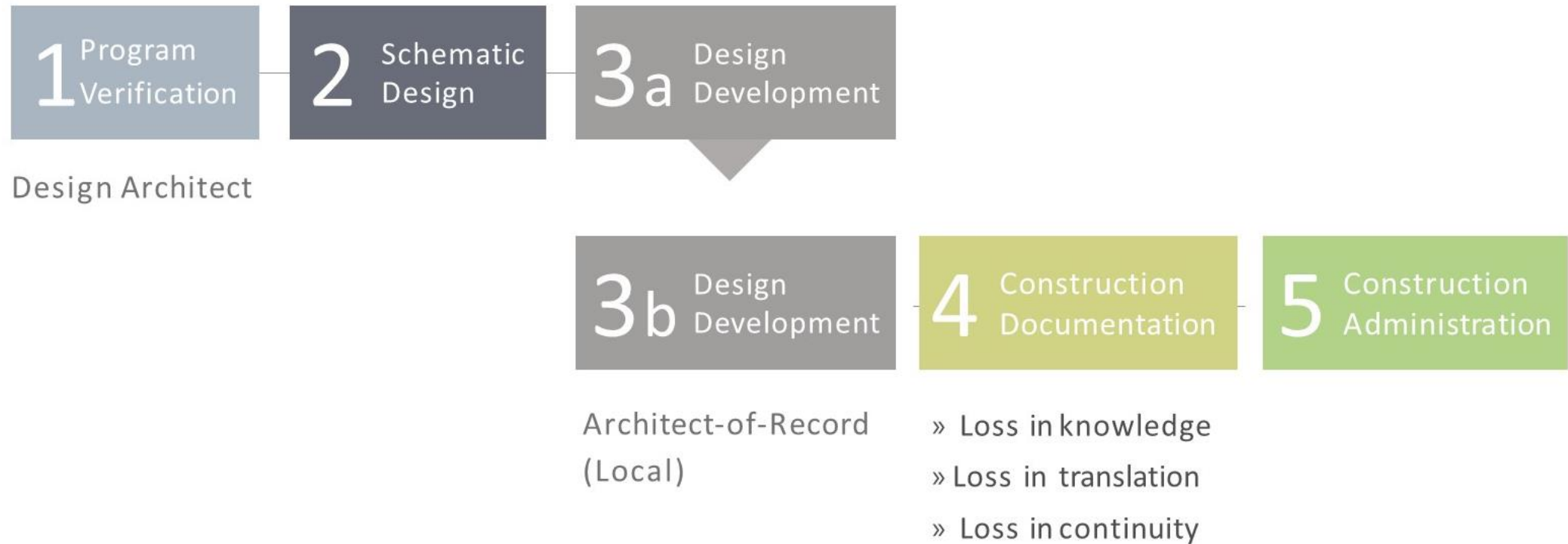
<div> <div>■</div> PRIMARY RESP. </div> <div> <div>□</div> SUPPORT </div>	<div> <div>✓</div> </div>	<div> <div>U</div> </div>
OVERALL PROJECT MNGT.	■	■
PROGRAM VERIFICATION		
- HOUSING / ACADEMIC	□	■
- DINING / SOCIAL HUBS	■	□
- STUDENT ENGAGEMENT	■	□
SD PHASE		
- BLOCKING, STACKING, MASSING	■	■
- URBAN / CAMPUS DESIGN	■	■
- HOUSING / LIVING LEARNING	□	■
- DINING + SOCIAL HUBS	■	□
DD + CD PHASES		
- HOUSING	□	□
- DINING	□	□
- FF + E	□	□
BID + CA PHASES		
- HOUSING SHOPS	□	■
- DINING SHOPS	■	□
- WEEKLY JOBSITE MTGS.	■	
- MONTHLY JOBSITE MTGS.		■
- CLOSE OUT	■	■

Pre-Delivery: A/E Team Strategies

- Division of Scope
- Define Overlaps
- Identify Roles and Responsibilities

ART OF TEAMING: Traditional Approach

PHASES



ART OF TEAMING: Design Collective + Workshop Approach

CLIENT ENGAGEMENT

- | | | | | |
|--------------------------------|---|---|---------------------------|--------------------------------|
| » Project Management Team | » Project Management Team | » Project Management Team | » Project Management Team | » Project Management Team |
| » Marquette Steering Committee | » Marquette Steering Committee Stakeholder Groups | » Marquette Steering Committee Stakeholder Groups | | » Marquette Steering Committee |

PHASES



ANTICIPATED INVOLVEMENT

- | | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| » Design Collective (60%) | » Design Collective (60%) | » Design Collective (65%) | » Design Collective (65%) | » Design Collective (20%) |
| » Workshop (40%) | » Workshop (40%) | » Workshop (35%) | » Workshop (35%) | » Workshop (80%) |
| | » Specialty Consultants | » Specialty Consultants | | |

RFP RESPONSE – REACTING TO GOALS FROM MASTER PLAN

DECISION-MAKING PARAMETERS

SETTING THE STAGE WITH CLEAR OBJECTIVES

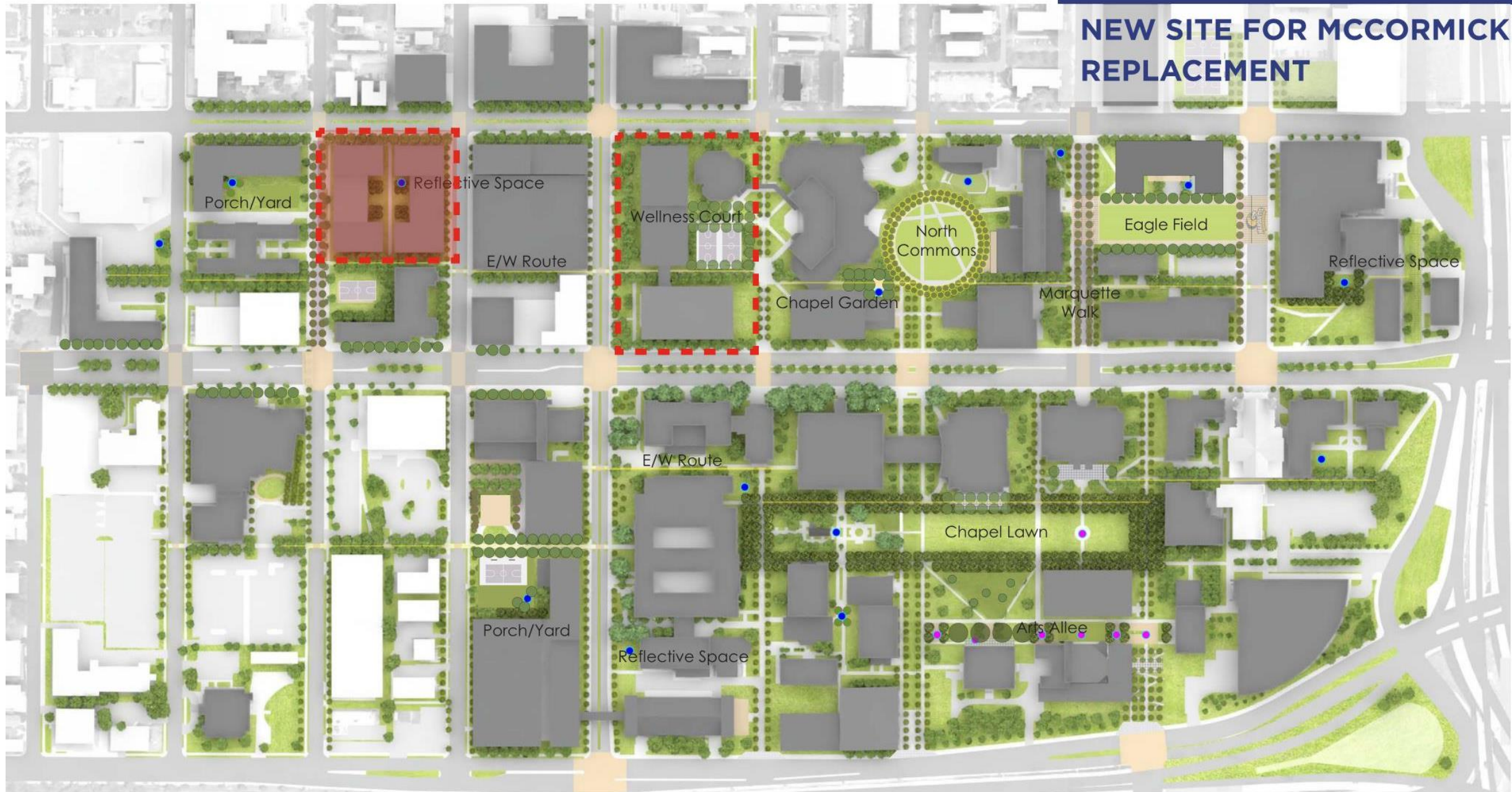
1. Create places where ideas turn to action – innovation & entrepreneurship
2. Elevate the quality and vitality of the student experience
3. Build community – create welcome places, celebrate our urban environment
4. Provide opportunities for engagement for faculty, staff, students
5. Celebrate our Catholic and Jesuit identity and values



RFP RESPONSE

DESIGN SOLUTIONS

NEW SITE FOR MCCORMICK REPLACEMENT



REACTING TO GOALS FROM THE RFP



- » Connection to outdoor landscape
- » Distinction between service and served space
- » Degree of porousness of facade differs depending on adjoining context

REACTING TO GOALS FROM THE RFP



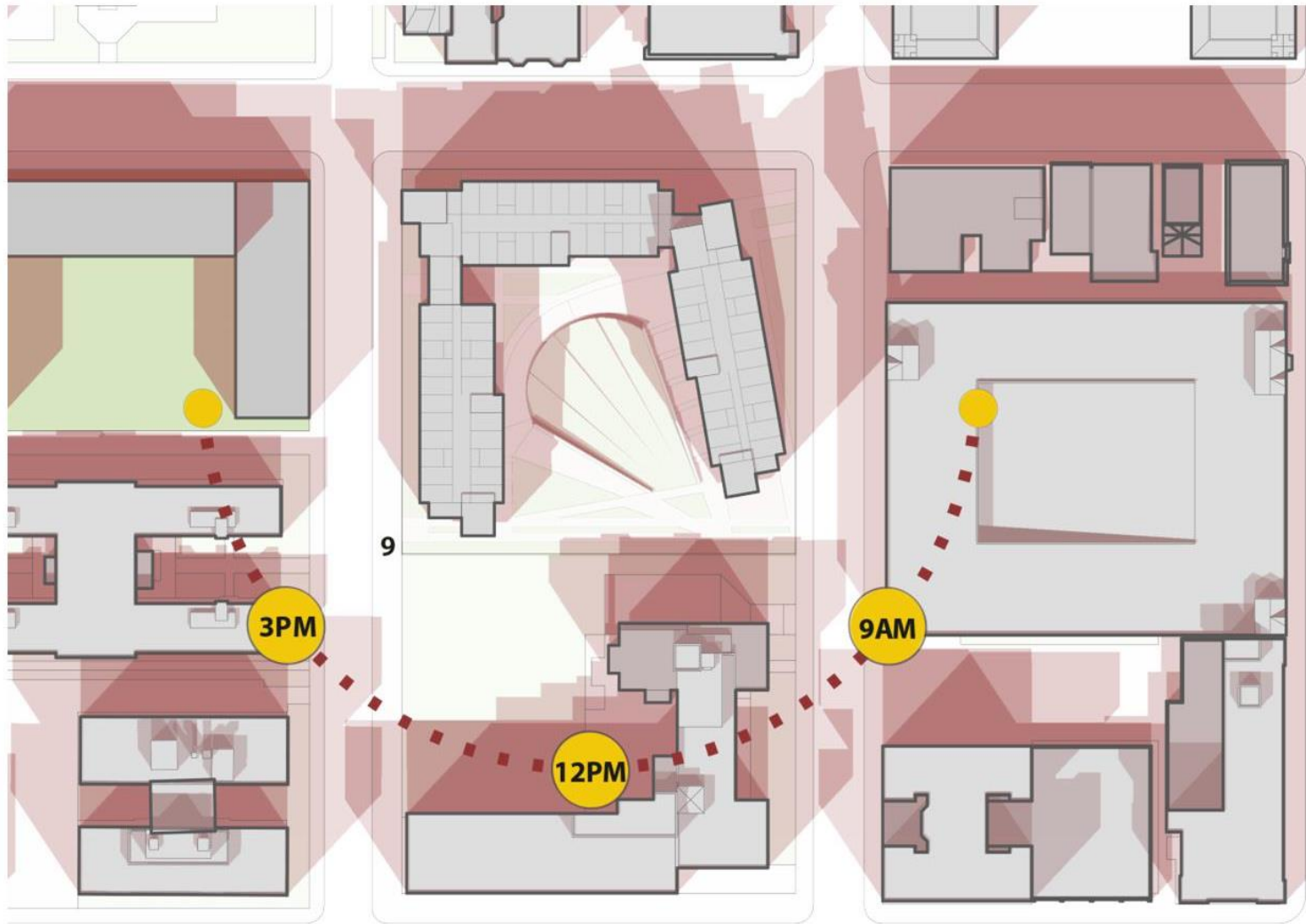
- » Reinforce E/W pedestrian spine with connected landscapes
- » Protect spaces from city edges with massing
- » Organize circulation zones so open spaces are usable

REACTING TO GOALS FROM THE RFP



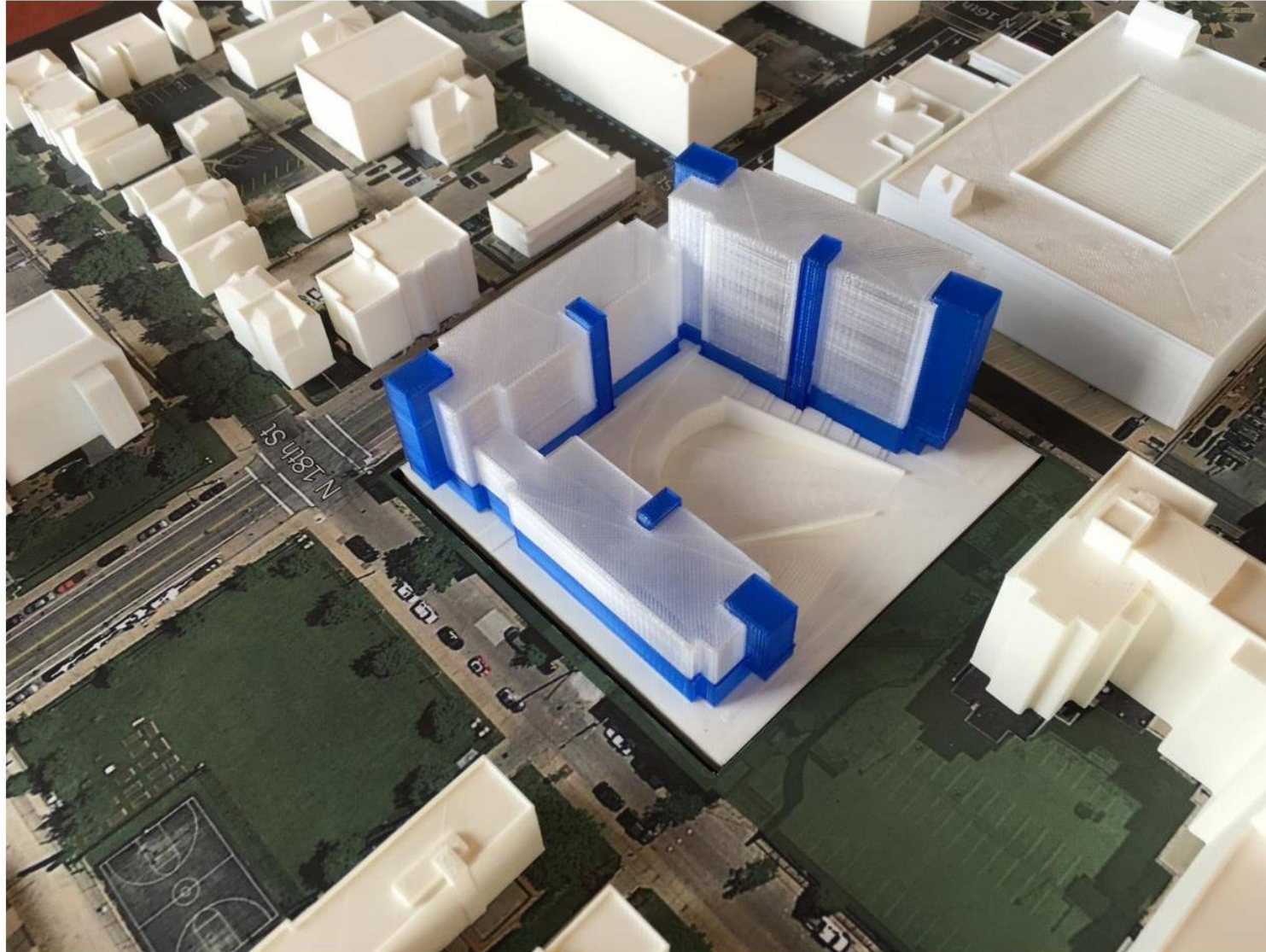
- Community Spaces treated like “Beacons” on building that promote connection to local context
- Maximum daylight – no community rooms with only northern exposure

REACTING TO GOALS FROM THE RFP



- Maximize daylight to community spaces
- Optimize viability of outdoor space
- Protect from Northerly winds

REACTING TO GOALS FROM THE RFP



- “Lifted” building and made entire ground floor into active, community spaces
- Vertical community spaces as building “activators”
- Holding urban edge while creating outdoor room
- Views to outdoors, greater campus, and local community



Pre-Delivery: Parallel selection: A/E, CM

- Invited local CM's with both pre-construction and construction strength. (ability to self-perform)
- Shared all pre-design information with A/E's and CM's
- Standardized contracts acceptance
- CMAR with GMP (flexible framework, all tools available)
- Open book competitive bidding plus agreed upon CM fee



Pre-Delivery: Establishing Team Expectations

- Clear Roles/Responsibilities
- Understand project and partner needs/objectives
- Appropriately share risks
- Accountability
- Transparency
- Proactive Process Ownership
- Preparedness
- Informed Decision Making
- Trust



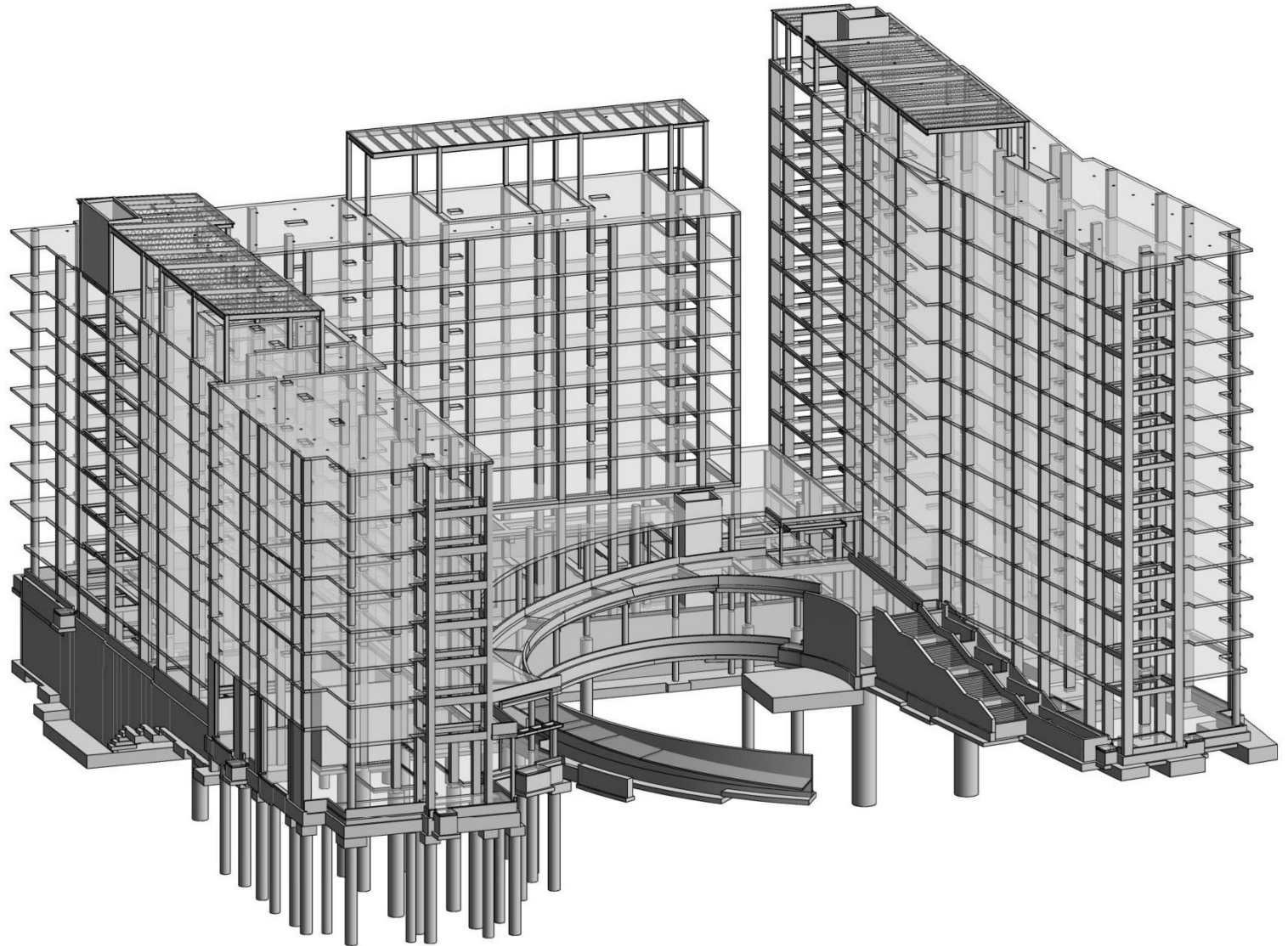
Pre-Delivery: Parallel selection: A/E, CM

- Collectively define IPD tools and strategies
- Schedule management
- Document management/expectations
- Cost management



CM Approach: Self Perform Structure with Open-Book Competitive Bidding

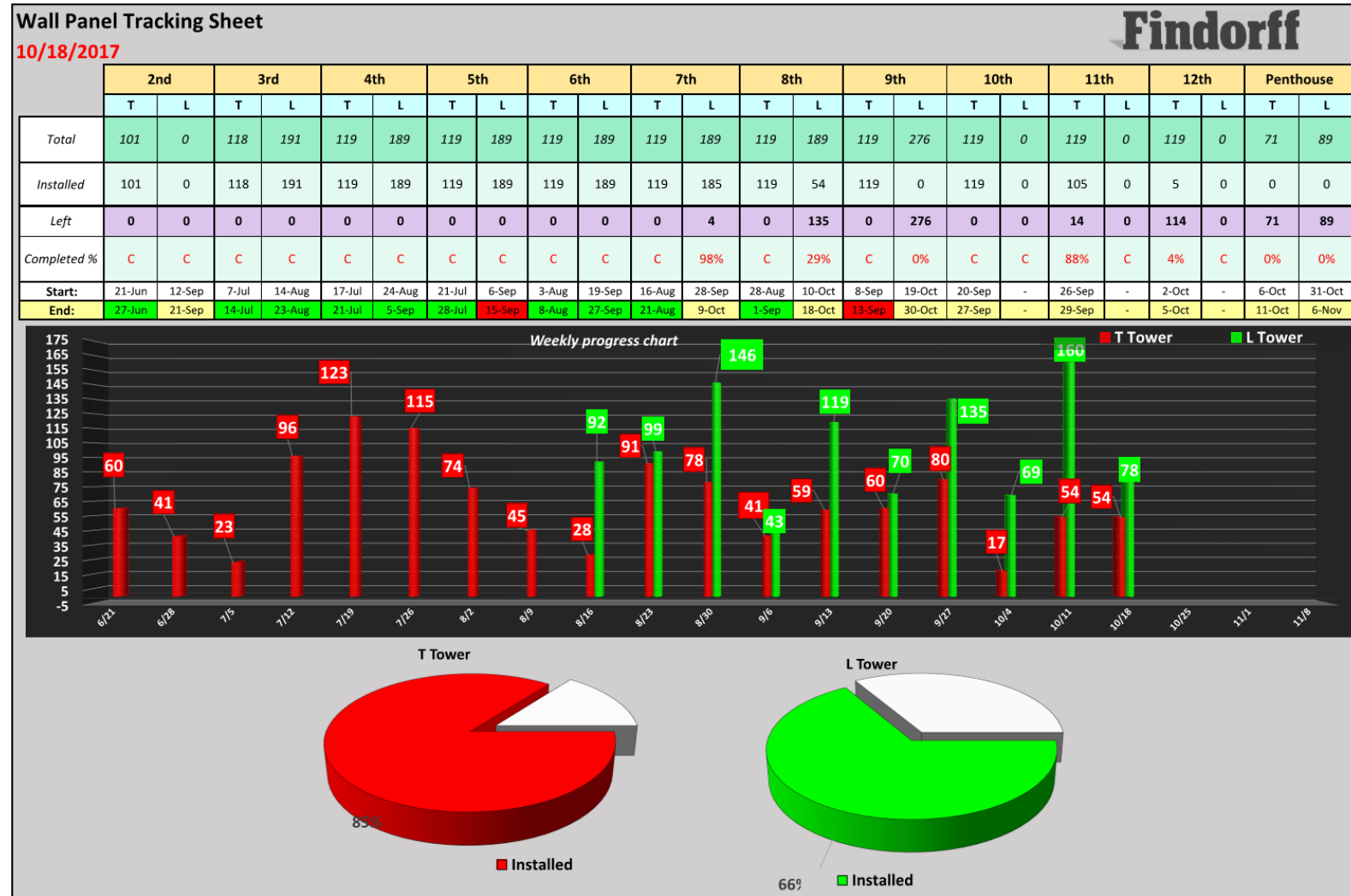
- Lead time
- Control of Labor
- Shear wall Vs Moment frame design
- Flexibility
- Flying formwork



DESIGN ASSIST / DESIGN BUILD

Schedule and Budget Awareness

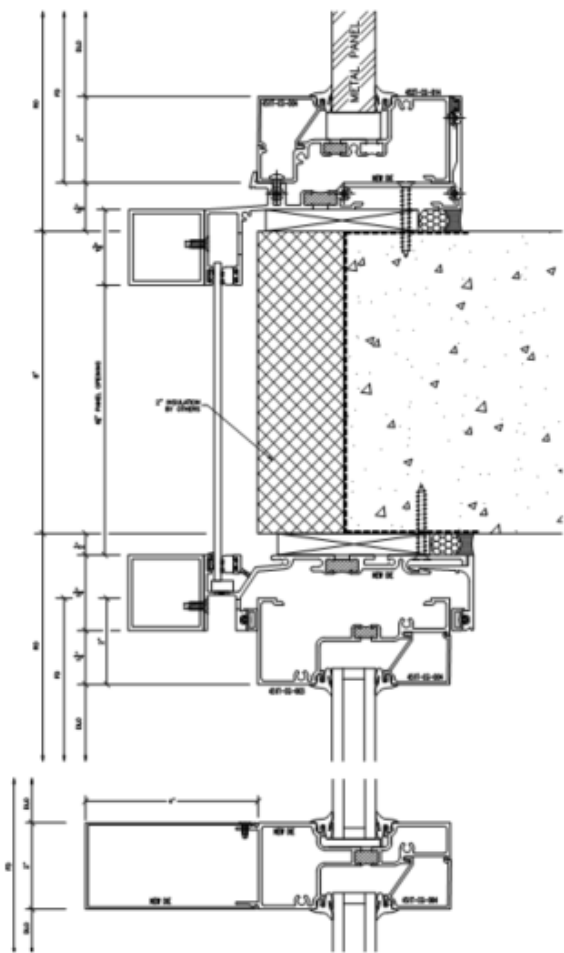
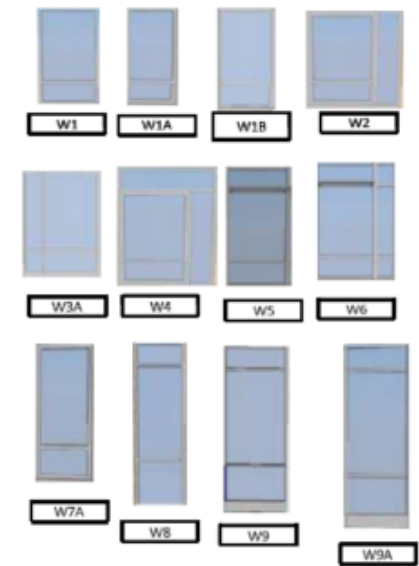
- Pull Planning with all stake holders Early
- One Schedule to track all critical path items: Owner, Design Team, and Construction
- Design based on long lead items
- Design based on access/final building components
- Acceleration Budget
- Market Awareness



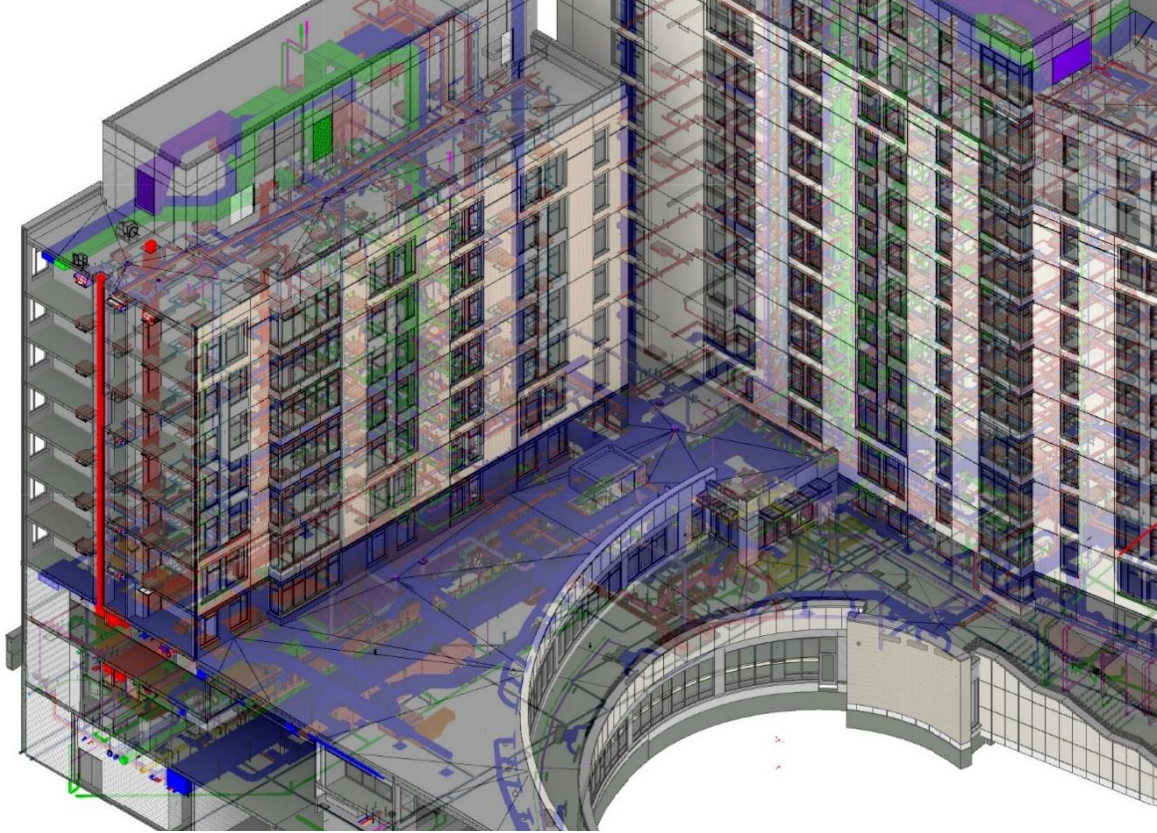
Schedule Management: Design Assist



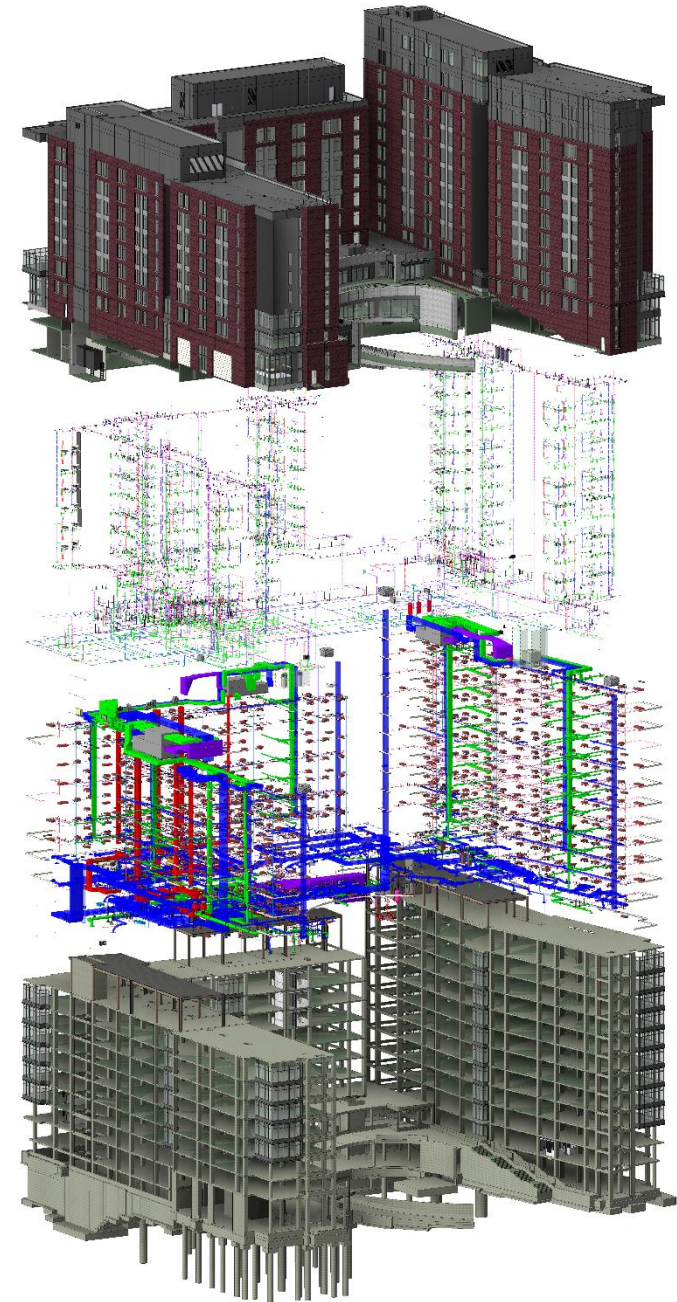
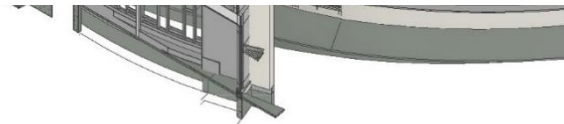
WINDOW TYPES		
NAME	DESCRIPTION	SF
W1	LARGE	17.2
W1A	LARGE_THIN	12.8
W1B	LARGE_ELONGATED	28.2
W2	LARGE_SIDELITE	23.8
W3	LARGE_SIDELITE2	23.6
W3A	LARGE_SIDELITE2_ELONGATED	37.2
W4	LARGE_SIDELITE+TRANSOM	29.6
W5	TALL	21.1
W6	TALL_SIDELITE	27.6
W7	TALL_ELONGATED_2PANE	20.5
W7A	TALL_ELONGATED_2PANE_FLIP	18
W8	TALL_ELONGATED_3PANE	22.2
W9	XLTALL_ELONGATED_3PANE	26.5
W9A	XLTALL_ELONGATED_3PANE_2	39.2
W10	TRANSOM_SMALL	5.2



Shared Model Access: BIM360



- Real-time, multi-disciplinary coordination
- Early and enhanced coordination
- Cost control



Process Engagement Structure: Lean and Nimble

- Core Team
- Steering Committee
- Other technical/support stakeholders as needed
- Engaging Students



Focused Team Activities: Building Trust & Fact Finding



Process Engagement Structure: Lean and Nimble

Core Team's Integral role:

- At zoning variance, Code Modification requests
- Pushing the Plans Review office: “Largest Customer” demanding better customer service
- Bringing in the stakeholders at the right time:
 - IT
 - Mechanical/ Maintenance
 - Sodexo: Food service provider.



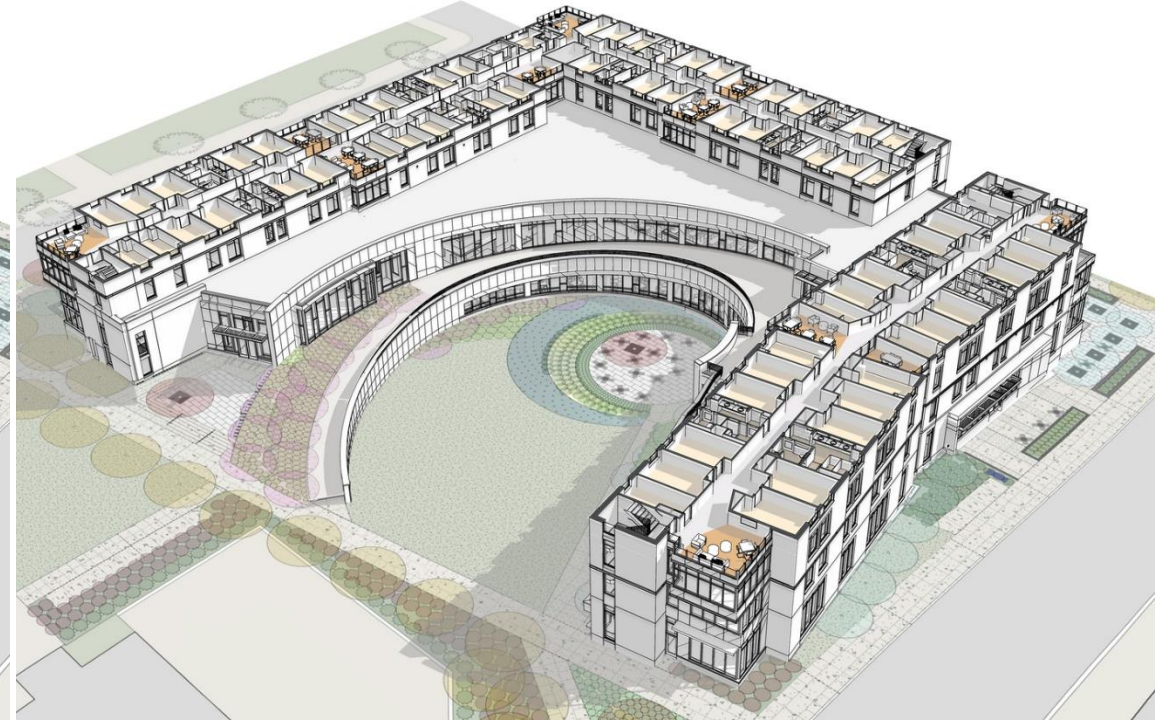
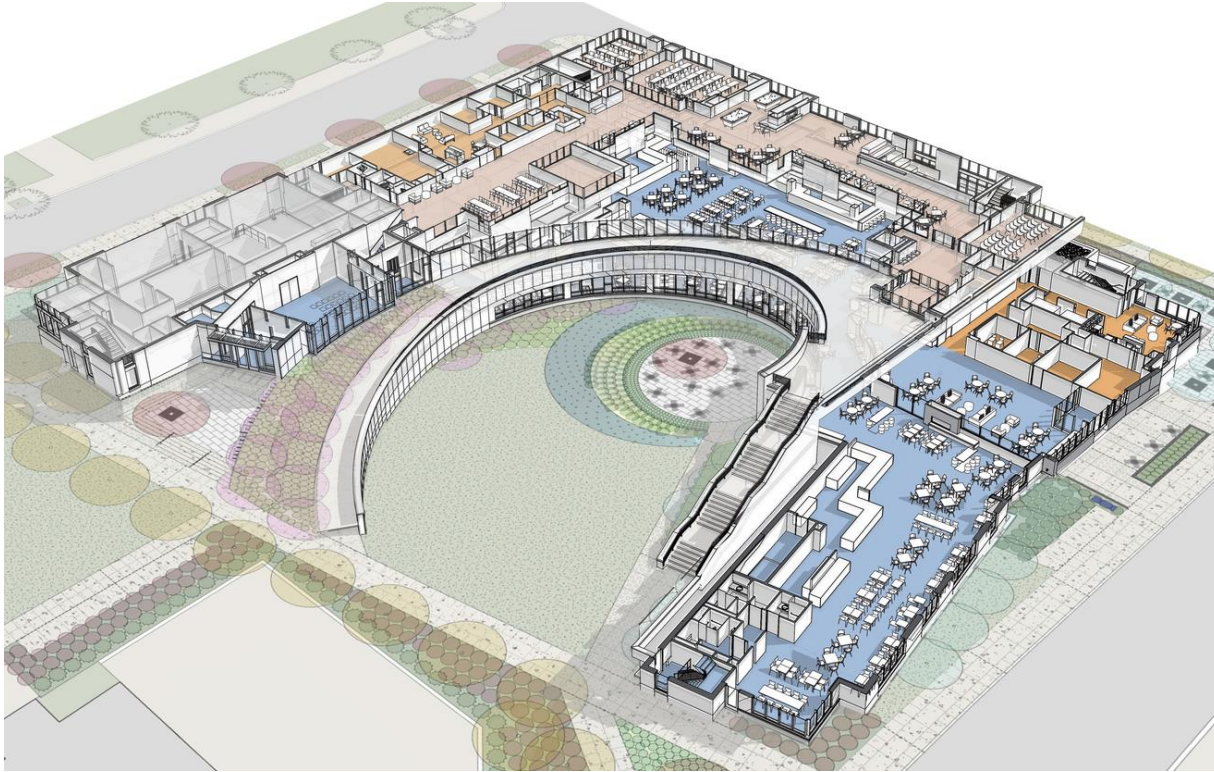
Process Engagement Structure: Lean and Nimble

Engaging the Students:

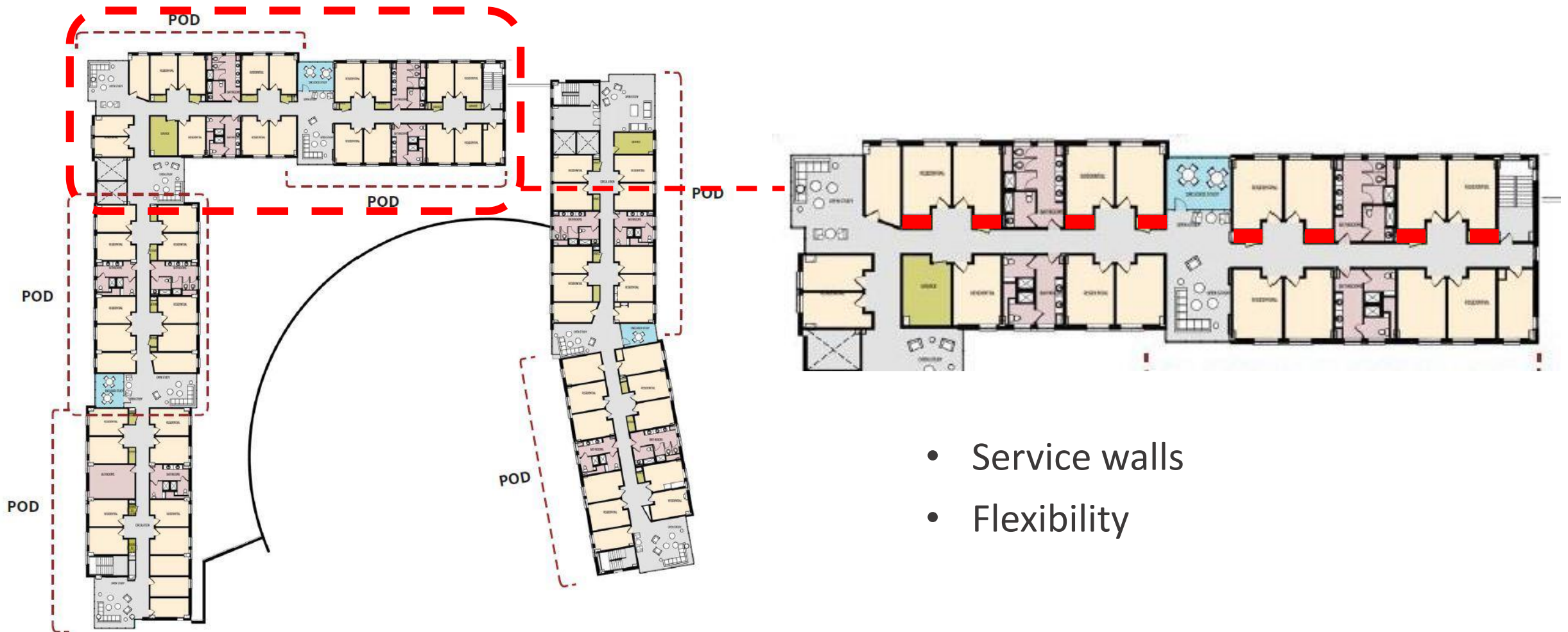
- Presentations to student governing bodies
- Interior material palette selection
- Teaching courses as “guest lecturers”



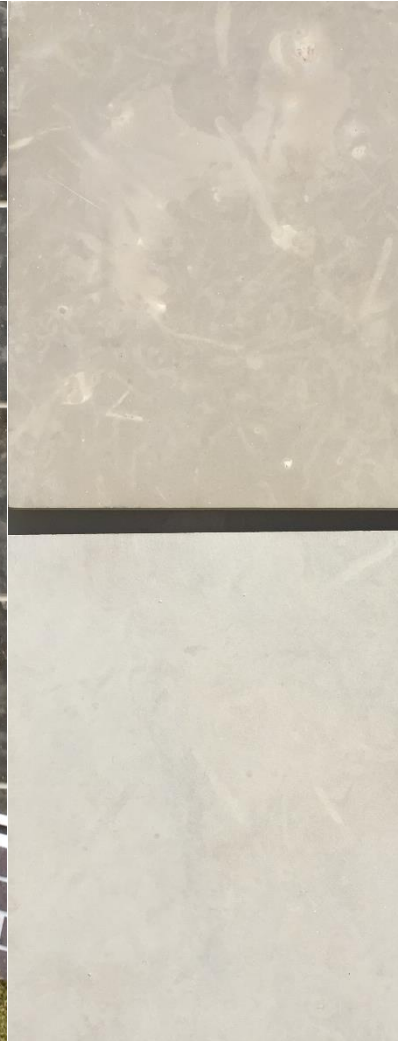
Design for Speed: Buying Time. “What can we be doing now?”



Design for Speed: Buying Time. Advancing the known.



Design for Speed: Sourcing Local Materials





CREATE A SENSE OF HOME

DESIGN SOLUTIONS



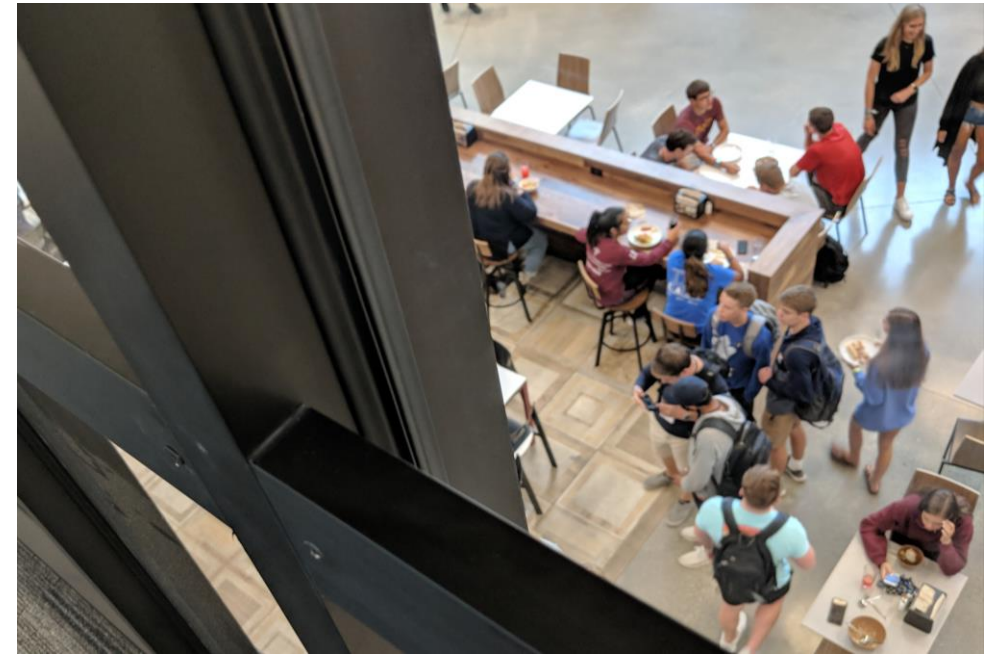
INVITING COMMUNITY SPACES

DESIGN SOLUTIONS



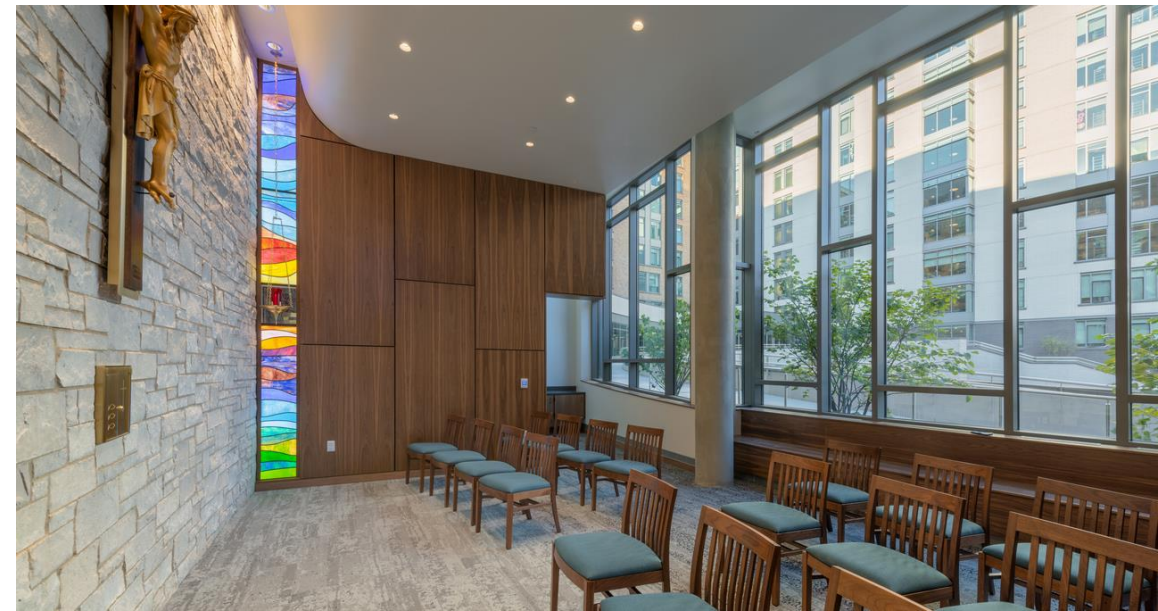
SPACES TO SEE AND BE SEEN

DESIGN SOLUTIONS



VARIETY OF COMMUNITY SPACE SIZES

DESIGN SOLUTIONS



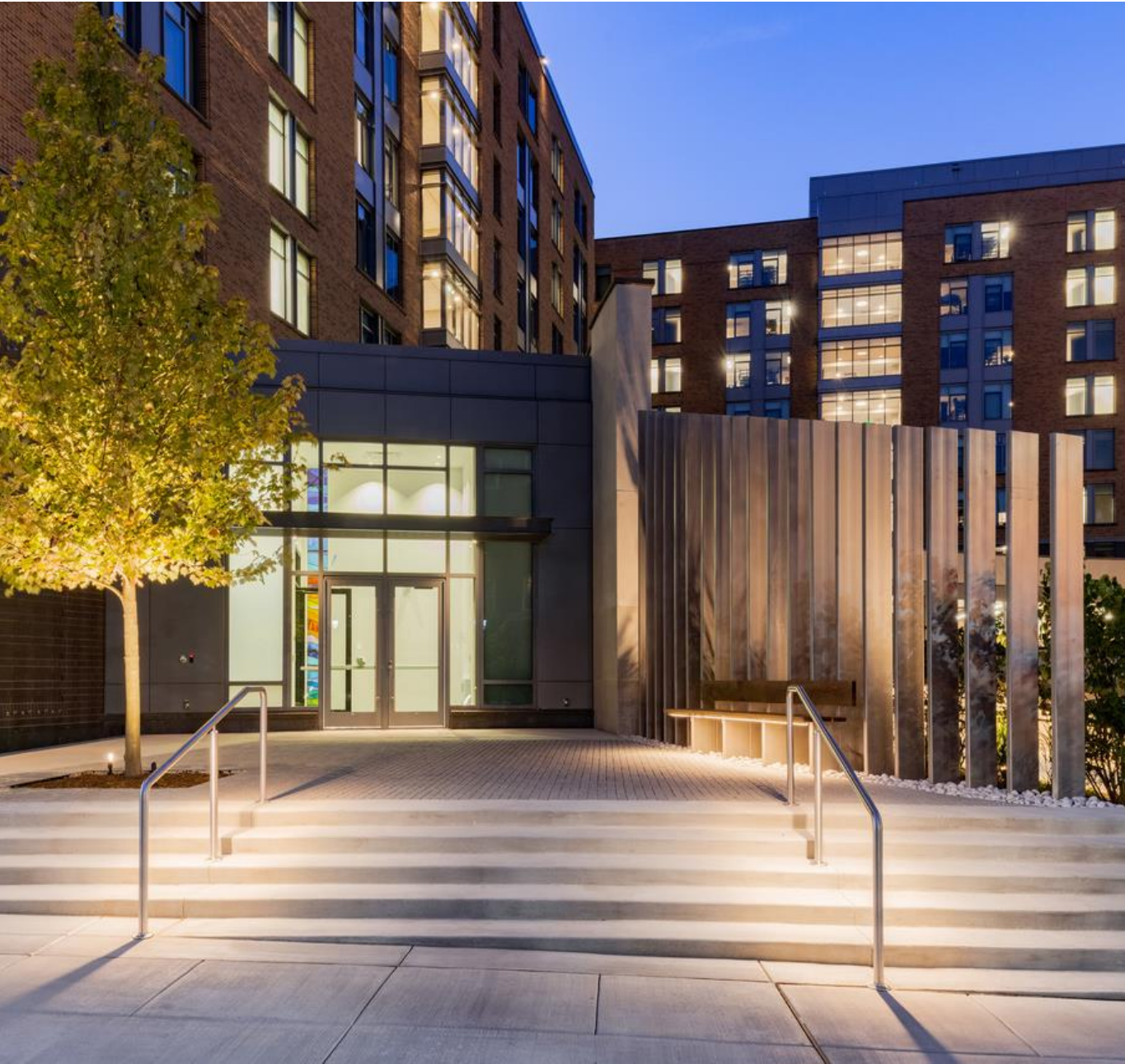
INFUSE AN ACADEMIC CULTURE

DESIGN SOLUTIONS



SPACES FOR WORSHIP/ REFLECTION

DESIGN SOLUTIONS



AMENITIES FOR THE ENTIRE CAMPUS

DESIGN SOLUTIONS



AMENITIES FOR THE ENTIRE CAMPUS

DESIGN SOLUTIONS





INTERACTIVE QUESTION:

WHAT IS THE BIGGEST CHALLENGE YOU HAVE FACED WHILE COMPLETING A PROJECT WITH AN AGGRESSIVE SCHEDULE?



THANK YOU FOR COMING!



Design
Collective

Findorff

WORKSHOP