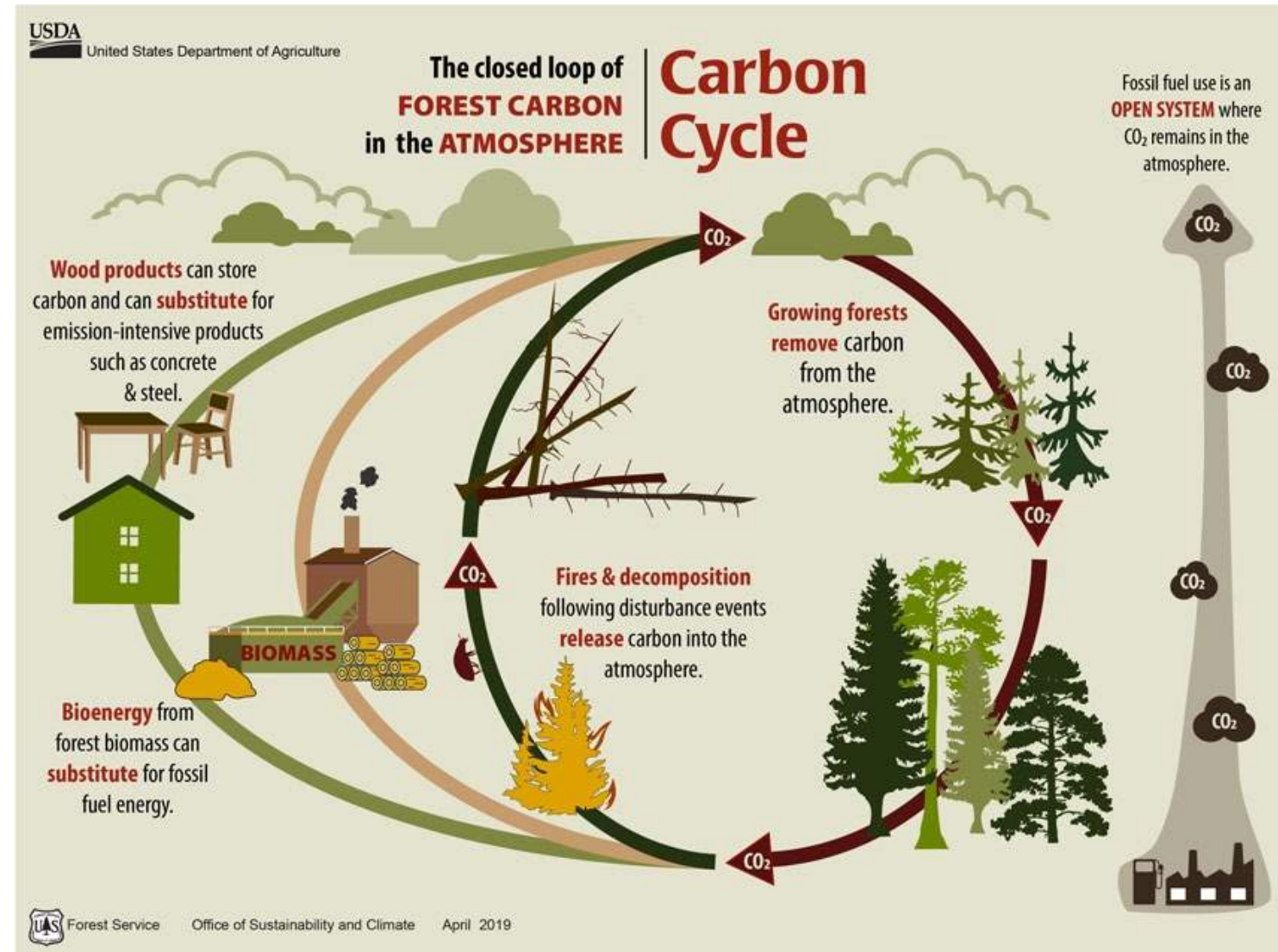




Carbon Benefits of Wood

- **Lower embodied carbon** compared to other common building materials
- **Less fossil fuel consumed** during manufacture
- **Avoid process emissions**
- Extended carbon **storage in products**
- **Carbon sequestration** in forests
- Promotes **forest health**



Glue Laminated Timber (Glulam)
Beams & columns



Cross-Laminated Timber (CLT)
Solid sawn laminations



Cross-Laminated Timber (CLT)
SCL laminations



Photo: Freres Lumber



Photo: StructureCraft



Photo: LendLease



Photo: LEVER Architecture

Dowel-Laminated Timber (DLT)



Photo: StructureCraft

Nail-Laminated Timber (NLT)



Photo: Think Wood

Glue-Laminated Timber (GLT)
Plank orientation



Photo: StructureCraft



Photo: StructureCraft



Photo: Ema Peter



Photo: Manasc Isaac
Architects/Fast + Epp

Office



District Office, Portland | Urban Development + Partners | Hacker Architects

Multifamily



Timber House, Brooklyn | Brooklyn Home Company | Mesh Architectures | Photo: Travis Mark

Vertical Additions



80M St, Washington, DC | Columbia Property Trust | ARUP | Hickok Cole Architecture

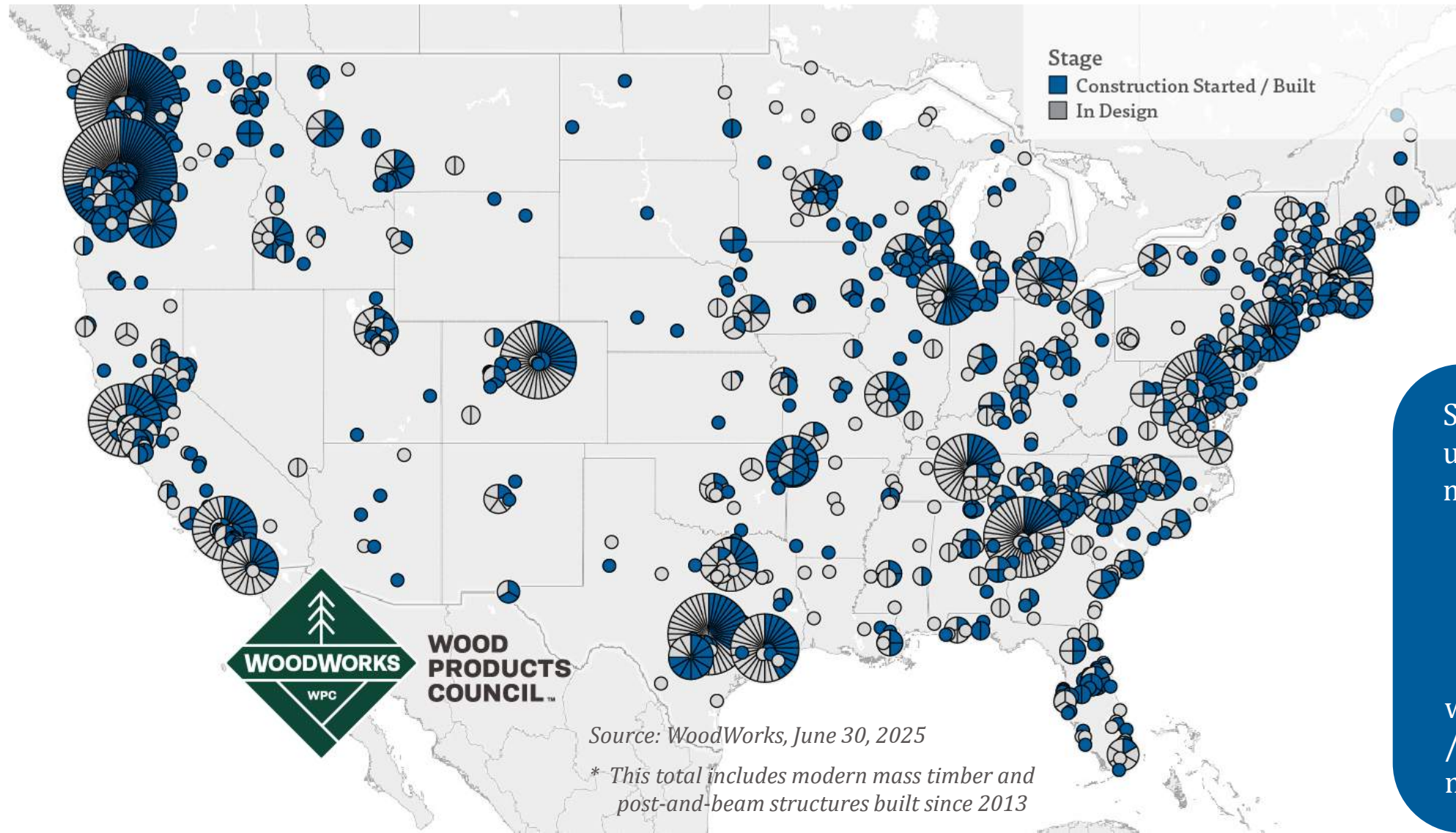
Warehouses



Southfield Park 35 Warehouse, Dallas | Affinius Capital | Image: Mark Humphries Photography

Current State of Mass Timber Projects

As of Q2 2025, in the US, **2,524** multi-family, commercial, or institutional projects have been constructed with, or are in design with, mass timber.



Scan this code or use the url to find the map and more details online.



www.woodworks.org/resources/mapping-mass-timber/



How to Successfully Cost Manage a Mass Timber Project

Cost-Estimating Considerations for General Contractors



Apex Plaza
William McDonough + Partners / Hourigan

A determining factor in the success of a mass timber project—and whether it goes forward at all—is the general contractor's ability to provide informed cost estimates from the earliest stage of design. However, unlike other materials, there isn't a hundred years of tradition and shared experience to guide budgeting, cost management, and competitive procurement, or readily available cost benchmarking.

This paper is intended to bridge that gap with guidance for minimizing whole project costs and maximizing the value of mass timber projects. It has been written with an emphasis on cross-laminated timber (CLT) and glue-laminated timber (glulam), but applies generally to all mass timber materials. Follow these steps to more confidently cost plan your next wood building.

This paper was developed collaboratively with a design and construction professional who specializes in mass timber construction and has worked on multiple projects for general contractors. Costs, percentages and other values are based on their experience and may differ for other projects.



Business Case Studies

Context, trends and quantitative overviews of industry-leading mass timber projects

Clay Creative: Mass Timber Development

Development Overview

Transaction Overview

- Early-cycle, spec-office development on brownfield city block
- Well located industrial neighborhood recently up-zoned
- Target knowledge-based firms with millennial workforce (a growing portion of the office sector) during soft office market

Strategy

- Embody millennial ethics and goals so that the office space creates value to the corporate tenant
- Align design with identity of neighborhood
- Differentiate to avoid direct competition with existing office supply

Results

- Fast lease-up at top-of-market rental rates on market-rate TIs
- Impressive sub-leasing without new TI allowances required
- Enduring brand and awareness of building in the marketplace

Key Contextual Elements

- Timing: developed early in cycle; cheap cost basis but low absorption and very thin leasing context
- Sponsor: experienced and known, but not with urban office
- Underwriting:
 - Built on "gut" feeling of what was missing from market
 - Assumptions notably above market; no comps
 - Substantial broker and lender skepticism

Mass Timber Business Case Study

December 5



Property Information	
Property Timing	Conceived 2012 Delivered 2015
Submarket	Central Eastside Industrial
Construction Type	Type 3-A
Site Size	40,000 sf (full block)
Gross Building Area	95,100 sf
Net Rentable Area (total)	76,140 sf
NRSF Retail	6,050 sf
NRSF Office	70,090 sf
Actual Load	18%
Parking Ratio	0.80 / 1000
Nature of Parking	Office tenants

Wilson Forest Park Townhomes:

Quantitative Overview

Investment			
Total Project Cost		Approximately \$21,000,000 (\$1,500 per home)	
Land		Finished home lots at appraised value of approx. \$500,000	
City		Portland City Costs are approx. \$100,000 of costs/home	
		Market	Actual
Construction Costs		\$200 PSF	\$235 PSF
			17% Premium
Use of CLT constitutes approx. \$10 PSF or 5% of cost premium			
Timeline			
Event		Date	Comment
Date Site Secured		Spring 2018	Seller liked the idea of using local materials
Date Equity / Investors Secured		Summer 2018	Investors liked timber's differentiation
Permitting Duration:			
Land Use Approvals		8 months duration	Use of mass timber helped generate support from neighborhood influencers
Horizontal / Site Improvements Permits		23 months City review duration	Use of mass timber had no impact. Project's positive social/environmental goals with CLT did not accelerate City's review
			Use of mass timber had negative impact. City's detached "single family" residential plan reviewers tend to be accustomed to simple, commodity homes. Reviewers had no experience with CLT and needed education on CLT use and performance. They were overly conservative.
Vertical / Home Permits		12 months review duration	Compared to IRC code & City's commercial reviewers, working from code and code books, City's residential reviewers, working from code and code books, were more conservative.



Image: Royal Oak Homes LLC
August 12, 2021 • Page 4

Adohi Hall University of Arkansas

FAYETTEVILLE, AR



WoodWorks / Mass Timber Business Case Study

Revised October 2022

48



SM

MASS TIMBER+

OFFSITE CONSTRUCTION CONFERENCE

Boston

October 28 - 30, 2025

www.masstimberplus.com

DE-RISKING MASS TIMBER

Avoid Risk & Add Value to Your Mass Timber Project



QUALITY BUILDINGS

Integrated Mass Timber Solutions

“Disclaimer:

This presentation was developed by a third party and is not funded by WoodWorks or the Softwood Lumber Board.”

WHO is Quality Buildings?

We're craftsmen who love what we do...

- ❖ In operation since 2008
- ❖ Integrated Mass Timber and Framing Solutions
 - ❖ Full-Service Turnkey – Supply & Install
 - ❖ Mass Timber
 - ❖ Light Framed Wood Wall Panels
- ❖ In-House:
 - ❖ Structural Engineering
 - ❖ Structural Design
 - ❖ 3D Modeling / BIM Coordination
 - ❖ Logistics
- ❖ Rock Star Installation Crews -Award winning Projects



Sharing lessons learned from multiple MASS TIMBER projects...

Completed projects:

•Princeton University Environmental Sciences Buildings	180,000 Sq/Ft
• <u>Johns Hopkins Student Center</u>	100,000 Sq/Ft
• <u>40TEN Offices</u>	70,000 Sq/Ft
•Autumn Willows Apartments	30,000 Sq/Ft
• <u>Sycamore and Oak Retail Pavilion</u>	23,000 Sq/Ft
•Mass Timber Elevator Shafts –Affordable Housing	2,000 Sq/Ft

In progress:

•Lego Corporate Office	100,000 Sq/Ft
•Colby College Student Housing	109,000 Sq/Ft
•PA State Police Academy	103,000 Sq/Ft
•COSTAR, Richmond Campus	70,000 Sq/Ft
•Presque Isle international Airport	35,000 Sq/Ft
•VA Medical Center	21,000 Sq/Ft
•Kalamazoo College	65,000 Sq/Ft

Calling all Military Veterans

Construction Background:

Stick & Panel Framing, Heavy Timber Frame, Pre-Fab Concrete Foundations, Mass Timber...

Formal Training:

- **US ARMY** Intelligence Analyst
 - What's the Mission / Situation?
 - What are rules of engagement?
 - What are Risks?
 - Where are Opportunities?



Approach MT projects thru analyst lens:

- Situation Analysis- What's the project goal?
- Risks- Where are exposures to avoid?
- Opportunities- Where are opportunities?



WHO uses Mass Timber?

- ❖ Thought Leaders
- ❖ Top Universities
- ❖ Major Corporate Entities
- ❖ Savvy Developers
- ❖ Top Architects / Engineers
- ❖ Progressive GC's



HOW is MASS TIMBER being used?



FULL SYSTEM-

- ❖ Columns
- ❖ Beams
- ❖ CLT Panels



HYBRID-CLT Panels on Steel



HYBRID- CLT Panels / Light Frame Panels

Shaft Towers



WHY are Developers, Architects, & GC's using Mass Timber?

Where are they finding
Value?

Accelerated Schedules / Leasing Velocity	(Head\$ in Bed\$)
Cost Containment / Cost Stabilization	(Fewer CO's)
Owner Loan / Debt Service Reduction	(Faster Builds)
Less Workers & Equipment required	(Small Crews)
Safer jobsite / Quieter jobsite	(Less workers, Drills)
Less Finishes, Less Waste Onsite	(Less Trash haul fees)
Reduce onsite energy costs	(Heat, Electric, Water)
ESG Objectives	(Environmental, Social, Governance)
Elevator & Stairwell Towers	(Faster construction starts)
Reduce trades & materials	(Steel, Concrete, Drywall, Paint)
Engineering is completed	(Signed, Sealed, Delivered)

MASS STATS

- ❖ **Strong:** Pound-for-pound Stronger than Concrete or Steel
- ❖ **Light:** Weighs **6X LESS** than Concrete & **18X** Less than Steel
 - ❖ (1 Cubic meter, solid MT)
- ❖ **Warm:** **5X** better thermal properties than concrete & **10X** better than steel
- ❖ **Precise:** **4X** more precise than tolerances for Concrete or Steel
 - ❖ Thickness- within 1/16 inch
 - ❖ Width- within 1/8 inch
 - ❖ Length- within 1/4 inch
- ❖ **Fast:** Can be installed **2X faster** than Concrete or Steel structures.
 - ❖ Schedule can be 25% faster.
- ❖ **Fire Resistant:** Retains structural integrity during fire (ASTM e119 testing)

Mass Timber is a holistic , system approach:

❖ **Historically:**

- ❖ Roof Truss system replace Rafters
- ❖ Floor Truss system replace Floor Joists
- ❖ Panelized Wall systems are replacing Stick Frame
- ❖ Pre-Fab concrete system replacing poured in place

Mass Timber -the next system in Industrialized Construction

- ❖ Can often replace Steel and Concrete in many commercial construction applications
- ❖ **Mass Timber plays well in the sandbox:**
 - ❖ Structural Steel
 - ❖ Structural Concrete
 - ❖ Light Framed Wood walls
 - ❖ Cold Formed Steel walls

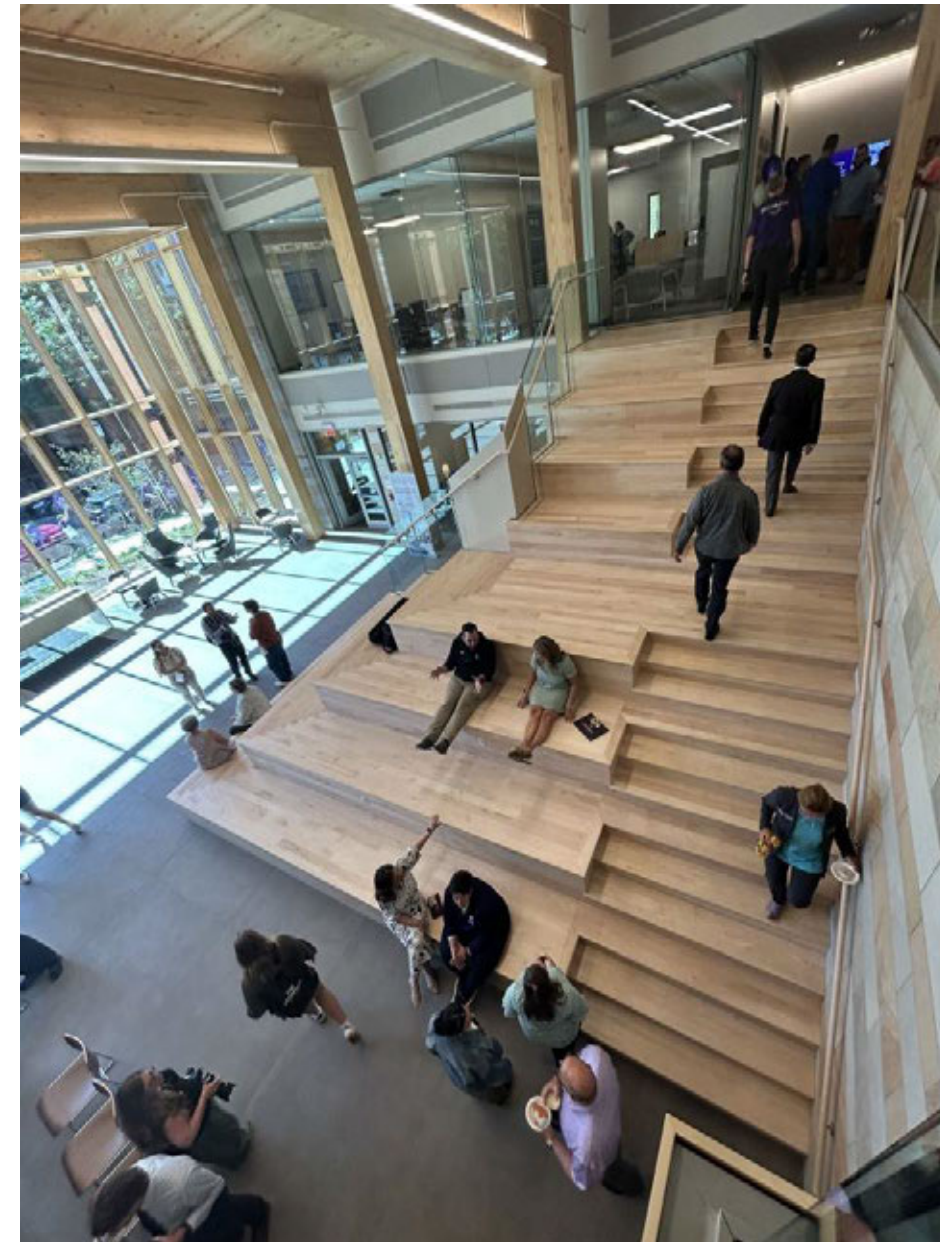
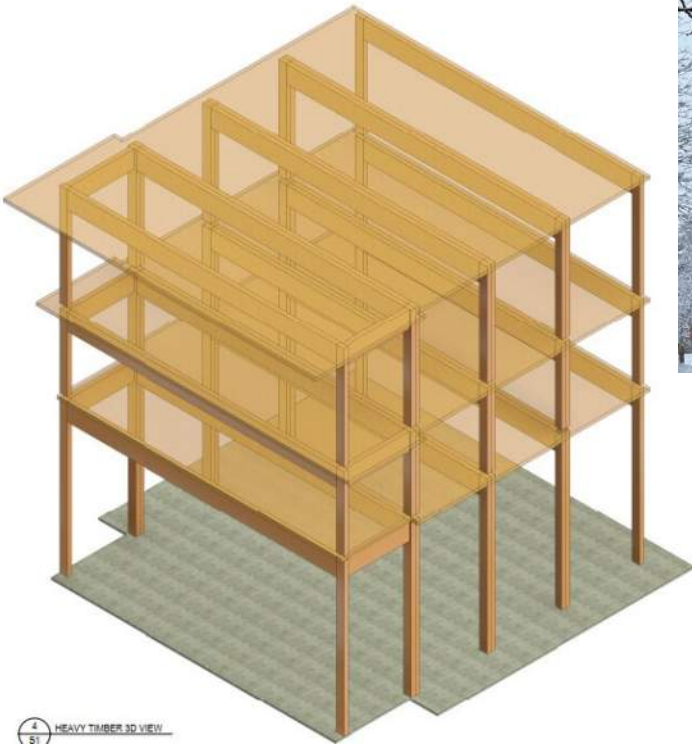


AVOIDING RISK...Prior Planning Prevents Poor Performance

- ❖ Design / Build - the most efficient & effective path forward
- ❖ Early Design and Engineering Collaboration - saves RFI's, drawing revisions, material discrepancies, logistic challenges, unforeseen Change Orders and valuable time
 - ❖ 10 hours in Design /Engineering /BIM collaboration can save weeks on jobsite delays and rework
 - ❖ Material sourcing, delivery logistics, connection details, acoustics, damage & moisture protection, erection sequencing, should be strategically vetted
 - ❖ Early strategic preparation avoids / mitigates costly risks and identifies opportunities to accelerate project timeline and add value
- ❖ Mass Timber projects are net propositions- Risk Avoidance= Captured Value
 - ❖ *The things you don't have to do increases your ROI.*

Avoiding Risk / Adding Value

- ❖ Situation
- ❖ Risk / Exposure
- ❖ Opportunity- Value Captured



Affordable Housing Project- Elevator Shafts

- ❖ **Situation**- Fast track 4-story, framed project while containing material and labor costs.
- ❖ **Exposure**- CMU walls can take 2-4 weeks to erect (Schedule unpredictability)
 - ❖ Need specialty trades-Masons. (\$\$)
 - ❖ Questionable plumb/level/square
 - ❖ CMU Requires finishing (Drywall, Paint)
- ❖ **Opportunity**- 5-Ply CLT Towers install fast, are 2-hour fire rated, accurate, can expose exterior
- ❖ **Results**-
 - ❖ GC Self-performed erection
 - ❖ 4 men installed in 1 ½ Days (Crazy fast)
 - ❖ Plumb / Level/ Square within 1/32"
- ❖ **BONUS:**
 - ❖ No waste on jobsite
 - ❖ Stained exterior "Feature walls"= Value Add



40TEN-Office Building

- ❖ **Situation**- Build 4-story office to attract long-term tenants
- ❖ **Exposure**-Brown field site. Steel & concrete weight = \$\$\$ Foundation
- ❖ **Opportunity**- MT Lighter material / smaller foundation
 - ❖ Built 3/ 1 - podium/ MT
- ❖ **Results**-
 - ❖ Celebree School- Tenant
 - ❖ Project Developer-Tenant
 - ❖ Project Civil Engineer -Tenant
 - ❖ Competing Developer -Tenant
- ❖ **BONUS:**
 - ❖ Winner of multiple awards for architectural design, sustainability, interior design



"It's extremely satisfying to see your design erected in weeks, not months, and with zero waste or field changes. The beauty, and versatility are virtually unmatched."

-Project Architect Firm

Sycamore & Oak Retail Pavilion

- ❖ Situation- Create a flexible space that encourages new business and serves as hub to inspire and celebrate the community.
- ❖ Exposure- The imperative need *for full collaboration and inclusion* among private, public, government, and community stakeholders for needs evaluation, input, insights, acceptance and approval.



Sycamore & Oak Retail Pavilion

- ❖ **Opportunity**- Assemble an all-star team to engineer, design and execute their adventurous vision. Employ Mass Timber to attract, welcome and inspire tenants & visitors alike to dream big.
- ❖ **Results**-A flexible, attractive, comforting space that supports entrepreneurs, embraces visitors, and hosts enthusiastic community activities and events.
- ❖ **BONUS:**
 - ❖ Sustainably engineered and designed to be re-purposed.





Lessons Learned

EARLY ENGAGEMENT = EFFICIENT EXECUTIONS

- ❖ Design / Build is the most efficient & effective path forward
- ❖ Early Collaboration saves RFI's, drawing revisions, costly Change Orders, material discrepancies, and valuable time
- ❖ Mass Timber projects are net propositions.
 - ❖ What you do early captures your project ROI



QUALITY BUILDINGS

*THANKS FOR YOUR
TIME AND ATTENTION.*

Scott Charney
Mass Timber Market Manager
Scharney@QualityBuildings.com
www.qualitybuildings.com





CIVIC BUILT ENVIRONMENT JOURNEY

DC PUBLIC LIBRARY



Jaspreet Pahwa | NCARB | LEED AP
Director, Capital Planning & Construction

WoodWorks | DC DOB

Sycamore & Oak
October 9, 2025



Disclaimer: This presentation was developed by a third party and is not funded by WoodWorks or the Softwood Lumber Board.

Jaspreet Pahwa, NCARB, LEED AP

(She/Her/Human)

Architect: Licensed in New York, Virginia, & New Delhi.

Leading **Transformative**, Award-Winning **Built Environment Endeavors for 20+ Years.**

Typologies: Tech-Centric Workspaces, Retail, Hospitality, Higher-Ed, & Civic Spaces

Director, Capital Planning, Design & Construction, DC Public Library.



Enabling Transit Oriented Joint Developments for new libraries

Led District of Columbia's first Public-Private Partnership Library anchored In A Mixed-Use Development.

Enabled First Library-Based Solar Program in DC, furthering Sustainability, Resiliency & Social Justice Goals.



Harmonizing Strains of Built Environment : **Clean Collective Carbon Karma**

Guest Speaker & Panelist: Harvard's Future of Library Design Program 2019-2023 & Temple University, Arizona University Designing Libraries Conference 2022, 2023

Jury Member: GSA Design Excellence Awards 2022, AGC DC Chapter 2023, & 2018

Board Member Glen Allen Cultural Arts Center, Virginia 2013-15.

DC PUBLIC LIBRARY SYSTEM

26 Libraries city wde

across 68.34 square miles

700,000 humans

18 of 26 Libraries Rebuilt/Modernized *2009 to 2022*

First LEED Platinum Library 2021

First NetZero underway

10 LEED Gold

2 LEED Silver

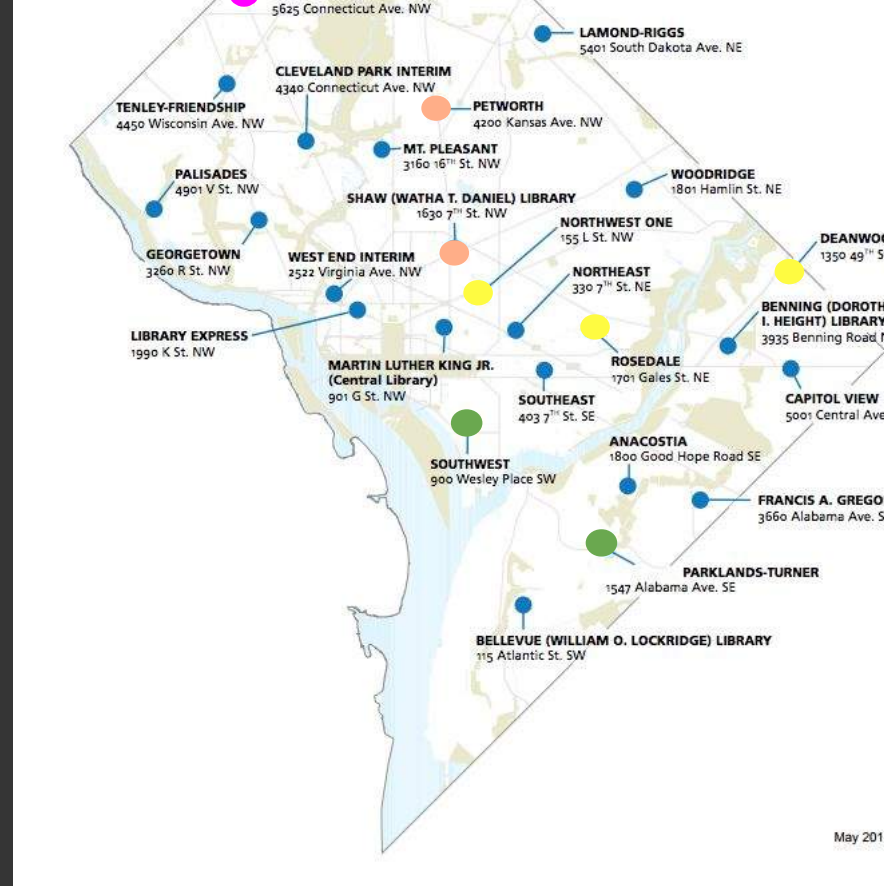
Next Libris Built Environment Roadmap

1 more expanded + modernized *by 2026*

4 smaller branches Replacement

Recalibration of 2 branches for evolved needs

Public/ Private Joint developments



DESIGN & CONSTRUCTION EXCELLENCE APPROACH

Each Public Library **SENSITIVE TO ITS CONTEXT MAXIMIZING** visual and physical **CONNECTION TO OUTDOORS** with **Universal ACCESSIBILITY, SAFETY, BIOPHILIA, &** glare free **NATURAL LIGHT**

BUILD W/ PRECISION, integrate **ENVIRONMENTAL, & ECOLOGICAL CONSCIOUSNESS**, innovatively with timeless materials for **RESILIENCE** and **High Performance** over the building's Lifecycle.

Core & bespoke Library services prioritized by each community are designed to be **FLEXIBLE &** technologically **ADAPTABLE** with evolving needs of the community.

SOUTHWEST LIBRARY

DC's First LEED Platinum Library

USGBC Climate Champion Award Winner 2023



SOUTHWEST
Library

MORTELL
ROOFING

202-553-7262
202-246-4348

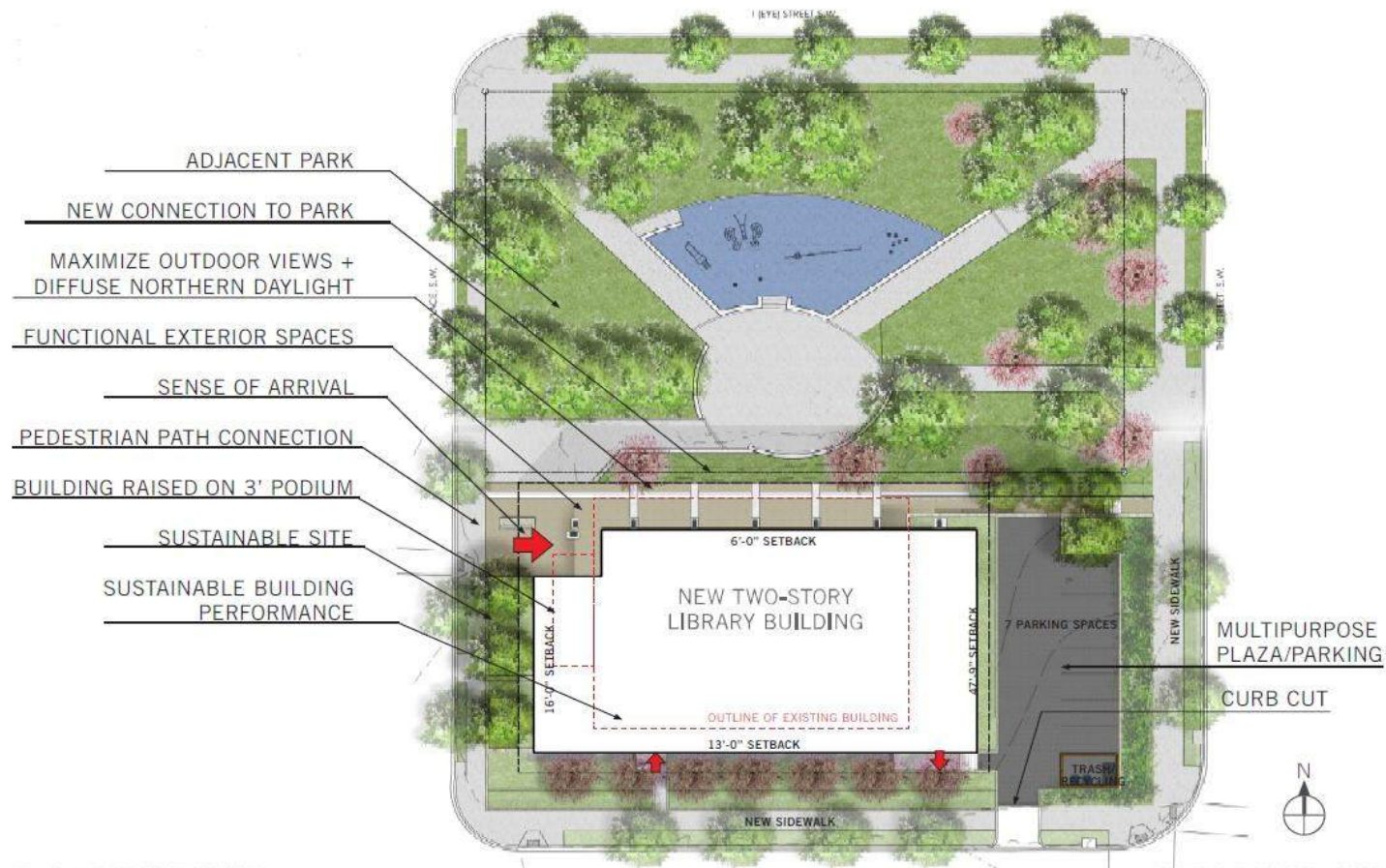
CALL ORIGIN FOR INFO





60% OF THE SITE PRESERVED AS PARK SPACE, WITH NATIVE & ADAPTIVE SPECIES

SITE/PROPOSED



SOUTHWEST LIBRARY, FIRST FLOOR PLAN

1 PROMINENT MAIN PUBLIC ENTRANCE

Unversally accessible, at street level, well lit.
8'-0" wide opening w/ bi-parting automatic sliding doors & 10'-0" deep vestibule with recessed walk off mat.

EXTERIOR BOOK DROP

At street level w/ after-hours access on path to main entrance.
Backs into a staff-only space for retrieving

2 WELCOME AREA

Completely in line of sight of staff
'Wow wall' (visual feature) in the gathering zone for small groups of upto 10
Space for 'Holds' on shelves w/ castors designed for flexibility
Self-Checkout area

3 FRONT DESK

2 person staff station with PC's and peripherals
Designed to serve differently-abled patrons and allow book/ material check-out /return depressible bin, with duress alarm tied to MPD.

SELF-SERVE EXPRESS BAR

Within line of sight of staff
Unversally accessible counter with 3 to 4 stations:
catalog pc, express computer, and print release station

5 CHILDREN'S STAFF WORKROOM

4 MULTIPURPOSE ROOM

Within line of sight of staff
100 people space with high performing acoustics, & AV capabilities to enable independent simultaneous programs when operable partition is drawn.
Stackable Chair storage
Solid surface counter w/ sink to enable catered events and wash area for children's activities
Direct access from Children's space to Multipurpose room for story time

UNIVERSALLY ACCESSIBLE LIBRARY STAFF ENTRANCE

Distinct & out of sight from public entrance

UNOBSTRUCTED VIEWS TO OUTDOORS

SEATING AT THE PERIMETER: INDOORS & OUTDOORS

Access to power for patron devices at Lounge furniture & tables w/ chairs along north perimeter w/ views of park with old growth

6 OUTDOOR SPACE

accessible only from within the library.



9

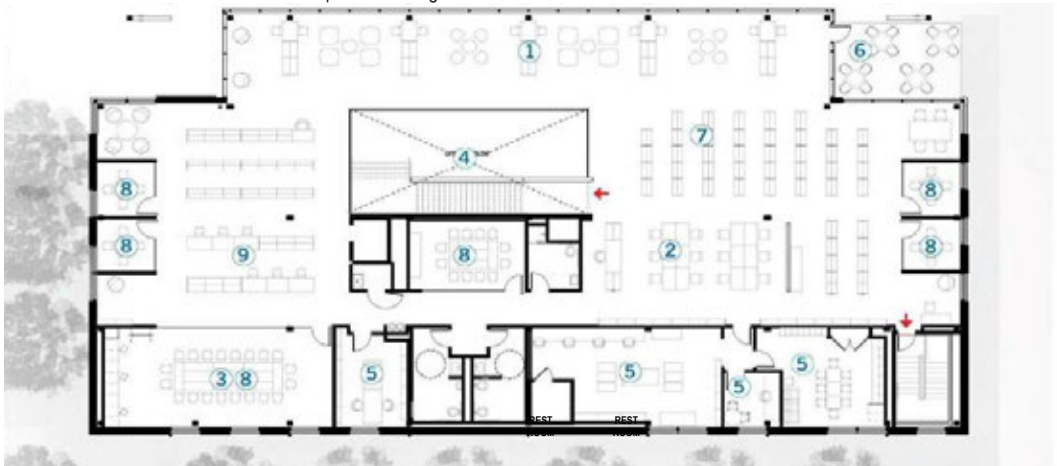
8 MEP/BUILDING SYSTEMS spaces

w/ Power assist door operators and water fountain, with water filling station.

7 CHILDREN'S SPACE

Tucked away from the street
Children's staff desk designed for 2 staff has line of sight to entire space
Stroller parking for 10 strollers closest to story time space and access to Family restroom
Zoned for different age groups babies, toddlers, preschoolers, school aged children with variety of furnishings
Picture books/ board books custom browser bins, custom tactile/interactive wall surfaces for experiential learning, Computers and homework area.

SOUTHWEST LIBRARY, SECOND FLOOR PLAN

- 1 SEATING ALONG NORTH FACE**
Access to power for patron devices at Lounge furniture & tables w/ chairs w/ views of park with old growth
- 2 ADULT COMPUTER ZONE**
- 3 ADULT STAFF DESK**
2 person staff station with pc's and peripherals
Designed to serve differently-abled adult patrons
- 4**
- 5 ACCESSIBLE RESTROOMS**
w/ Power assist door operators and water fountain, with water filling station.
- 6 BALCONY** accessible only from within the library.
- 7 ADULT COLLECTION**
Standard 60 inch high shelving with 4 feet aisles and lighting targeted at book spines
- 8 RESERVABLE STUDY ROOMS**
Securable
Visible to staff
Designed for collaboration with 4 to 6 people
Acoustically high-performing
Outfitted with AV technology and White Boards
- 8 IMPROMPTU COLLABORATION NOOKS**
Movable lounge furniture or tables and chairs White Boards
- 9 TEEN COLLECTION, AND COMPUTER ZONE**
w/ integrated Teen staff touchpoint
Outfitted with AV technology and White Boards
Views to outdoors & natural light
- 3 MULTIPURPOSE ROOM TRAINING/MAKERSPACE: BESPOKE SPACE**
Acoustically high performing
Outfitted with counters for trending technologies
AV display also supports gaming
Views to outdoors & natural light
- 5 LIBRARY STAFF SPACES**
All spaces have Views to outdoors & natural light
Acoustically isolated forms taff space
Adult services staff workroom,
Manager's Office
Breakroom
Digital surveillance access and alarm within staff spaces
- LIBRARY STAFF RESTROOM w/ SHOWER**
- 
- The floor plan shows a rectangular building layout. At the top (North) is a long lounge area with seating and power outlets (1). Below this is a large open area with bookshelves (7) and computer zones (2, 3, 8). A central staircase (4) leads to an upper level. To the right is a staff area (5) with restrooms and a balcony (6) accessible from within. The bottom left features a multipurpose room (3) and study rooms (8). The bottom right has more study rooms (8) and a teen collection area (9). The plan includes various furniture like tables, chairs, and bookshelves, as well as restrooms and a breakroom.

HOW WE GOT TO LEED PLATINUM

ROOFING

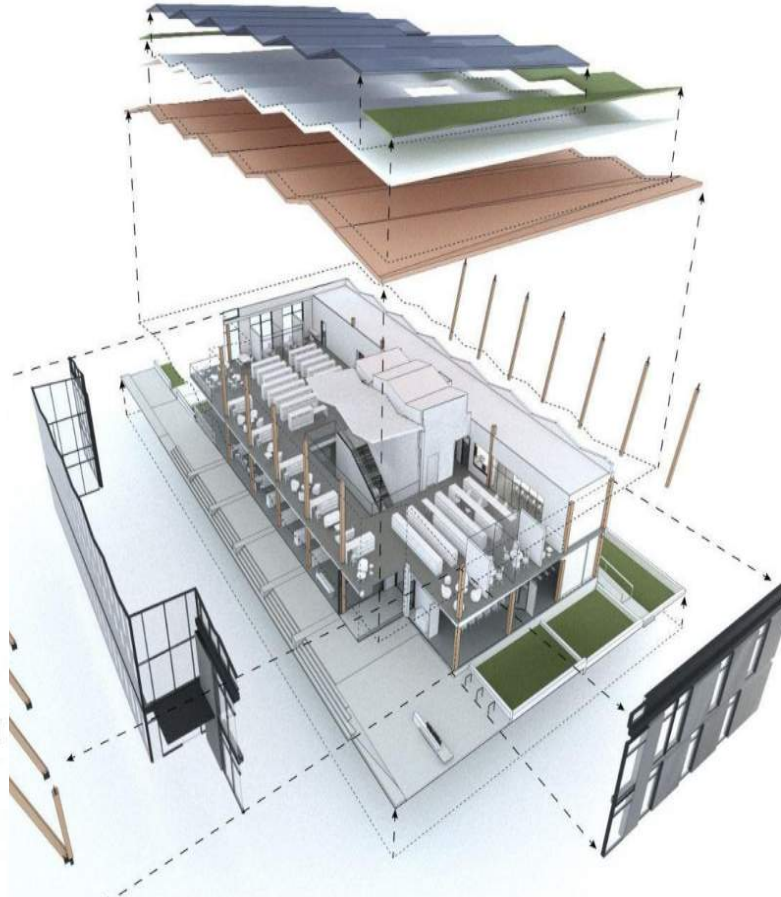
PHOTOVOLTAIC PANELS
LIVING GREEN ROOF
THERMAL INSULATION
LAMINATED WOOD ROOF PLATE
SEQUESTERS CARBON DIOXIDE
COLLECTS SOLAR ENERGY
PRODUCES OXYGEN
ABSORBS RUNOFF

INTERIOR

DIFFUSE NORTHERN DAYLIGHT
LAMINATED WOOD COLUMNS
MAXIMIZED VISIBILITY
SPACIOUS FLOOR AREA
UNIQUE STAIR FEATURE
NON-TOXIC MATERIALS
ACCESSIBLE DESIGN

EXTERIOR

NEIGHBORHOOD INSPIRED DESIGN
GROUND FLOOR ELEVATED ON 3FT PODIUM
EXTERIOR PORCH/BALCONY
PAVILION IN THE PARK APPROACH
NATURAL BIO-SWATH VEGETATION
HIGH PERFORMANCE FACADE
CLOSE PROXIMITY TO TRANSPORTATION



LEED-NC v2009
Certification Level: Platinum

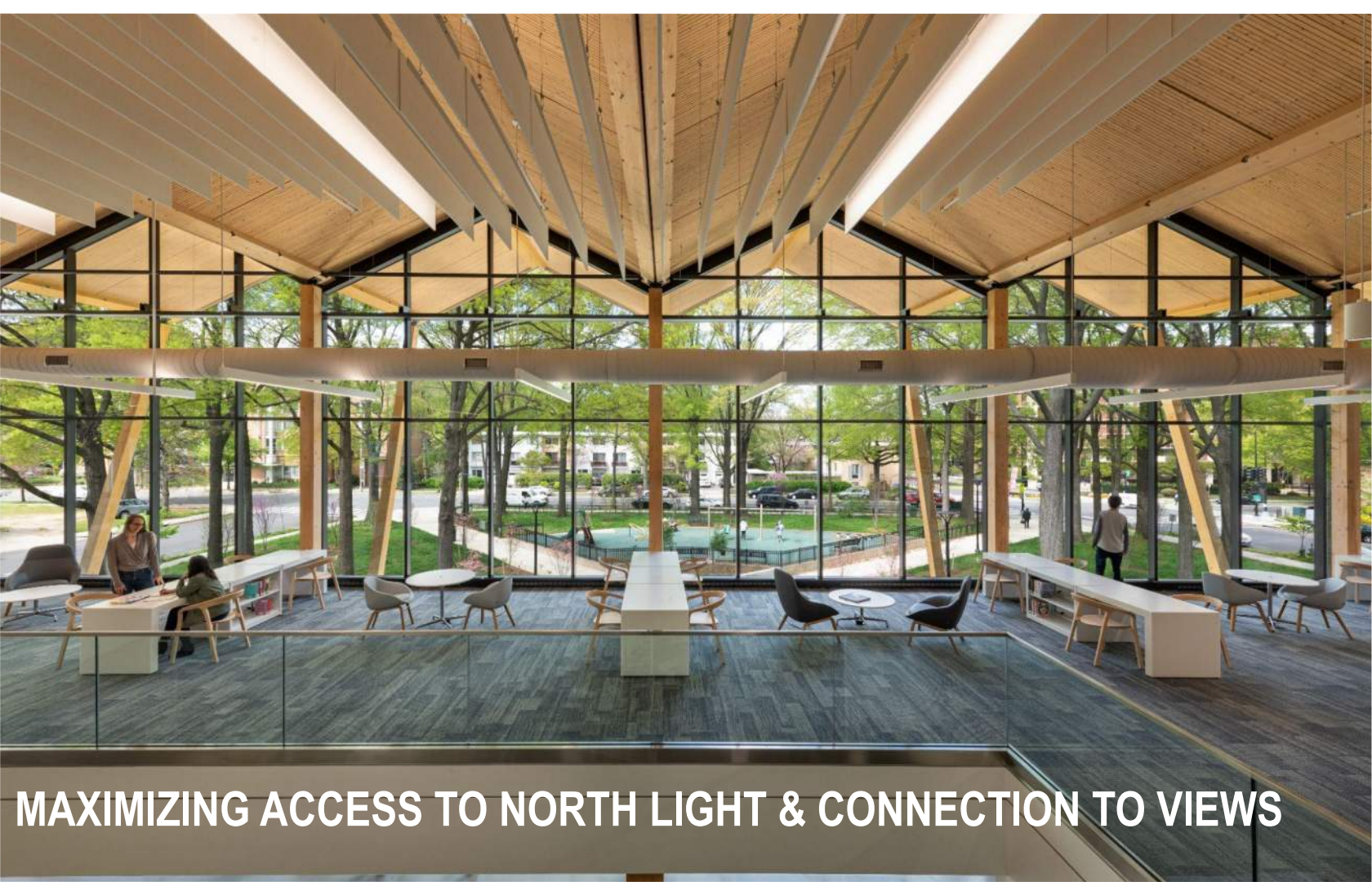
-  Sustainable Sites: 23 of 26
-  Water Efficiency: 7 of 10
-  Energy & Atmosphere: 29 of 35
-  Materials & Resources: 5 of 14
-  Indoor Environ. Quality: 9 of 15
-  Innovation in Design: 6 of 6
-  Regional Priority: 2 of 4

OVER 50% OF ENERGY FROM ONSITE ROOFTOP PV'S



MASS TIMBER PREFAB STRUCTURE & HIGH PERFORMANCE MATERIALS & DETAILING





MAXIMIZING ACCESS TO NORTH LIGHT & CONNECTION TO VIEWS



BUILT FOR FLEXIBILITY, ADAPTABILITY & RESILIENCE



ELEVATED ABOVE THE FLOODPLAIN & BUILT FOR RESILIENCE

Awards

2021 World Design Award

The Architecture Community

2021 Excellence in Structural Engineering Outstanding Award - New Buildings < \$30M

NCSEA

2021 Excellence in Structural Engineering SEE Award - New Buildings < \$30M

NCSEA

2021 Best in Engineering Award of Excellence

DBIA National

2021 Civic/Assembly Award of Merit

DBIA National

2021 Gold - Wood in Architecture

World Architectural News Awards

2021 Finalist - Civic - Libraries, Museums and the Arts

World Architectural News Awards

2021 Excellence in Design Award

DBIA-MAR

2021 Design-Build Award

DBIA-MAR

2021 Award of Merit

AIA Northern Virginia

2021 Best Project for Excellence in Sustainability

ENR MidAtlantic

2021 Award of Merit | Cultural/Worship - Best Projects

ENR MidAtlantic

2021 Best of the Best: Building

NAIOP DC

2021 Best Institutional Facility

NAIOP DC

2021 Best Project - Design-Build \$16M-\$30M

AGC - DC

2021 Award for Outstanding Project (Less than 200,000 sqft)

Lambda Alpha International, George Washington Chapter

2021-22 Sansin Sponsorship Award

Wood Design & Building Awards

2022 Wood Design Awards, Institutional Wood Design

WoodWorks

2022 Finalist | Institutional - Libraries

Architizer A+ Awards

2022 Community Leader Award | Climate Champion

USGBC National Capital Region

2022 People's Choice

USGBC National Capitol Region

2021 Global Awards, Bronze Award Winner, Humanitarian Category

International Federation of Interior Architects

2022 Mid-Atlantic Chapter Premiere Design Awards, Education Category

IIDA MAC

2023 Excellence in Institutional Architecture Project Award

Urban Land Institute - Washington

2023 Interior Architecture Award

AIA Interior Architecture Awards

2022 Civic / Public Category Winner

ICFF 42nd Annual Interiors Awards

2022 Chapter Design Awards, Architecture

AIA DC

2022 Wood Design & Building Awards, Non- residential

Canadian Wood Council

2021 Award of Merit, Institutional Architecture

AIA Northern Virginia

CONGRESS HEIGHTS LIBRARY

First Transit Oriented Net-Zero Library on the Drawing Boards



Celebrate the legacy of physical place and culture of place

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

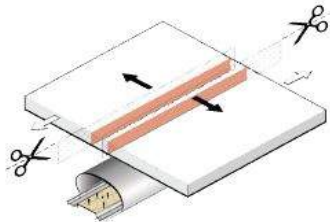


Become a catalyst for sustainable and resilient development

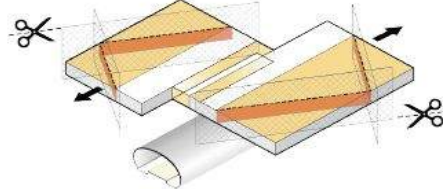
Outdoor Programs & Connections to Nature

Create a place of Refuge

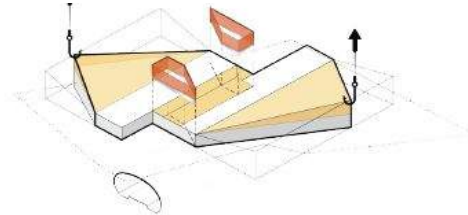
Interior Courtyards



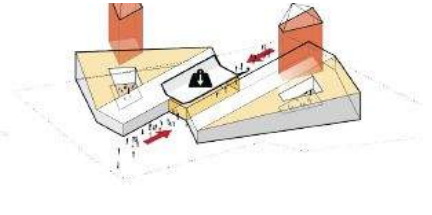
Simple volume responsive to infrastructure
Volume slice - program shifts



Fractured massing announces entry
Volume cut composed on site



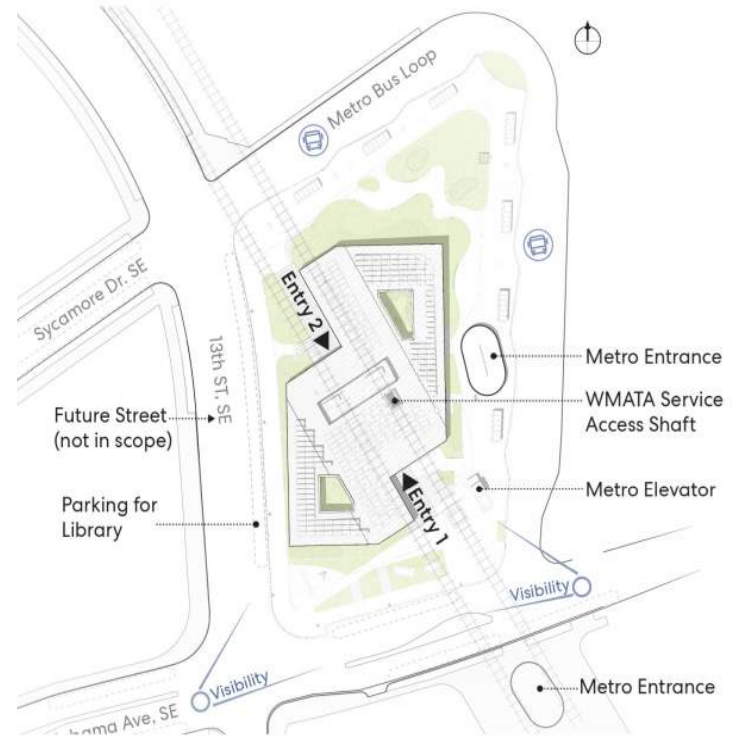
Arrival = community portals
Expansion = Day-lit reading rooms



Compression upon entry
Courtyards frame the sky

Project Location

1304 Alabama Ave SE



DCPL's First Transit-Oriented Net-Zero Library



- 23,400 SF Single Story Library
- Mass Timber Structure
- Leed V4.0 & V4.1 Bd+C: New Construction
- Geothermal System
- PV Panels Estimated Yearly Production: 224,360 Kwh
- Bird Safe Glazing Per D.C.'s Migratory Local Wildlife Protection Act



Design | Floor Plan

23,400 Square Feet



- 1 Welcome Zone
- 2 Co-Work / Meeting Space
- 3 Staff Area
- 4 Adult Reading Room
- 5 Adult Courtyard
- 6 Multipurpose Room
- 7 Maker Space
- 8 Recording Studio
- 9 Teen Hangout
- 10 Youth Reading Room
- 11 Youth Courtyard
- 12 Metro Subway Entrance
- 13 Metro Subway Elevator

Experientially

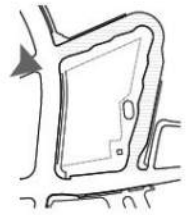


3D Views | Alabama & 13th St





3D Views | 13th Street SE & Sycamore





Curtain Wall

Formed Metal Coping

Sharkfin Profile Formed Metal
Panel Cladding

Formed Metal Fascia

Low-E Vision Glass with Vertical
Bird Safe Acid Etch

Mass Timber Super Structure

Interior Wood Louvers for Light
Diffusion

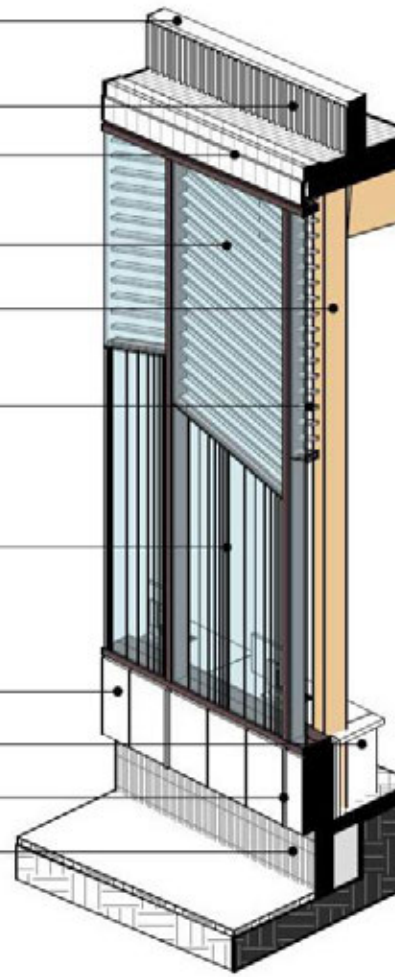
Low-E Vision Glass with Vertical
Bird Safe Ceramic Frit

Metal Composite Material
Cladding

Interior Millwork Workstation

Metal Fin

Board Formed Concrete



MATERIALS



The proposed palette is designed to complement the surrounding campus without mimicking the existing materials



Depth / Shadow



Texture



Natural Color / Tone



Entry Wall Composition



metal



mullion/accent

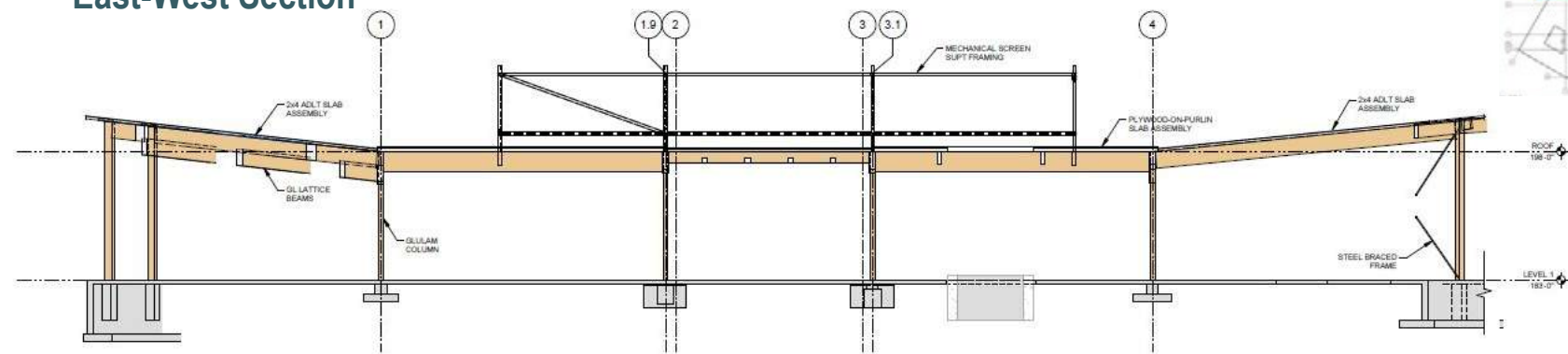


wood

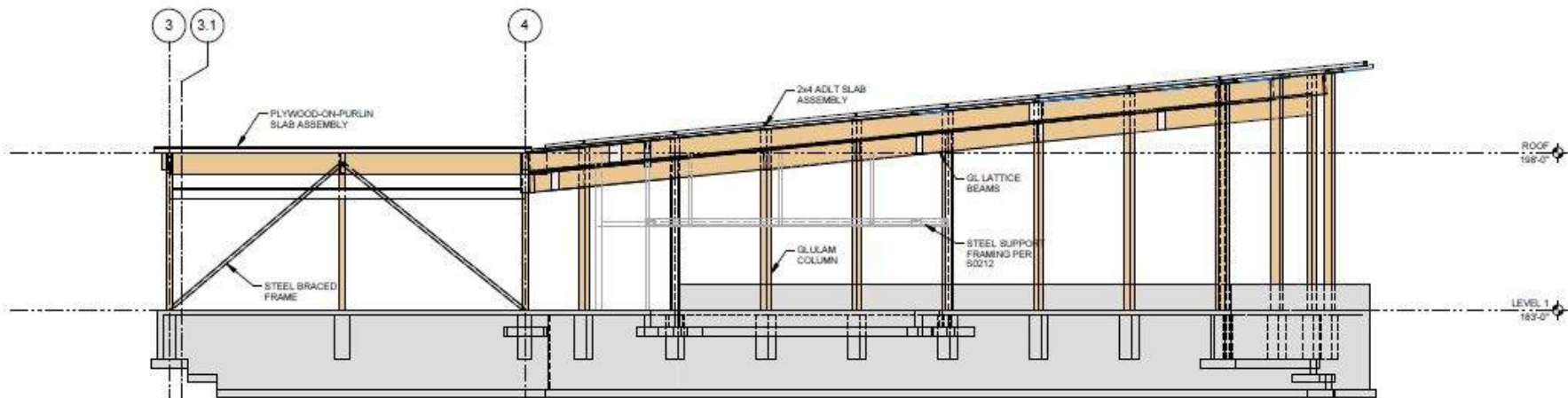
BUILDING SECTION



East-West Section

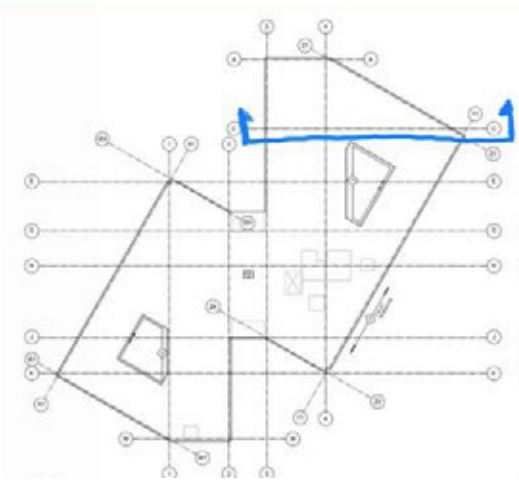


BUILDING SECTION

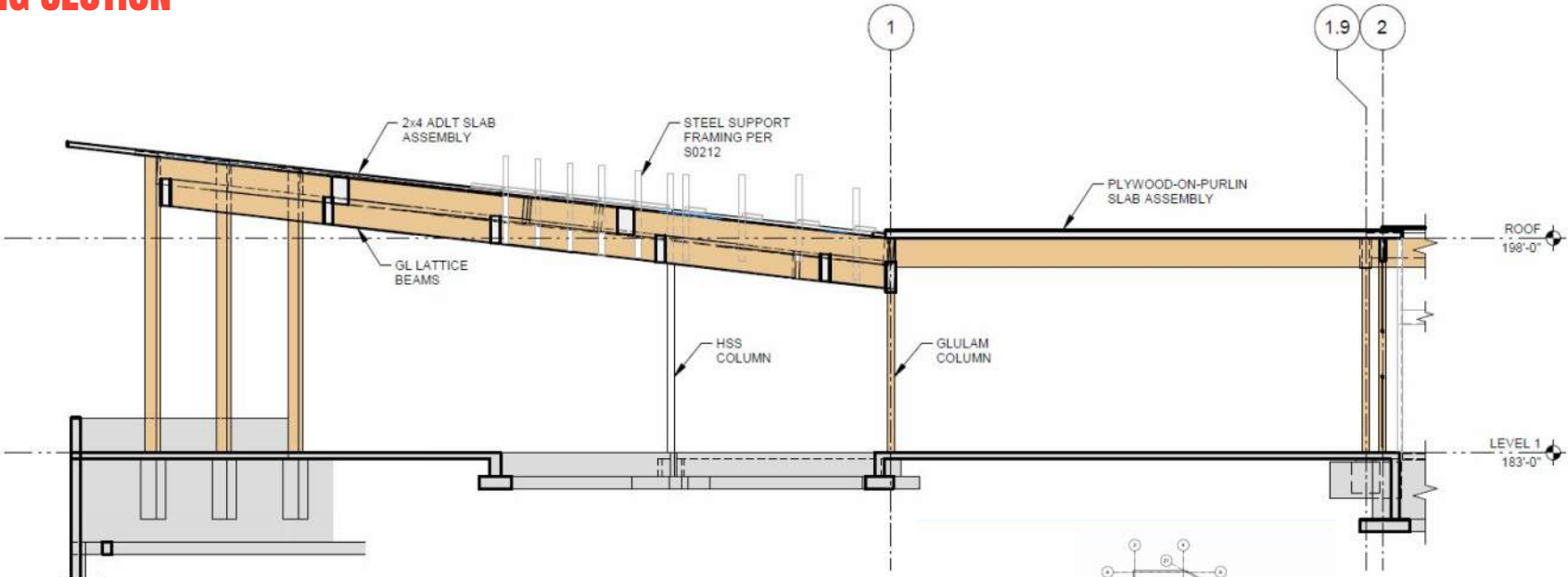


East West Section
Through the Adult Spaces

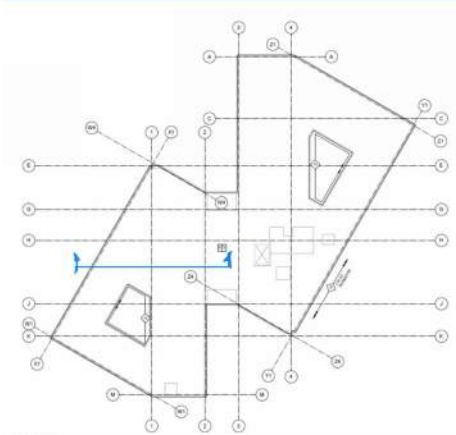
Member	Species/Grade
Glued-Laminated Beams *	Per AITC 117 or DIN EN 14080: GL24c minimum or North American Equivalent for alternate species options
Glued-Laminated Columns *	Per AITC 117 or DIN EN 14080: GL24h minimum or North American Equivalent for alternate species options
CLT Panels	APA PRG 320 rated Douglas Fir Larch, Spruce Pine Fir, or ETA approved European Spruce, V Grade
DLT Panels	Spruce Pine Fir No. 2, European Spruce C24 minimum or Equivalent
Plywood Sheathing	Grade C-D or Structural 1 with Exterior Glue



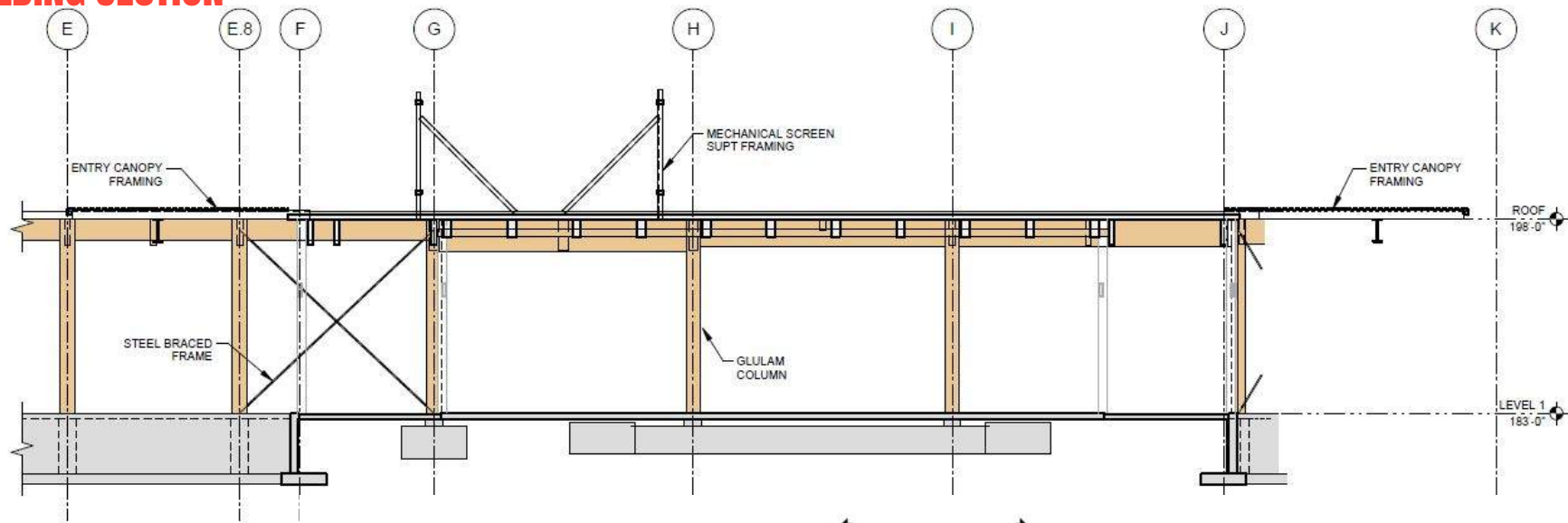
BUILDING SECTION



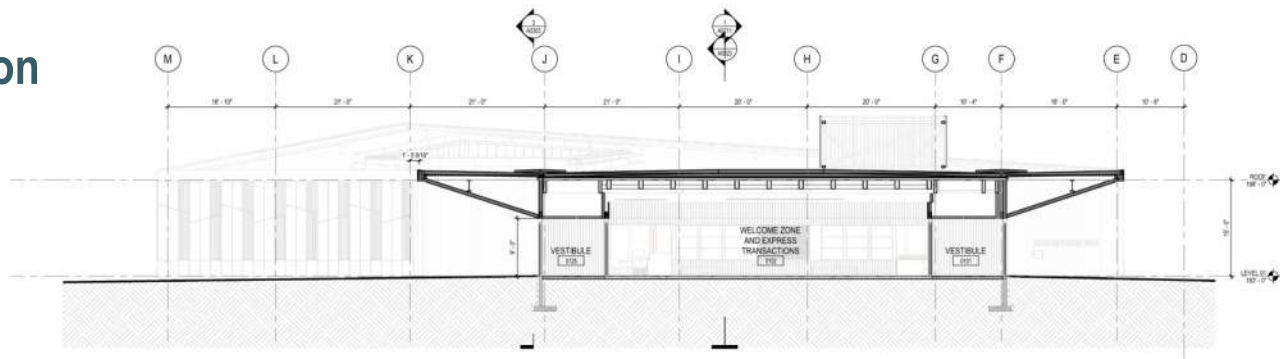
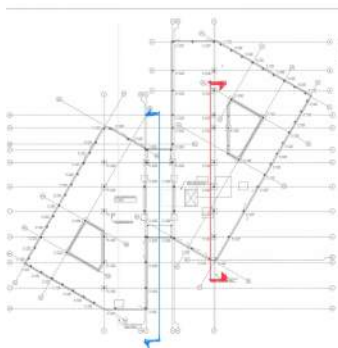
East West Section
Youth Wing



BUILDING SECTION



● North-South Section



● North-South Section (opposite)

Landscape Plan

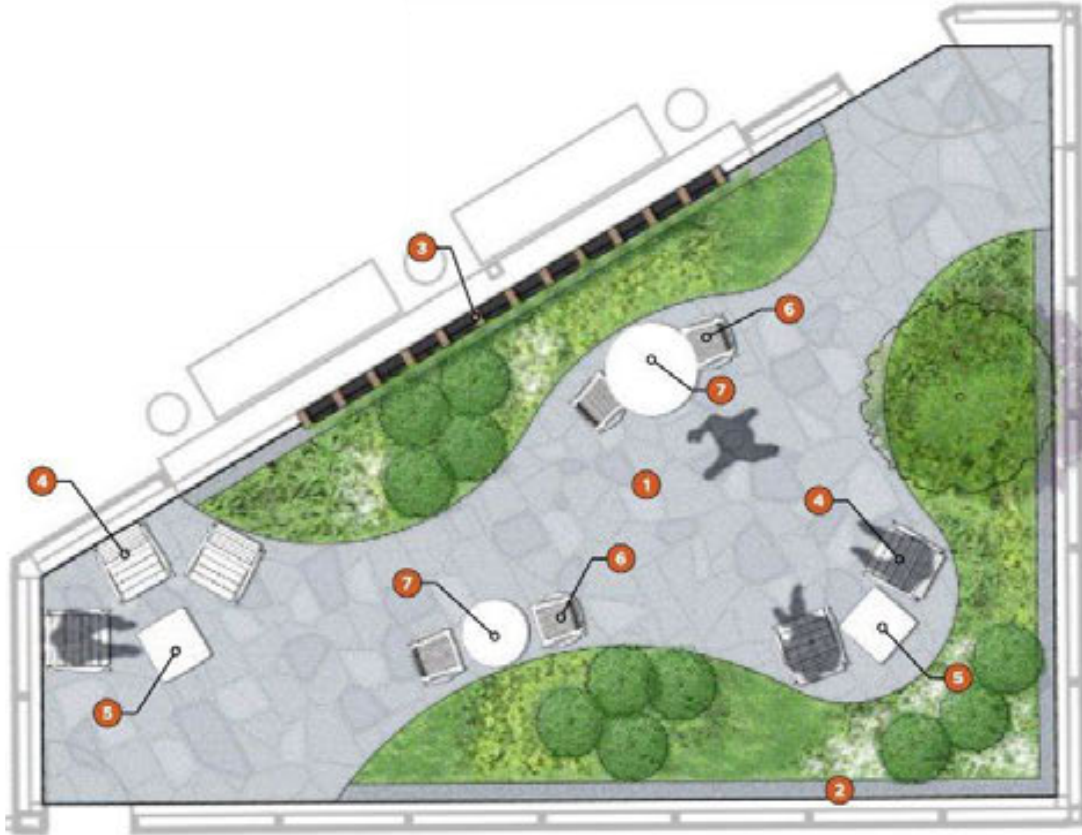
scape | Plan

DDOT Standard Paving
Stamped Concrete Walkway
Public Seating Area
Relocated Existing Artwork
Educational Signage

- 1 DDOT Standard Paving
- 2 Stamped Concrete Walkway
- 3 Public Seating Area
- 4 Relocated Existing Artwork
- 5 Educational Signage



Adult Courtyard



1 STONE PAVING
THERMAL BLUESTONE



2 DECORATIVE STONE
MEXICAN BEACH PEBBLES



3 WOOD
THERMORY ASH



4 CHAIR
VAYA CHAIR - FORMS - SURFACES



5 TABLE
VAYA TABLE - FORMS - SURFACES



6 CHAIR
CH-PMAN CHAIR - FOG - LANDSCAPE FORMS



7 TABLE
CATENA - SAGE - LANDSCAPE FORMS



DC Public Library

THANK YOU

Our Journey of Harmonizing Strains of Built Environment
Combating Carbon Karma Continues

Jaspreet Pahwa | NCARB | LEED AP
Director, Capital Planning & Construction
DC PUBLIC LIBRARY

jaspreet.pahwa@dc.gov | 202.503.5391



SUSTAINABLE BY DESIGN:

INNOVATING THROUGH MASS TIMBER

JJ Rivers, AIA
Principal

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October 9, 2025

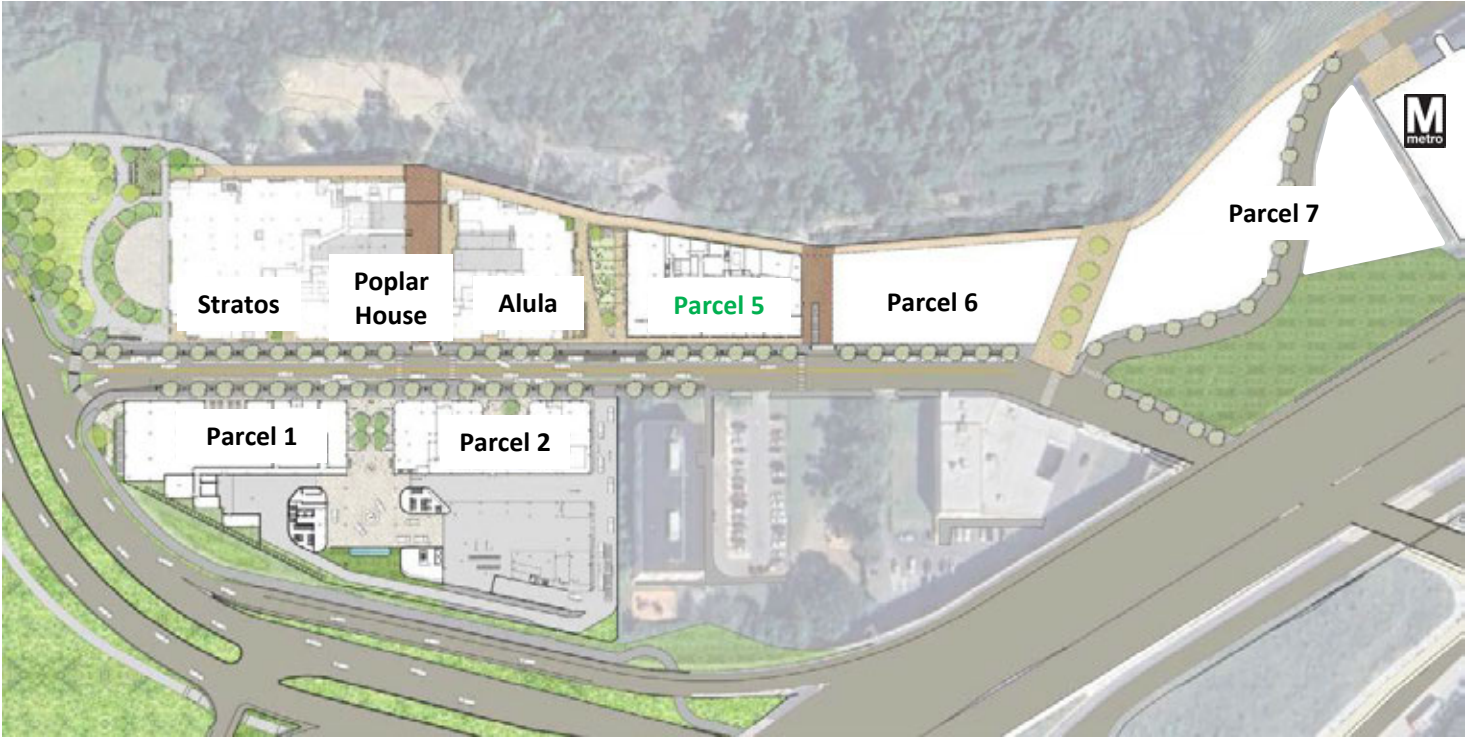
Gensler



Paul Elias – Executive Vice President Construction
pelias@redbricklmd.com

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Site Plan: The Bridge District



Parcel	Type	Size/Units	Status
Stratos	Residential	283 units	Delivered Q1 2025
Poplar House	Residential	180 units	Delivered Q1 2025
Alula	Residential	294 units	Delivered Q1 2025
Parcel 5	Residential	272 units	Q4 2025 Construction Start
Parcel 2	Residential & Lodging	495 units & 110 keys	Q2 2026 Construction Start
Parcel 1	Residential	~330-350 units	TBD
Parcel 6	Office/Residential	~220K SF/ ~200-220 units	TBD
Parcel 7	Lodging	125 - 150 keys	TBD

BRIDGE DISTRICT



Parcel 5



 REDBRICK LMD





RECEPTION & ARRIVAL LOBBY



CO-WORK LOUNGE



ROOFTOP LOUNGE



FITNESS

Parcel 5 Unit Renderings



Parcel 5 Unit Renderings



Lessons Learned & Continues to be Learned

1. Mass Timber - Let it run the show

2. Design Thoughts

- *Design Build vs Design Bid Build – Scheduling Concerns & Cost of Design Structural, Mechanical, Plumbing, Electrical, Sprinkler*
- *EOR's and General Contracting Subcontracting*
- *Acoustics and floor assembly – Concrete on top of acoustic mat.*
- *Exterior Wall Design – Connection Details are very important*
- *Exposed conduit, Ductwork, Sprinklers - Drywall ceilings are still ok*
- *Early Buys, start shop drawings as early as possible*



Lessons Learned & Continues to be Learned

3. Mass Timber Lock – What is this and why is it so important?

- **Items that can't change**
 - Structural loading, performance criteria, acoustic ratings, floor elevations, exterior wall connections to structure, balconies, grid, slab edge, major MEP chases, pools.
- **Items that can change**
 - Interior layouts not affecting structure, coatings/finishes on mass timber, MEP coordination (chases are locked), final detailing of secondary structures, attachments, etc.

These design decisions are related to fabrication, lead times, production, delivery to maintain start erection on site.



Lessons Learned & Continues to be Learned

4. Moisture Concerns – Wood treatments/coverings.

5. Insurance Costs – Builders Risk and Property Coverage

“Not considered Stick but it is certainly not Post Tension Concrete Coverage”



Lessons Learned & Continues to be Learned

- 6. Permitting – Foundation to Grade is really Fdn. to Roof
Cores – Steel, Wood, Concrete
- 7. Tariffs – U.S. vs European suppliers
- 8. Late Design Changes – Try not to.





Paul Elias – Executive Vice President Construction
pelias@redbricklmd.com

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MASS TIMBER CASE STUDY: **3300 WHITEHAVEN**

October 9, 2025

3300 WHITEHAVEN

Washington, DC

Project Team

- Developer: Grosvenor Properties America
- Architect: Hickok Cole
- Structural Engineer: Ehlert Bryan
- MEP Engineer: Bowman
- Sustainability: Sustainable Building Partners
- Civil Engineer: Bohler
- Landscape Architecture: Parker Rodriguez
- Code Consultant: Jensen Hughes



1

3300 WHITEHAVEN PROJECT OVERVIEW

3300 WHITEHAVEN

Washington, DC

CLIENT

Grosvenor Properties America

SIZE

281,374 GFA

DETAILS

Combining 280 units, 5,600 SF of educational space, and a forward-focused mass timber structure sets the new standard for sustainable development in DC's multifamily market.



EXISTING SITE

Site Analysis

LEGEND

- GREEN SPACE
- BIKE SHARE
- PUBLIC PARK
- SCHOOL
- CHURCH
- NEIGHBORHOOD AMENITY
- RESIDENTIAL
- SITE BOUNDARIES
- RETAIL
- BUS STOPS
- TRANSP. INFRA

SITE VEHICULAR ACCESS & CIRCULATION

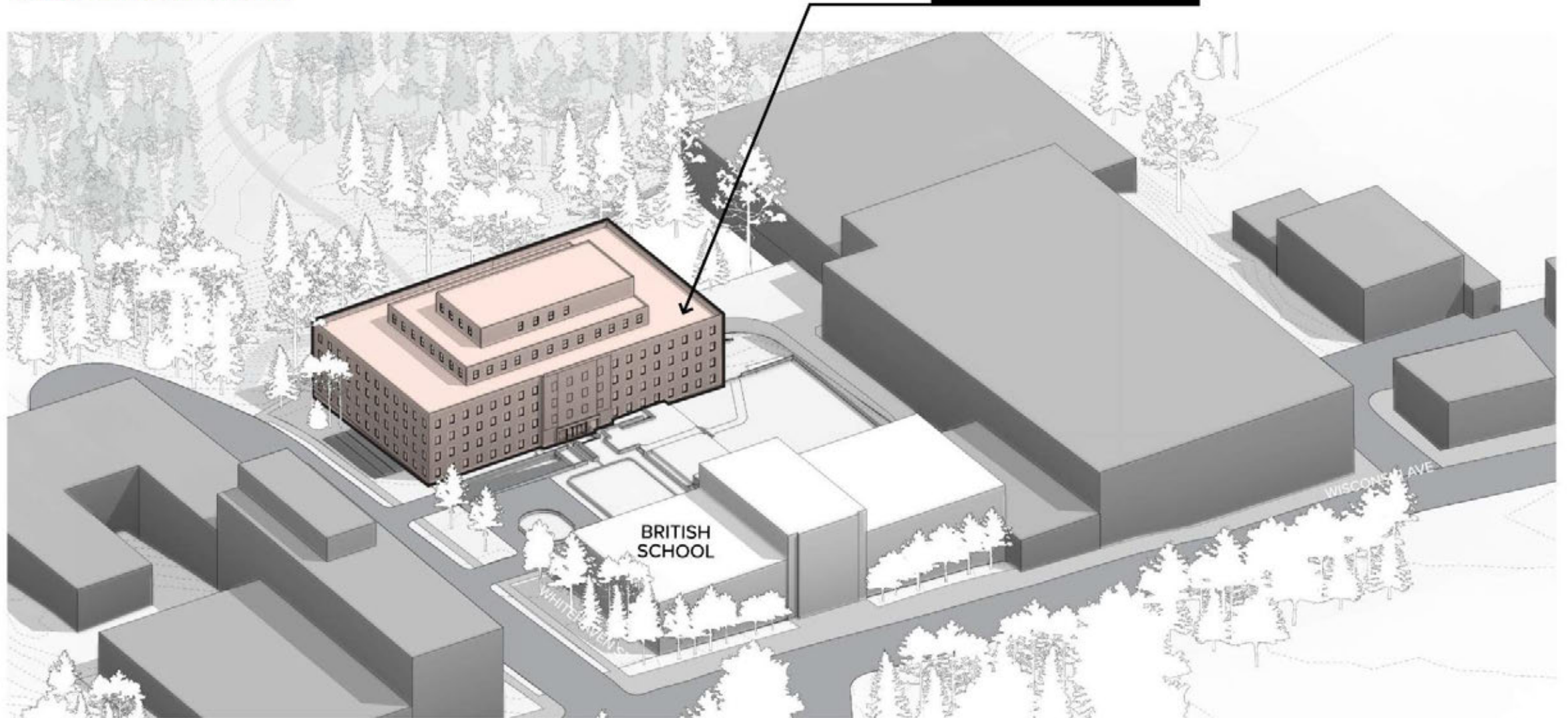
- PRIMARY
- SECONDARY
- TERTIARY
- PEDESTRIAN ONLY



EXISTING MASSING

West Axon View

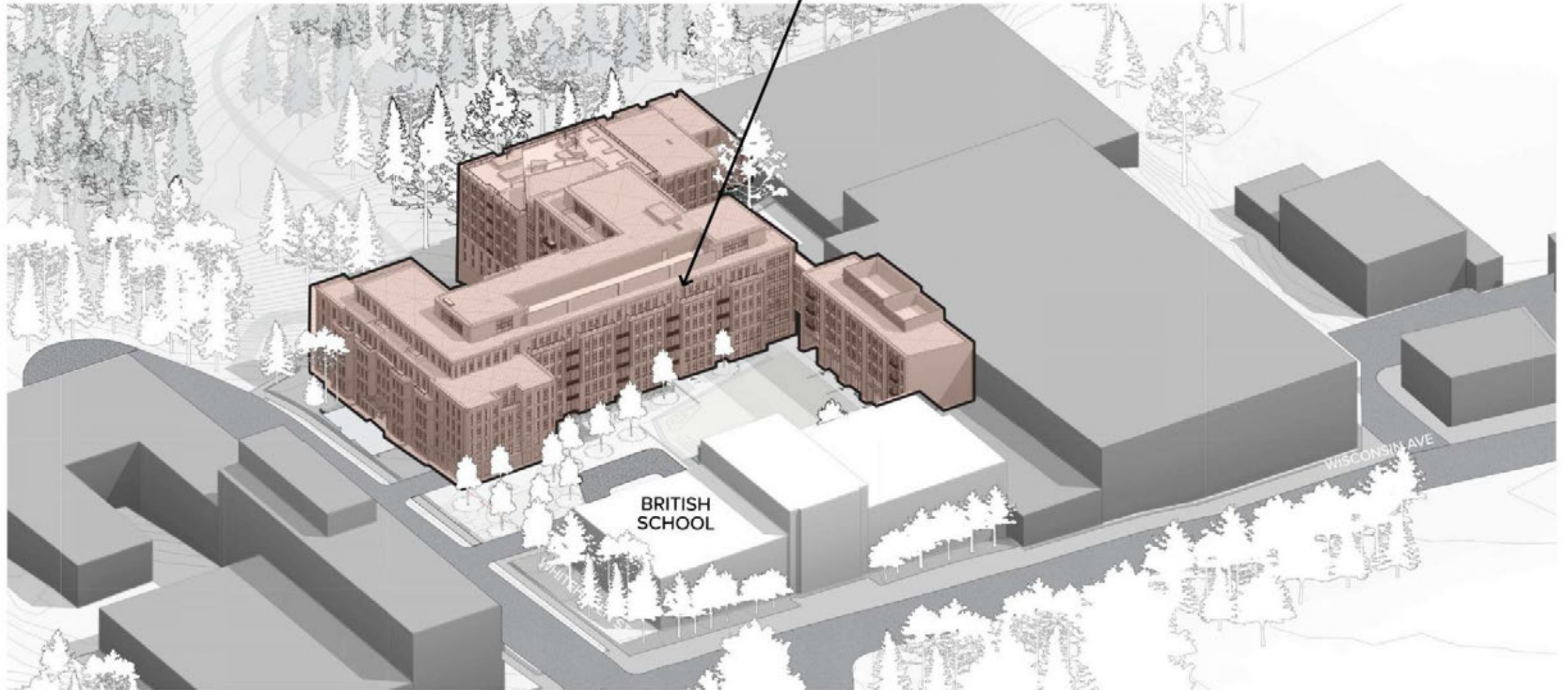
EXISTING BUILDING



PROPOSED MASSING

West Axon View

PROPOSED BUILDING



PROPOSED BUILDING

Project Themes

- Office-to-Residential conversion
- Mass timber development & sustainability
- Interaction with Dumbarton Oaks Park and extended greening
- Georgetown historic context and compatibility
- Infill development and affordable housing
- Supplemental space for British School programming

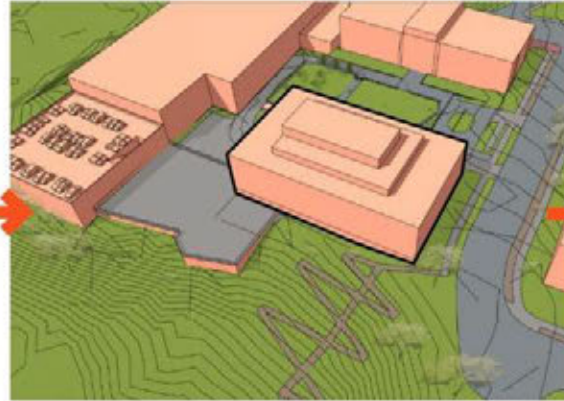


PROPOSED BUILDING

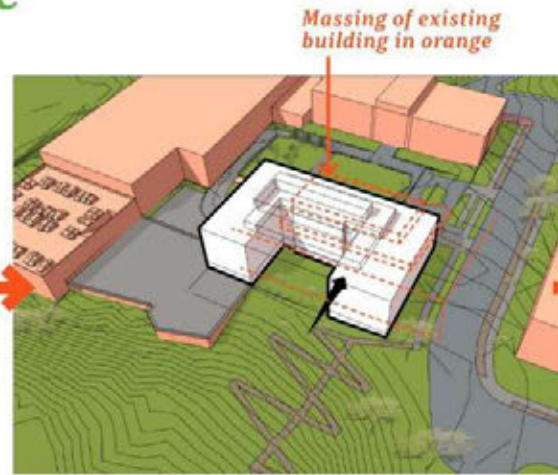
Massing Diagrams - A Contextual Response



Existing



Existing Massing



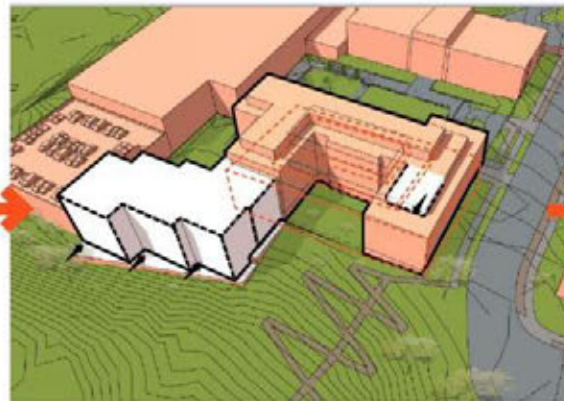
Carve out for residential floorplate and improved to connection to park.



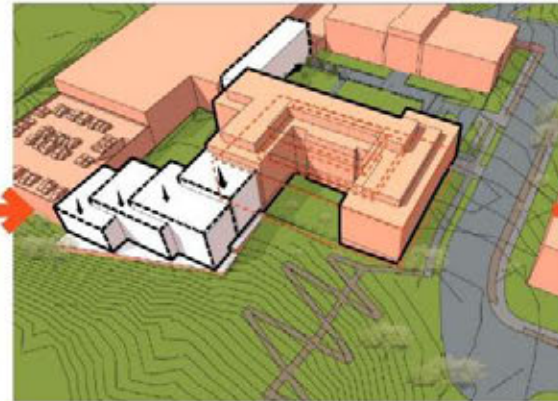
Extend east-west



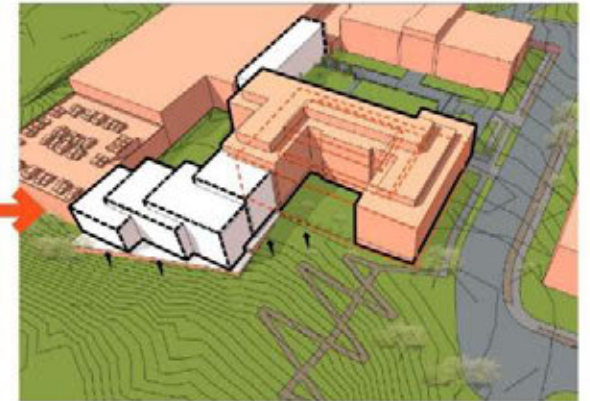
Extend footprint north-south



Modulate massing at park



Step massing down towards park and envelop far end of new Academic Quad



Raise base

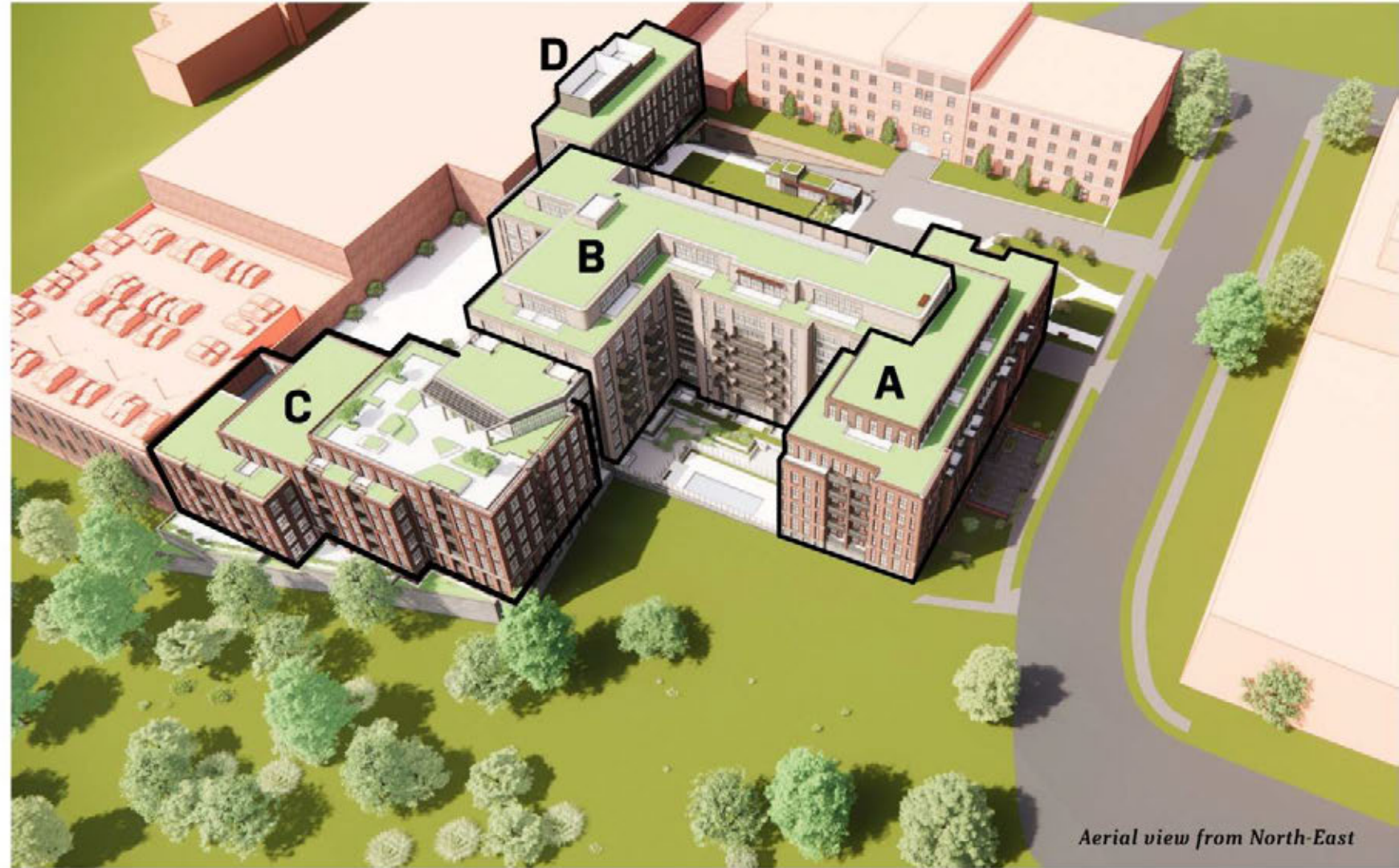
PROPOSED BUILDING

Articulation of Massing

4 distinct building volumes, each with their own articulation, unique interpretation of details, and material palette provide a more contextually scaled composition of buildings which appear to have developed organically, over time.



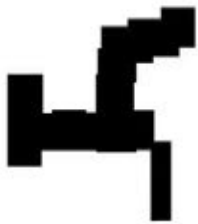
Key Plan



Aerial view from North-East

PROPOSED BUILDING DESIGN

Whitehaven Building



Key Plan

PROPOSED BUILDING DESIGN

Whitehaven Building



Key Plan



Mass A

PROPOSED BUILDING DESIGN

Plaza Building



Key Plan



PROPOSED BUILDING DESIGN

At Dumbarton Oaks Park

Mass C



Key Plan

PROPOSED BUILDING DESIGN

Pavilion Building



Key Plan

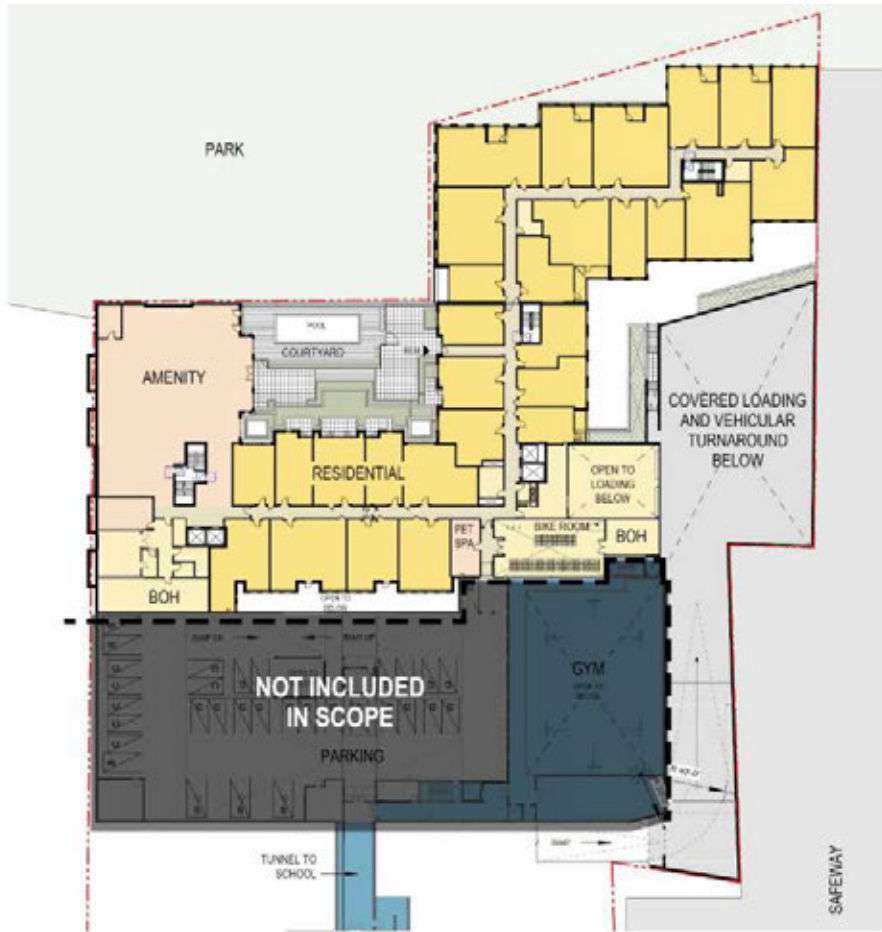


PROPOSED PLANS

B1 & Ground Levels

LEGEND

- | | | | |
|---|---|--|--|
| Residential Units | Residential BOH | Parking | School |
| Residential Amenity | Residential Corridor | Loading | Green Area |



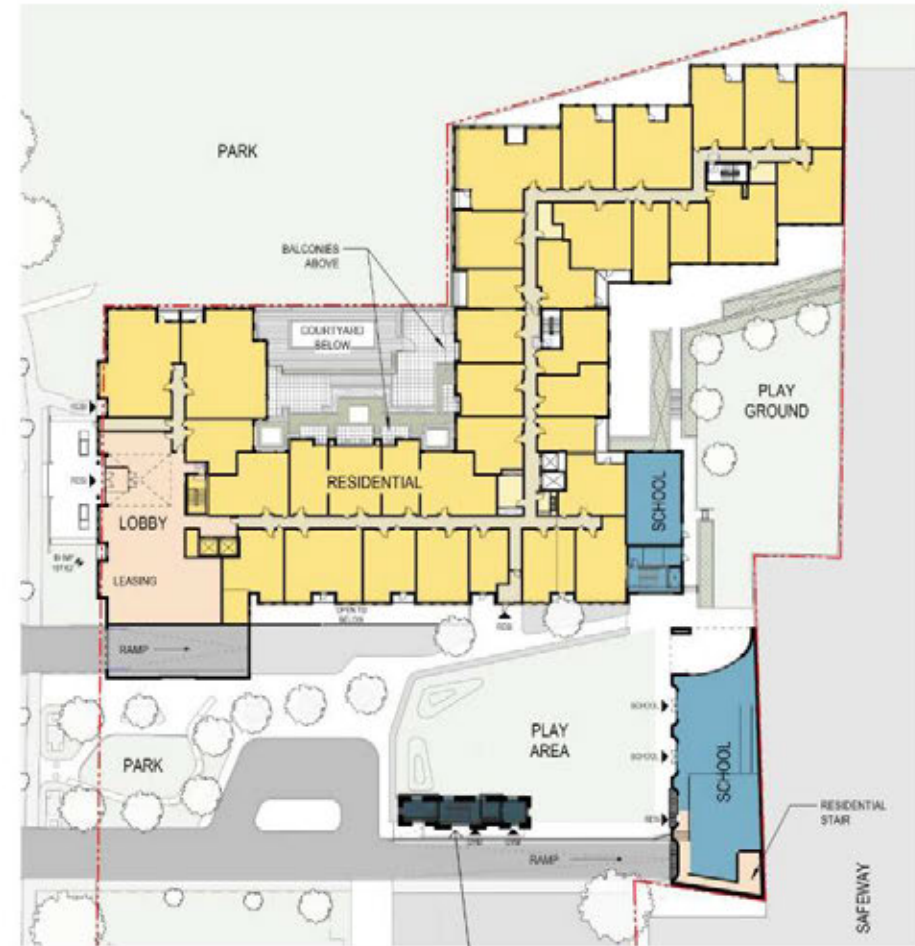
LEVEL B1

SCALE: 1"=60'-0"

PARKING: 43 SPACES

Flexibility is requested to vary the space number of parking spaces by +10% from the number depicted on the Final Plans and to modify the garage layout to increase efficiency.

BIKE PARKING: 89 LONG TERM



GROUND LEVEL

SCALE: 1"=60'-0"

ELEVATOR/STAIR POP-UP
APPROVED UNDER ZC 86-04A
NOT INCLUDED IN SCOPE



2

**MASS TIMBER
DEVELOPMENT BENEFITS**

SUSTAINABILITY

Mass Timber Benefits - Developer Perspective



- Achieves ESG goals—reduction in embodied carbon
- Credits toward LEED
- Zoning benefits or relief from entitlement requirements
- Reduction in the amount of column and footings requiring strengthening due to lighter overbuild structure. Reduces construction cost.
- Unique construction type identifies the development as a luxury property. Property stands out in a crowd of housing options.
- Stickier renters
- Schedule - Speed of Mass Timber Installation; Smaller crew
- Construction Site Noise Reduction

SUSTAINABILITY

LEED Scorecard



LEED for Homes v4: Multifamily Midrise
3300 Whitehaven
January 21, 2025



2 0 0 Integrative Process Possible Points: 2

Y	P	N
2		

Credit Integrative Process

15.0 0 0 Location and Transportation Possible Points: 15

Y	P	N			
Y			Preq	Floodplain Avoidance	Required
8			Credit	Site Selection	8
3			Credit	Compact Development	3
2			Credit	Community Resources	2
2			Credit	Access to Transit	2

4 0.5 2.5 Sustainable Sites Possible Points: 7

Y	P	N			
Y			Preq	Construction Activity Pollution Prevention	Required
Y			Preq	No Invasive Plants	Required
		2	Credit	Heat Island Reduction	2
3			Credit	Rainwater Management	3
1	0.5	0.5	Credit	Non-Toxic Pest Control	2

7 1 4 Water Efficiency Possible Points: 12

Y	P	N			
Y			Preq	Water Metering	Required
7	1	4	Credit	Total Water Use	12

19 4 14 Energy and Atmosphere Possible Points: 37

Y	P	N			
Y			Preq	Minimum Energy Performance	Required
Y			Preq	Energy Metering	Required
Y			Preq	Education of the Homeowner, Tenant or Building Manager	Required
18	3	9	Credit	Annual Energy Use	30
		5	Credit	Efficient Hot Water Distribution	5
1	1		Credit	Advanced Utility Tracking	2

3.5 1 4.5 Materials and Resources Possible Points: 9

Y	P	N			
Y			Preq	Certified Tropical Wood	Required
Y			Preq	Durability Management	Required
1			Credit	Durability Management Verification	1
0.5	1	3.5	Credit	Environmentally Preferable Products	5
2		1	Credit	Construction Waste Management	3

7 1 10 Indoor Environmental Quality Possible Points: 18

Y	P	N			
Y			Preq	Ventilation	Required
Y			Preq	Combustion Venting	Required
Y			Preq	Garage Pollutant Protection	Required
Y			Preq	Radon Resistant Construction	Required
Y			Preq	Air Filtering	Required
Y			Preq	Environmental Tobacco Smoke	Required
Y			Preq	Compartmentalization	Required
1		2	Credit	Enhanced Ventilation	3
		2	Credit	Contaminant Control	2
1		2	Credit	Balancing of Heating and Cooling Distribution Systems	3
		3	Credit	Enhanced Compartmentalization	3
2			Credit	Enhanced Combustion Venting	2
1			Credit	Enhanced Garage Pollutant Protection	1
1	1	1	Credit	Low Emitting Products	3
1			Credit	No Environmental Tobacco Smoke	1

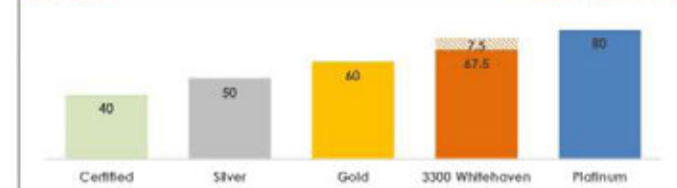
4 0 0 Innovation Possible Points: 6

Y	P	N			
5			Credit	Innovation	5
1			Credit	LEED AP Homes	1

4 0 0 Regional Priority Credits Possible Points: 4

Y	P	N			
1			Credit	Site Selection (8 pts)	1
1			Credit	Community Resources (2 pts)	1
1			Credit	Access to Transit (2 pts)	1
1			Credit	Rainwater Management (3 pts)	1

47.5 7.5 35 Possible Points: 110

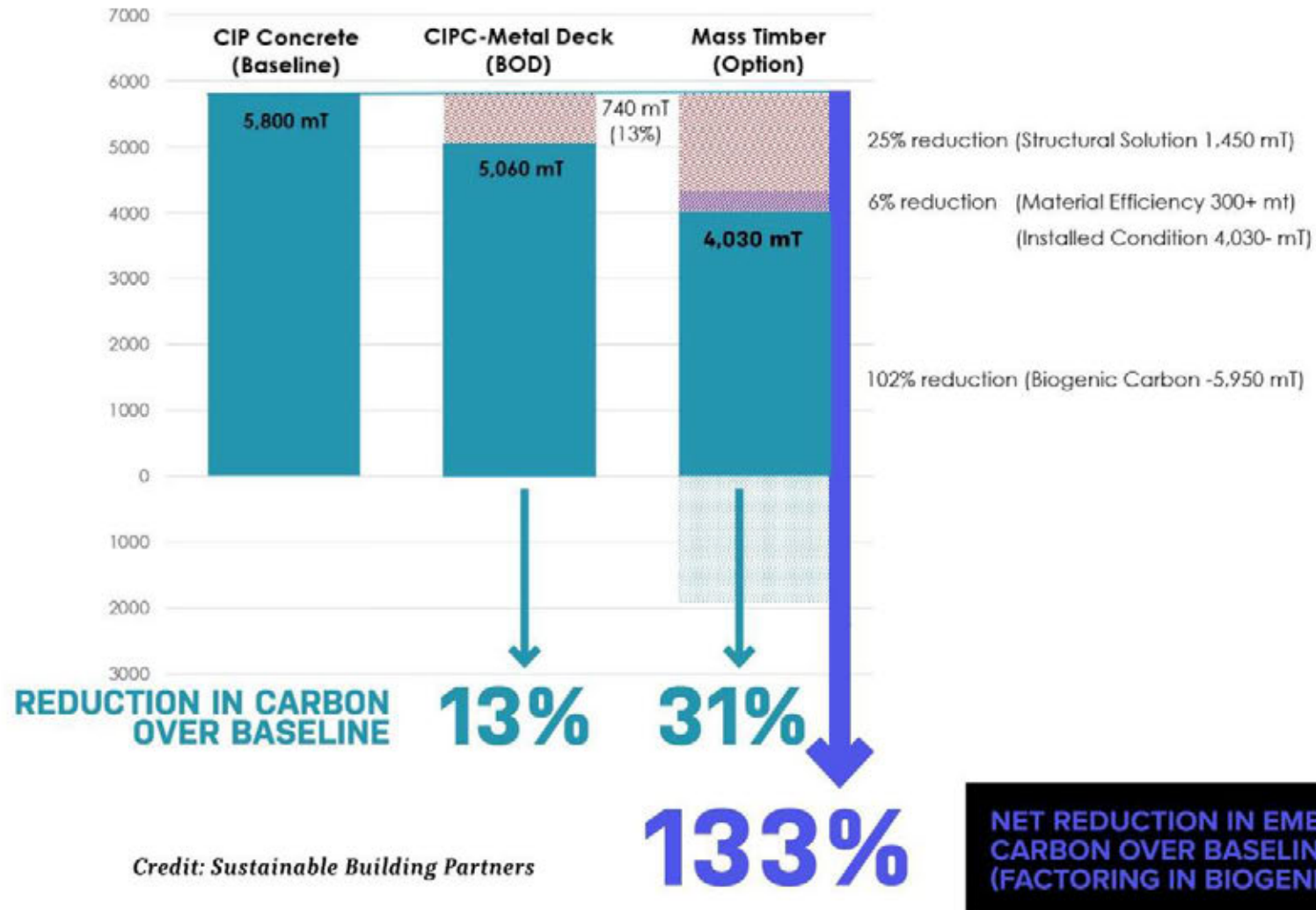


Note:
--min 8 points total in LT and EA required
--min 3 points in WE required
--min 3 points in EQ required

Credit: Sustainable Building Partners

SUSTAINABILITY

Embodied Carbon Reduction & Alternative Construction Approaches



3

**DESIGN
CONSIDERATIONS**

FEASIBILITY

Design Considerations

TYPE IV-C - GLULAM POSTS AND BEAMS W/ CLT SLABS

**TYPE III-A - HYBRID CLT SLABS WITH LOAD BEARING
UNIT DEMISING WALLS**

CONSIDERATIONS

- Height and area limitations
- Floor to floor heights
- Cost
- Retrofitting into a pre-entitled massing and exterior articulation
- Impact on fire ratings
- Code pathway



80 M Street SW, Hickok Cole

FEASIBILITY

Area Limitations

OPTION 06a

Type IIIA (Split Bldg)

Separated Mixed-Use

Type 1A (Split Bldg)

AREA TAKEOFFS:

[illegible]

OPTION 2b1		Option 2b1 (continued)	
Description		Quantity	Unit Price
1	1000000	1	1000000
2	1000000	1	1000000
3	1000000	1	1000000
4	1000000	1	1000000
5	1000000	1	1000000
6	1000000	1	1000000
7	1000000	1	1000000
8	1000000	1	1000000
9	1000000	1	1000000
10	1000000	1	1000000
11	1000000	1	1000000
12	1000000	1	1000000
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14	1000000	1	1000000
15	1000000	1	1000000
16	1000000	1	1000000
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77	1000000	1	1000000
78	1000000	1	1000000
79	1000000	1	1000000
80	1000000	1	1000000
81	1000000	1	1000000
82	1000000	1	1000000
83	1000000	1	1000000
84	1000000	1	100

[illegible]

LEVEL 06 DIAGRAM



LEVEL 03 DIAGRAM



LEVEL B1 DIAGRAM



LEVEL 05 DIAGRAM



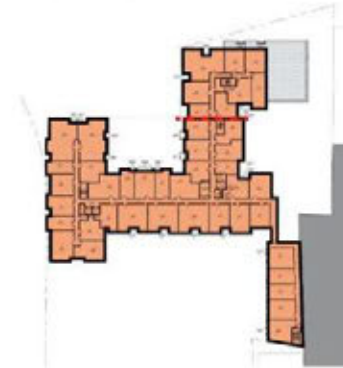
LEVEL 02 DIAGRAM



LEVEL B2 DIAGRAM



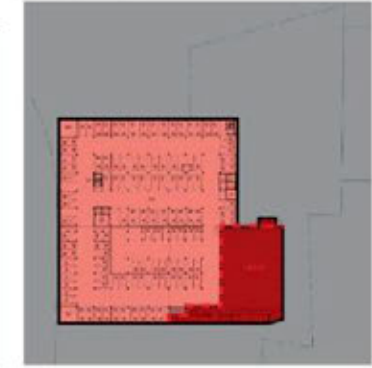
LEVEL PH DIAGRAM



LEVEL 04 DIAGRAM



LEVEL 01 DIAGRAM



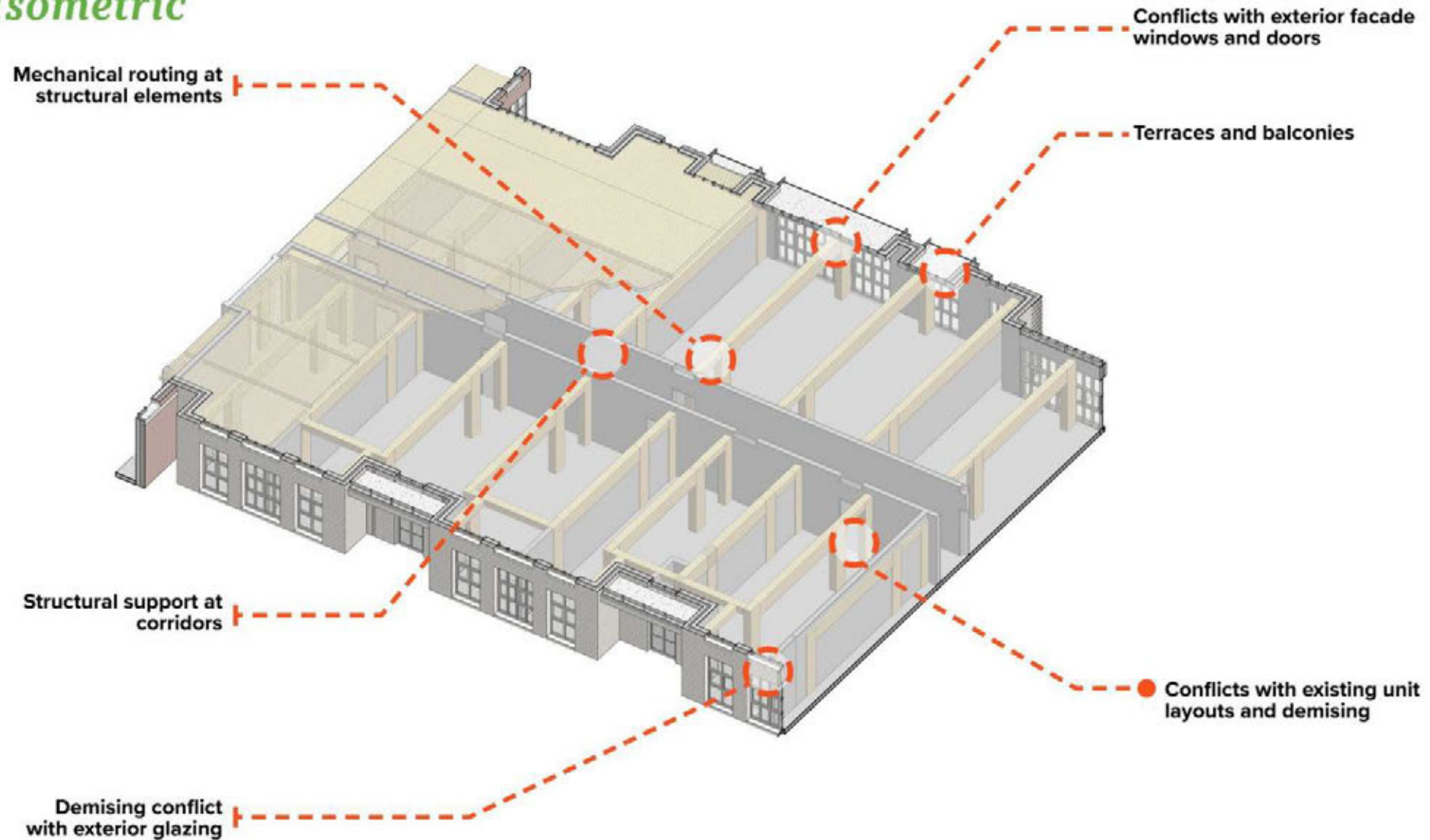
LEVEL B3 DIAGRAM

LEGEND (CONSTRUCTION TYPE)

-  TYPE IA
 TYPE IB
 TYPE IIIC
 3-HR Fire Separation
 2-HR Fire Separation
 1-HR Fire Separation

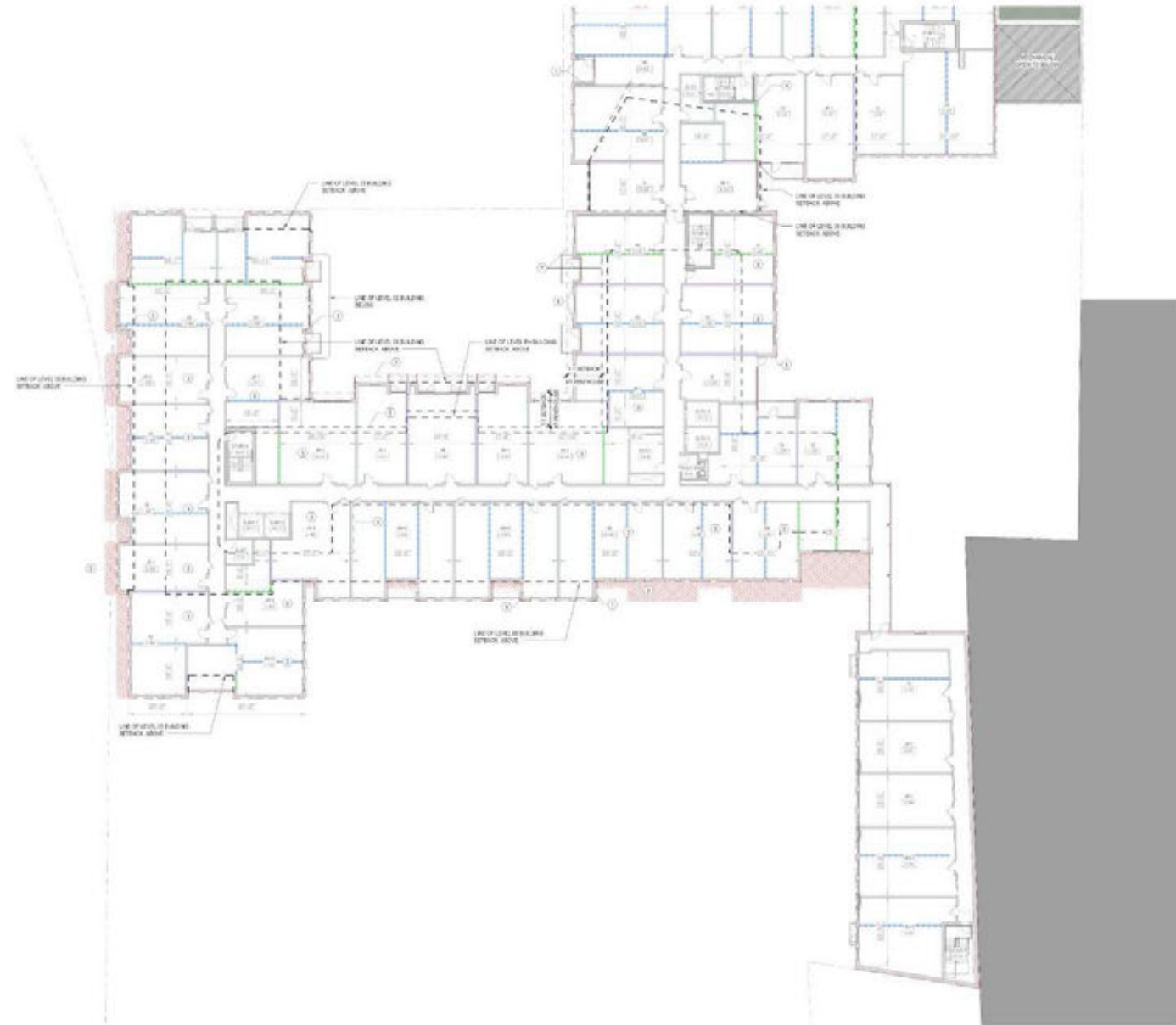
FEASIBILITY

Building Isometric



FEASIBILITY

Multi-Family Hybrid Load Bearing Wall CLT Study



FEASIBILITY

Vertical Limitations

OPTION 06a

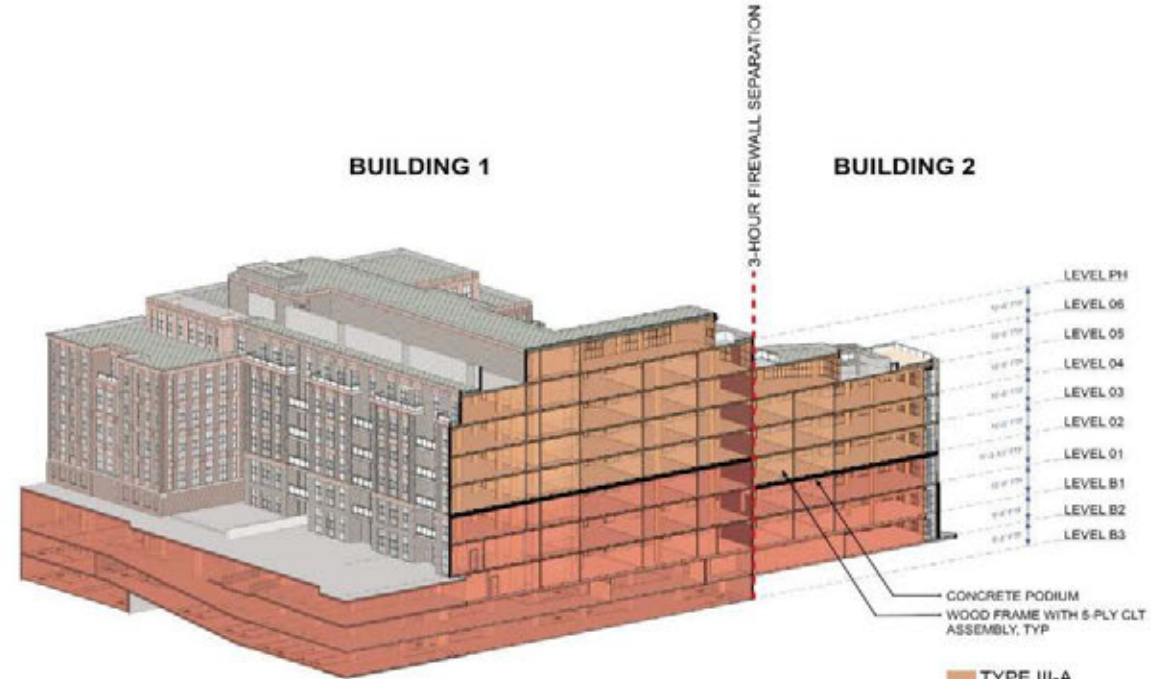
Type IIIA (Split Bldg)

Separated Mixed Use

Type IA (Split Bldg)

BUILDING 1

BUILDING 2

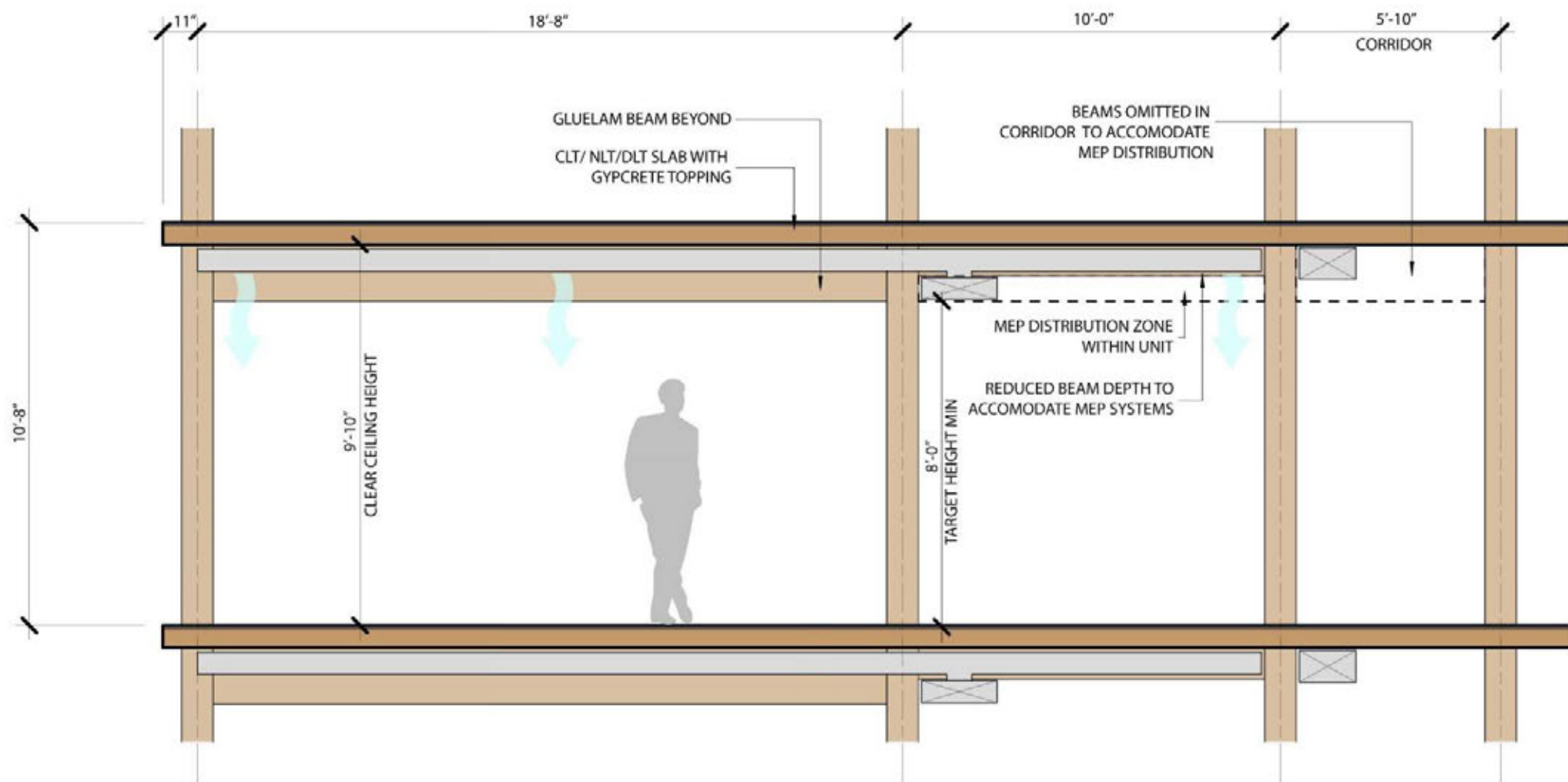


TYPE III-A
TYPE IA
TYPE IB



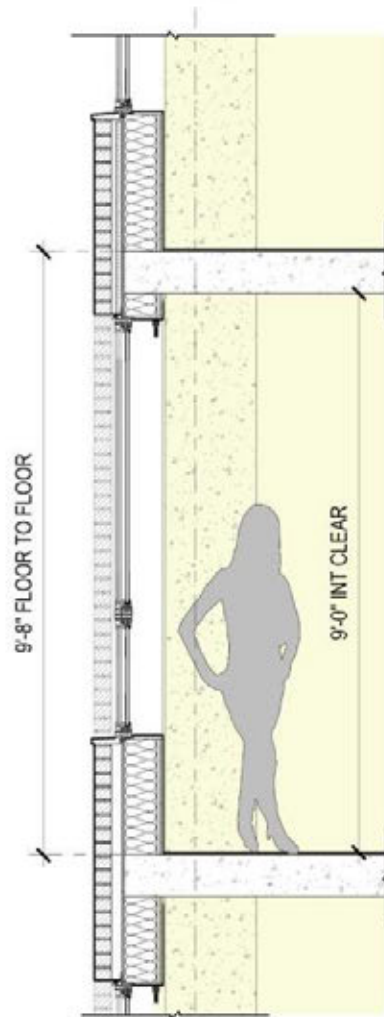
FEASIBILITY

Typical Section (10-8)

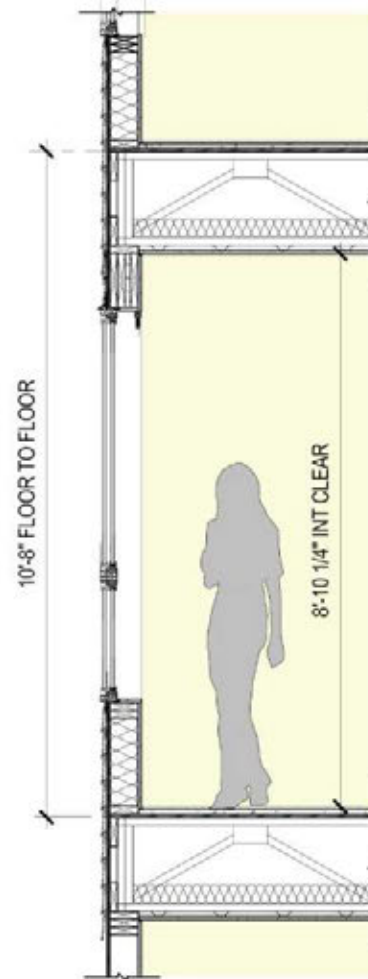


FEASIBILITY

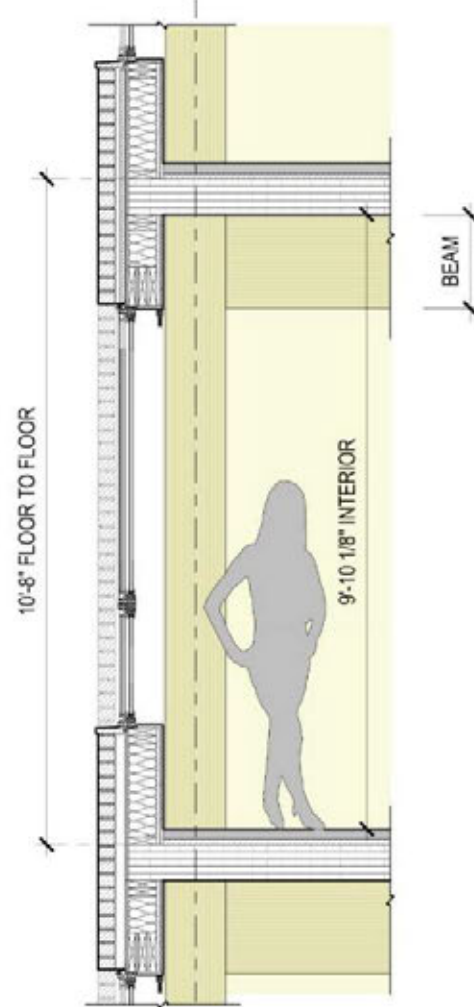
Multi-Family Construction Types



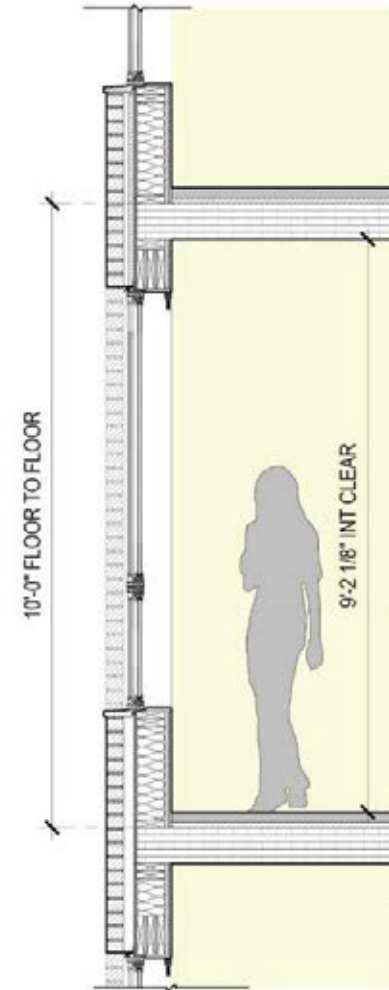
CIP Concrete



Wood frame



**Mass Timber: Glulam Post +
Beam w/ CLT Slabs**



**Hybrid Mass Timber: CLT Slabs w/
Wood Stud Load Bearing Walls**

4

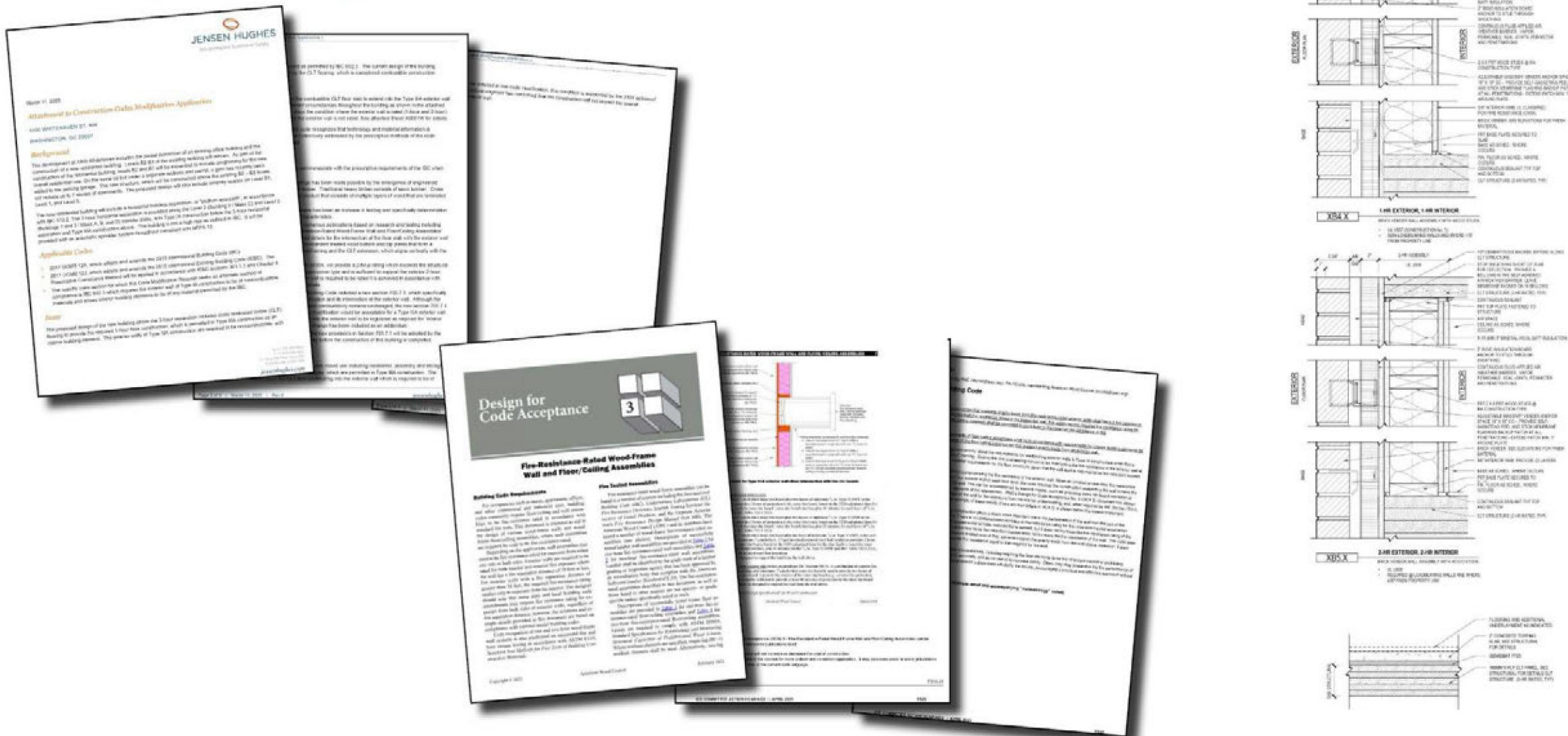
**CONSTRUCTION
CODE PATHWAYS**

CONSTRUCTION TYPE DIFFERENCES

Fire Resistance Ratings and Height

CODE DIFFERENCES		
	TYPE IIIA	TYPE IV-C
<i>FSD ≥ 30FT</i>		
EXTERIOR WALL RATING (BEARING)	2 HOURS	2 HOURS
EXTERIOR WALL RATING (NON-BEARING)	0 HOUR	0 HOUR
<i>10FT < FSD < 30FT</i>		
EXTERIOR WALL RATING (BEARING)	2 HOURS	2 HOURS
EXTERIOR WALL RATING (NON-BEARING)	1 HOUR	1 HOUR
<i>FSD ≤ 10FT</i>		
EXTERIOR WALL RATING (BEARING)	2 HOURS	2 HOURS
EXTERIOR WALL RATING (NON-BEARING)	1 HOUR	1 HOUR
MAX HEIGHT	MAX 5 FLOORS OF R-2	MAX 8 FLOORS FOR R-2

Pathway to III-A Hybrid Mass Timber Construction



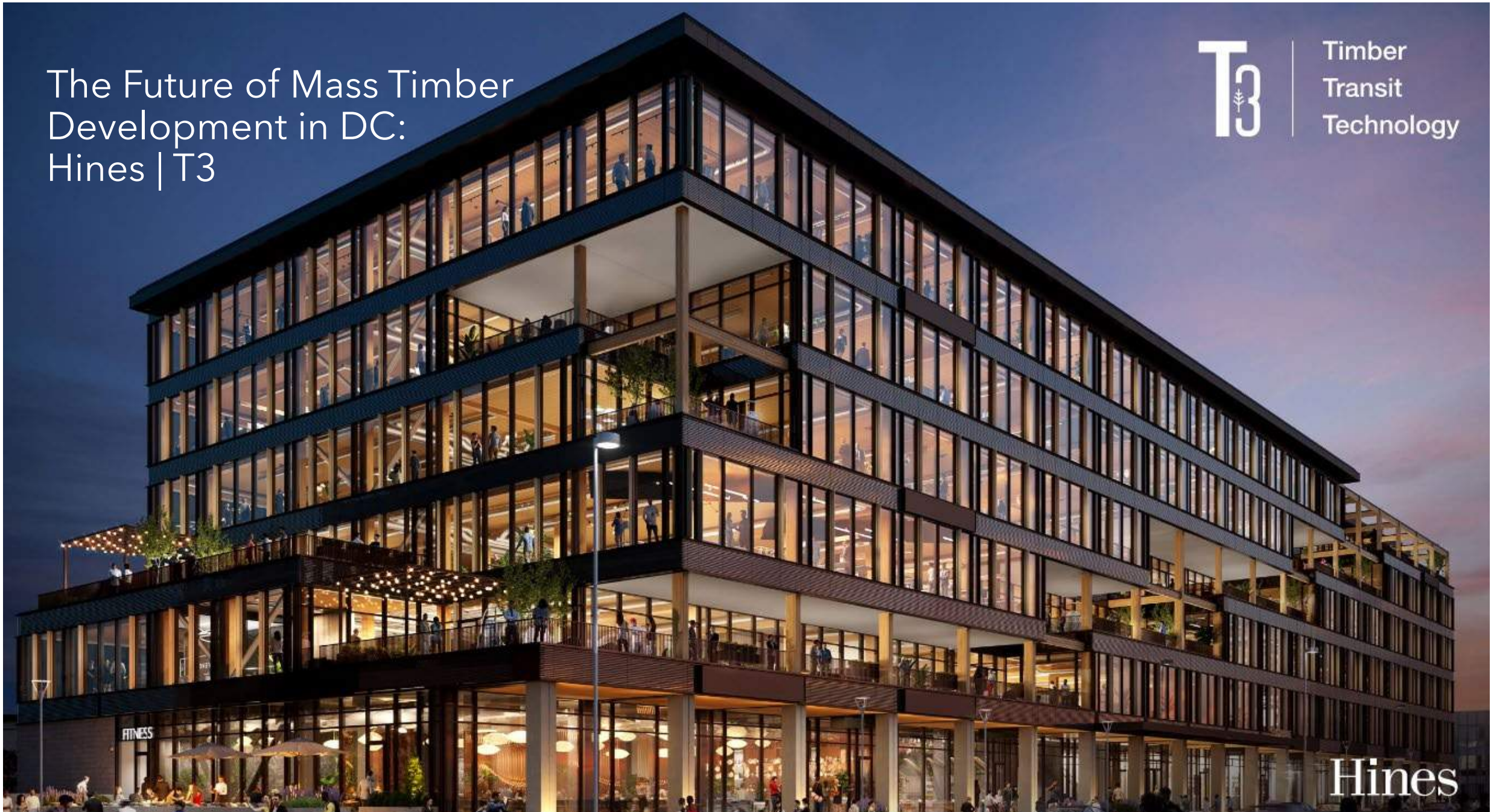
CONNECT WITH US



TODD MARTIN, AIA
Senior Associate
Hickok Cole
tmartin@hickokcole.com



The Future of Mass Timber Development in DC: Hines | T3



Hines

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Hines Overview



LEVITT GREEN
Houston

OUR FOUNDER'S STORY

Gerald D. Hines | 1925-2020

Grew one-man, namesake firm into a distinguished global brand

Among the first to marry great architecture with multi-tenant office building world

Established footprints in major hubs across the globe, including platforms in Western and Eastern Europe that are still growing today; brought new standards of excellence to real estate in emerging markets such as China

Pioneered approaches and technologies that are the foundation for sustainable practices that elevate the efficiency and value of investments

Created and permanently endowed the Urban Land Institute's Gerald D. Hines Student Urban Design Competition

Championed real estate, architecture and urban planning programs at Harvard, Purdue, Rice and Yale universities, The Wharton School of the University of Pennsylvania, and many others

Developed more than 885 projects across the world including 100+ buildings over 25 stories, and the tallest office towers in Texas, San Francisco and Italy, among others

Believed his greatest achievement was the team of dedicated professionals who have, and will continue to, carry on his legacy of peerless quality, integrity and innovation in the built environment

The firm's philosophy of quality, architectural excellence and fair dealing, instilled by its founder, is perpetuated by Jeff Hines, Laura Hines-Pierce and our employees around the globe.



Hines by the Numbers

PORTFOLIO

\$90.1 billion
ASSETS UNDER MANAGEMENT¹

9
DIVERSIFIED INSTITUTIONAL FUNDS

1,968
PROJECTS COMPLETED OR UNDERWAY
AND ACQUIRED TOTALING **700 MILLION+ SF**

108 million+ SF
PORTFOLIO OF THIRD-PARTY PROPERTY-LEVEL SERVICES²

850 properties
MANAGED TOTALING **290 MILLION+ SF**

PEOPLE

4,954
EMPLOYEES

68 Years
OF EXPERIENCE

14
EXECUTIVE COMMITTEE MEMBERS
WITH AN **AVERAGE TENURE OF 16 YEARS³**

11
INVESTMENT COMMITTEE MEMBERS
WITH AN **AVERAGE TENURE OF 20 YEARS³**

PRESENCE

30
COUNTRIES

415
CITIES

5
CONTINENTS

Data as of December 31, 2024.
¹Includes both the global Hines organization and RIA AUM as of December 31, 2024.
²Includes 428 properties as of December 31, 2024.
³As of December 31, 2024.

HINES GLOBAL PRESENCE

Locations and Workforce



As of December 31, 2024

ENVIRONMENTAL STEWARDSHIP

Sustainable Value Creation in Practice: Commitment to a net zero carbon target by 2040 without buying carbon offsets.

NEARLY ZERO OPERATIONAL CARBON DESIGN



555 GREENWICH STREET & 345 HUDSON STREET
New York, NY



AER
Munich, Germany



DIAGONAL VERTICAL
Barcelona, Spain

There is no guarantee that the same results will be achieved for other projects.

Driving Efficiency in Our Portfolio to Create Long-Term Value

Optimizing building performance lowers operating costs and future-proofs properties. This is central to Hines’ business strategy of **driving alpha at the property and portfolio level.**

We evaluate sustainability measures at **every stage of the property life cycle.**

				
Energy Efficiency	Electrification	Circular-Systems Approach	Sustainable Power	Embodied Carbon
Typical Hines operational efficiency	Remove fossil fuels from our buildings	Utilizing circular economy principles for maximum energy efficiency	On-Site Renewables + sustainable energy platform	Life-cycle analysis of product manufacturing, transportation and waste
Efficiency Experience	Fossil Fuel Elimination	2x - 3x Efficiency	100% Green Energy	Low Carbon Materials (reliant on supply chain)

Broad Sector Diversification: Exploring opportunities for mass timber.



¹AUM as of December 31, 2024

RETHINKING THE BOUNDARIES OF REAL ESTATE

The Hines Approach to Navigating Industry & Environmental Disruptions

Investing in innovation and sustainability are part of the foundation of Hines. We are committed to expanding our capabilities, exploring untapped possibilities, and driving exponential outcomes designed to help transform our industry into a sustainable world.

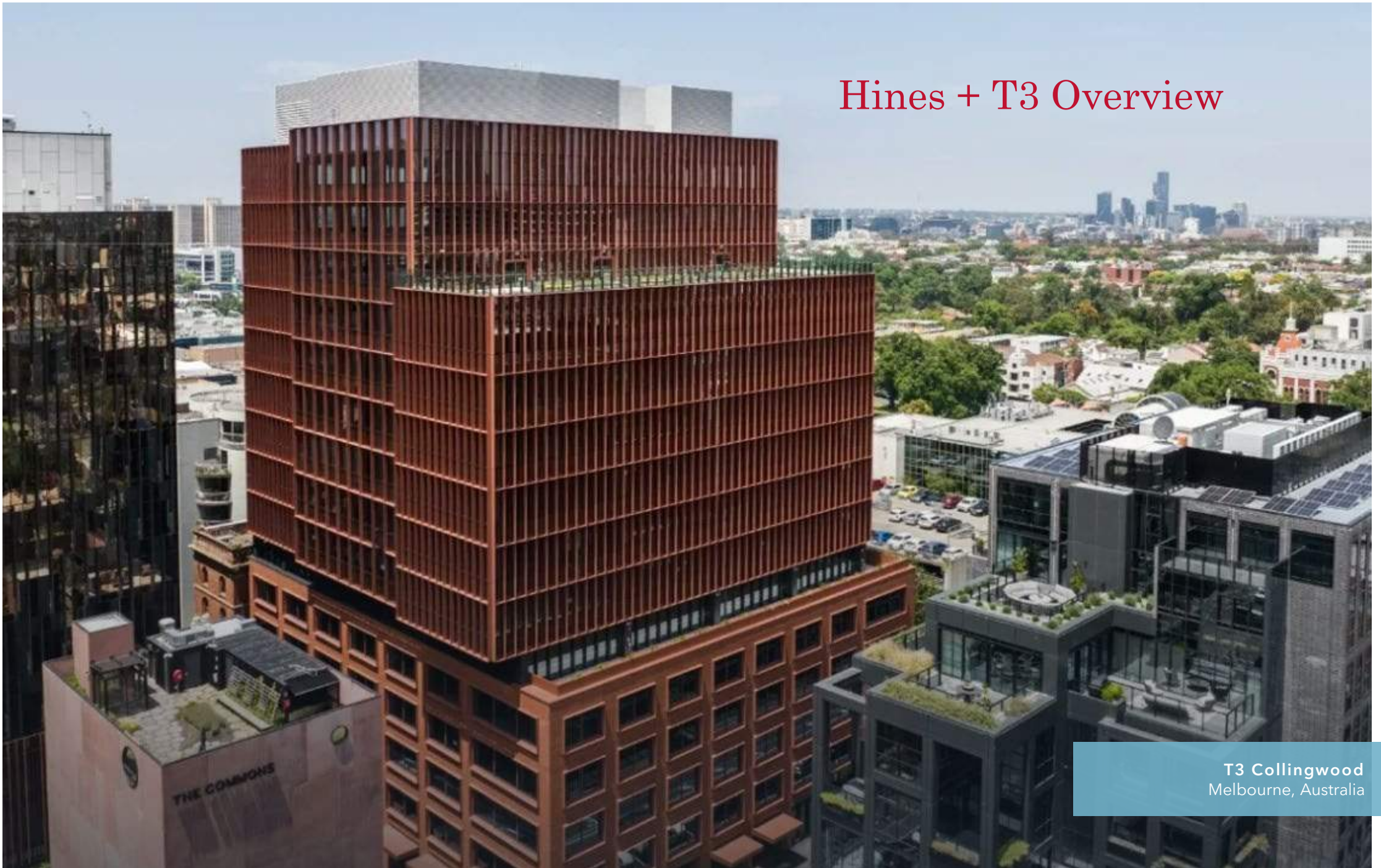
We capture the most innovative ideas that combine client service, culture, and environmental stewardship to create more inclusive, accessible communities that connect the built environment to a higher purpose. It's a vision of the future that's far bigger than buildings.

Our Organization Delivers

Our investment and strategy initiatives are formulated to discover, design and deliver innovative ventures, partnerships, and human-centric solutions.



Hines + T3 Overview



T3 Collingwood
Melbourne, Australia

T3 BUILDINGS

How it started: 250 N 3rd Ave, Minneapolis (built in 1886)



An acquisition. Tenants loved this building, and the rents + renewals + tenant testimonials inspired the Hines T3 platform.

Adjacent to North Loop Green
Minneapolis, MN

T3 BUILDINGS

Timber Buildings with a Conscience

Our innovative approach to mass-timber construction, T3 brings environmental and social sustainability to the built environment in a sophisticated, elegant way. Made with rapidly renewable, sustainably sourced timber, T3 buildings are clean and quick to construct and poised to meet global climate goals. Cutting-edge connectivity supports collaboration, while energy-efficient systems address many Sustainable Value Creation goals and meet bold carbon commitments. T3's exceptional amenities prioritize health and well-being, and the natural wood interior and bright, inspiring spaces help people feel - and do - their best.



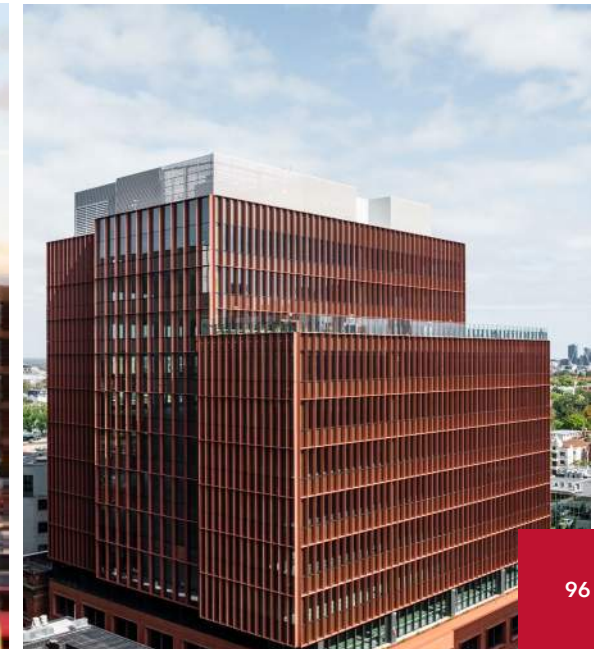
T3 MINNEAPOLIS
Minneapolis



T3 RINO
Denver



T3 ATC
Durham, NC



T3 COLLINGWOOD
Melbourne, Australia

PROJECT HIGHLIGHT

T3 Minneapolis: The prototype

Located in Minneapolis’ vibrant, fast-growing North Loop neighborhood, T3 North Loop Green is our first T3 project and a true pioneer. Upon completion, it was the largest modern timber office building in the U.S. and the country’s first multi-story office building built of wood in the last 100 years.

Location	Minneapolis
Year built	2016
Area	221,552 SF
Attributes and amenities	Premier fitness center, bike repair and storage facility, rooftop terrace, high-efficiency mechanical systems

ESG Highlights

1,540

Tons of carbon emissions were eliminated during the building process due to timber construction

3,860+

Tons of carbon are stored in the structure of T3 North Loop Green



WiredScore
PLATINUM



Adjacent to North Loop Green
Minneapolis, MN

T3 Diagonal Mar: Europe's first T3

Sited in Barcelona's 22@ district, one of Europe's most important innovation hubs, T3 Diagonal Mar is an elevated office environment for businesses that prioritize creativity and inspiration. A bustling food and entertainment scene and excellent connectivity with the rest of the city make T3 Diagonal Mar an unparalleled destination for balancing work and life.

Location Barcelona

Year Opened 2022

Area 3,627 SQM

Attributes and amenities Indoor biophilic elements and outdoor green spaces, gracious social areas, panoramic views, and outstanding air quality

ESG Highlights

14%

Reduction in energy consumption
by utilizing PV panels*

47%

Less water by utilizing a high-
performance gray water system*

228

Parking spaces: 36 car, 4 EV,
86 scooter, 102 bicycle

Targeting



WiredScore
PLATINUM



*when compared to conventional office buildings



T3 Diagonal Mar
Barcelona, Spain

T3

Current Portfolio

11

INTERNATIONAL PROJECTS

13

U.S. PROJECTS

24

PROJECTS COMPLETED, IN DESIGN,
AND UNDER CONSTRUCTION

Data as of December 31, 2024

HINES | CONFIDENTIAL & PROPRIETARY



Sustainably sourced

Trees from managed forests

Rapidly renewable

Young tree, not old growth

Removes CO₂ from the atmosphere

Cleaner construction

T3

Current & Upcoming Locations

Americas Projects

- CALIFORNIA**

 - 1125 Arguello

COLORADO

 - T3 RiNo

FLORIDA

 - T3 FAT Village

GEORGIA

 - T3 West Midtown

ILLINOIS

 - T3 Oak Brook
 - T3 Goose Island

MINNESOTA

 - T3 Minneapolis
- NEBRASKA**

 - T3 Mercantile

NORTH CAROLINA

 - T3 American Tobacco Campus

TENNESSEE

 - T3 Wedgewood Houston

TEXAS

 - T3 ATX Eastside

WASHINGTON

 - T3 Main Place
 - Redmond Town Center
- TORONTO**

 - T3 Bayside
 - T3 Junction

VANCOUVER

 - T3 Mount Pleasant

International Projects

- PARIS**

 - Stream (Hybrid)

MUNICH

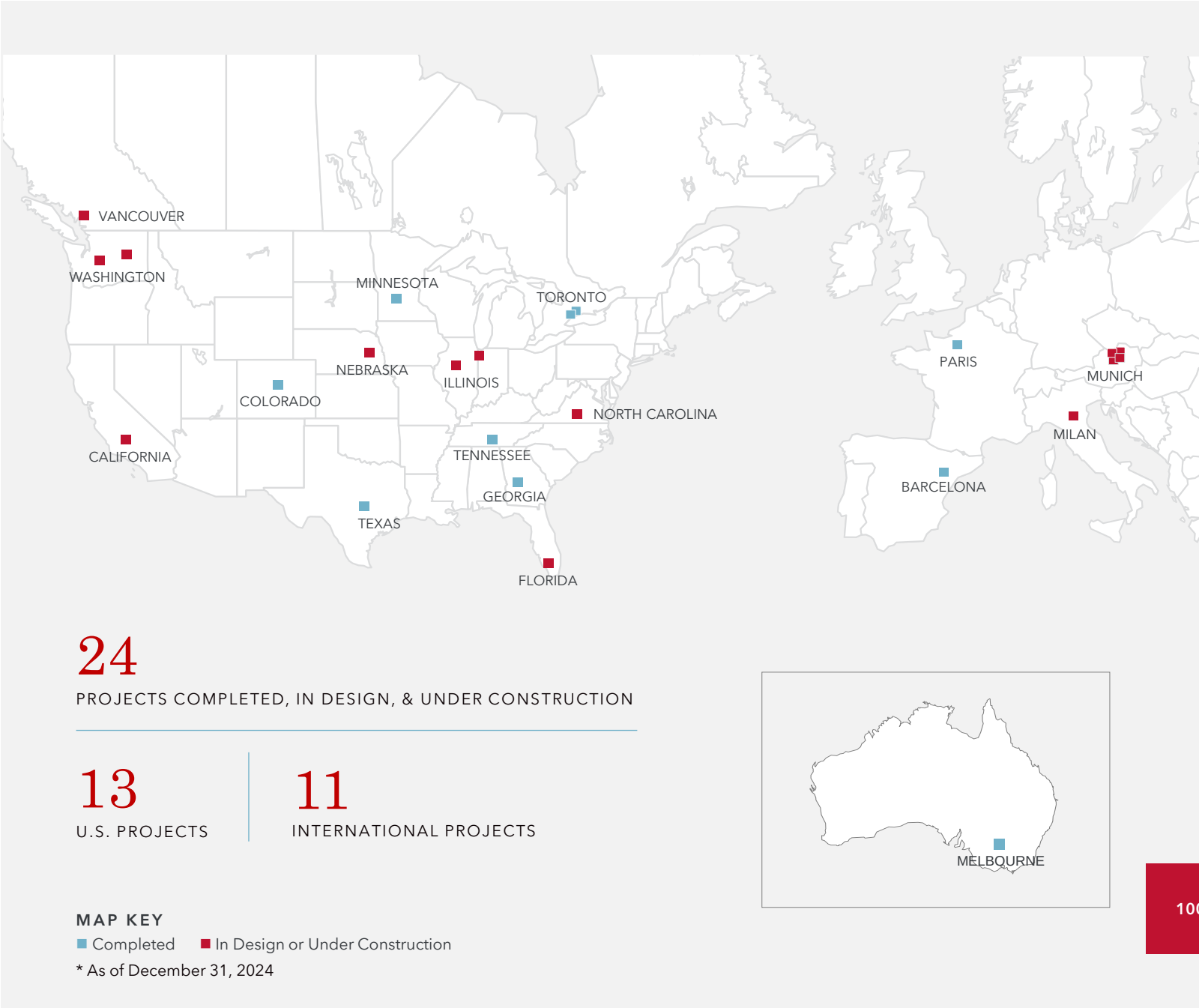
 - Aer (Redevelopment)
 - LOFT
 - LOFT - Phase II
 - Quartier FÜRstenried West (Redevelopment)
- BARCELONA**

 - T3 Diagonal Mar

MILAN

 - Bovisa
- MELBOURNE**

 - T3 Collingwood



Product Types – Beyond Office



AMERICAN TOBACCO
Durham, NC

Conclusion and the Road Ahead:

- The office market has seen historic constriction, including in DC, as result of COVID.
- Furthermore, tariffs are a looming concern now more than ever.
- Hines is committed is committed to a net zero carbon target by 2040 without buying offsets.
- The District of Columbia is particularly focused on Green initiatives, and therefore is a welcoming environment to Hines goals as a firm, coupled with the use of mass timber. The Sustainable DC and Clean Energy DC initiatives have established a comprehensive energy and climate strategy, aiming for a 56% reduction in emissions by 2032 and carbon neutrality by 2050.
- Hines has strong conviction in the T3 mass timber product, which was traditionally limited to office projects.
- **Therefore, all of these factors are driving Hines to expand our T3 / mass timber developments, to additional product-types and in the District of Columbia.**

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Thank you!

Brian Eklund

Managing Director - Construction

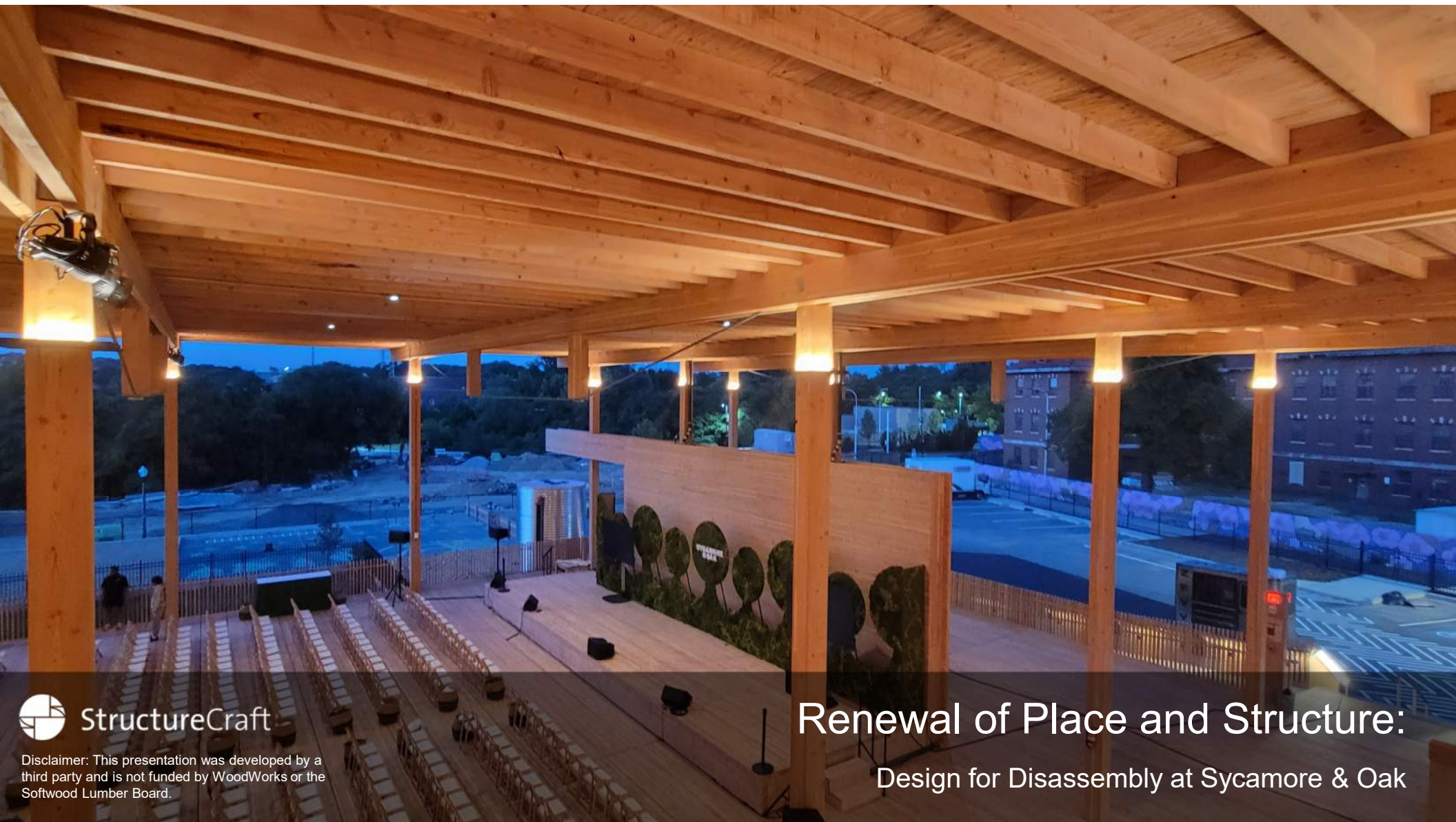
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555 13th Street NW, Suite 400 West, Washington, DC 20004

404-271-7769 cell





StructureCraft

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Renewal of Place and Structure: Design for Disassembly at Sycamore & Oak

StructureCraft

DC/Baltimore Projects

Arena Stage Theater

Washington, DC

Architect

Revery (Bing Thom)



DC Southwest Library

Washington, DC

Architect
Perkins&Will



**Johns Hopkins University
Student Center**
Baltimore, MD

Architect
**Bjarke Ingels Group
Shepley Bulfinch**



40TEN Canton Office
Baltimore, MD

Architect
Moseley Architects



Congress Heights Library

Washington, DC

Architect

Perkins&Will



Bridge District Parcel 5

Washington, DC

Architect

Hartshorne Plunkard Architecture

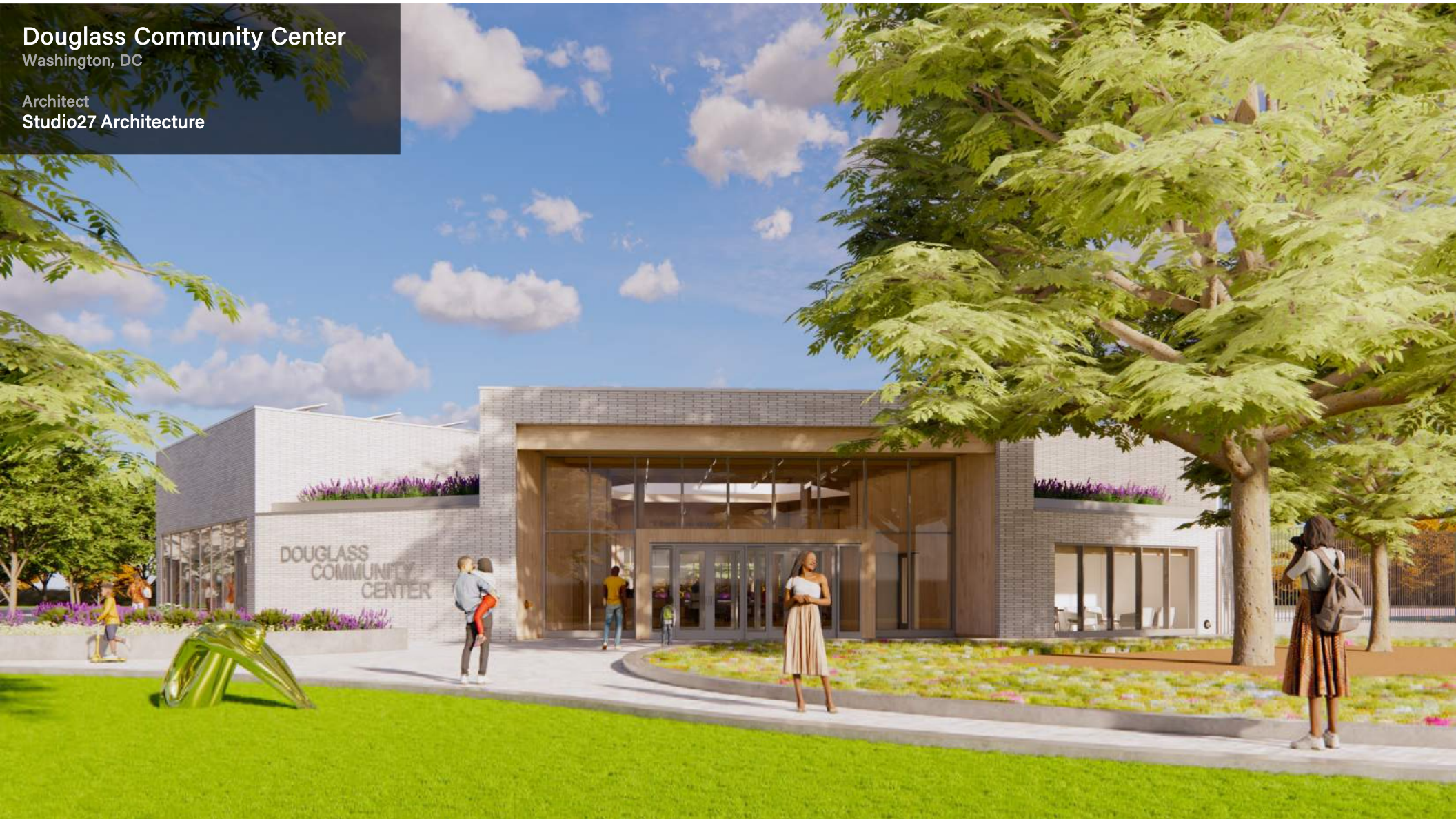


Douglass Community Center

Washington, DC

Architect

Studio27 Architecture



Sycamore & Oak

Washington, DC

Architect

Adjaye Associates

Winstanley Architects

You are here!



Sycamore & Oak Team and Sourcing

Redbrick / Emerson - Owner

Adjaye – Design Architect

Winstanley – Architect of Record

Banneker – General Contractor

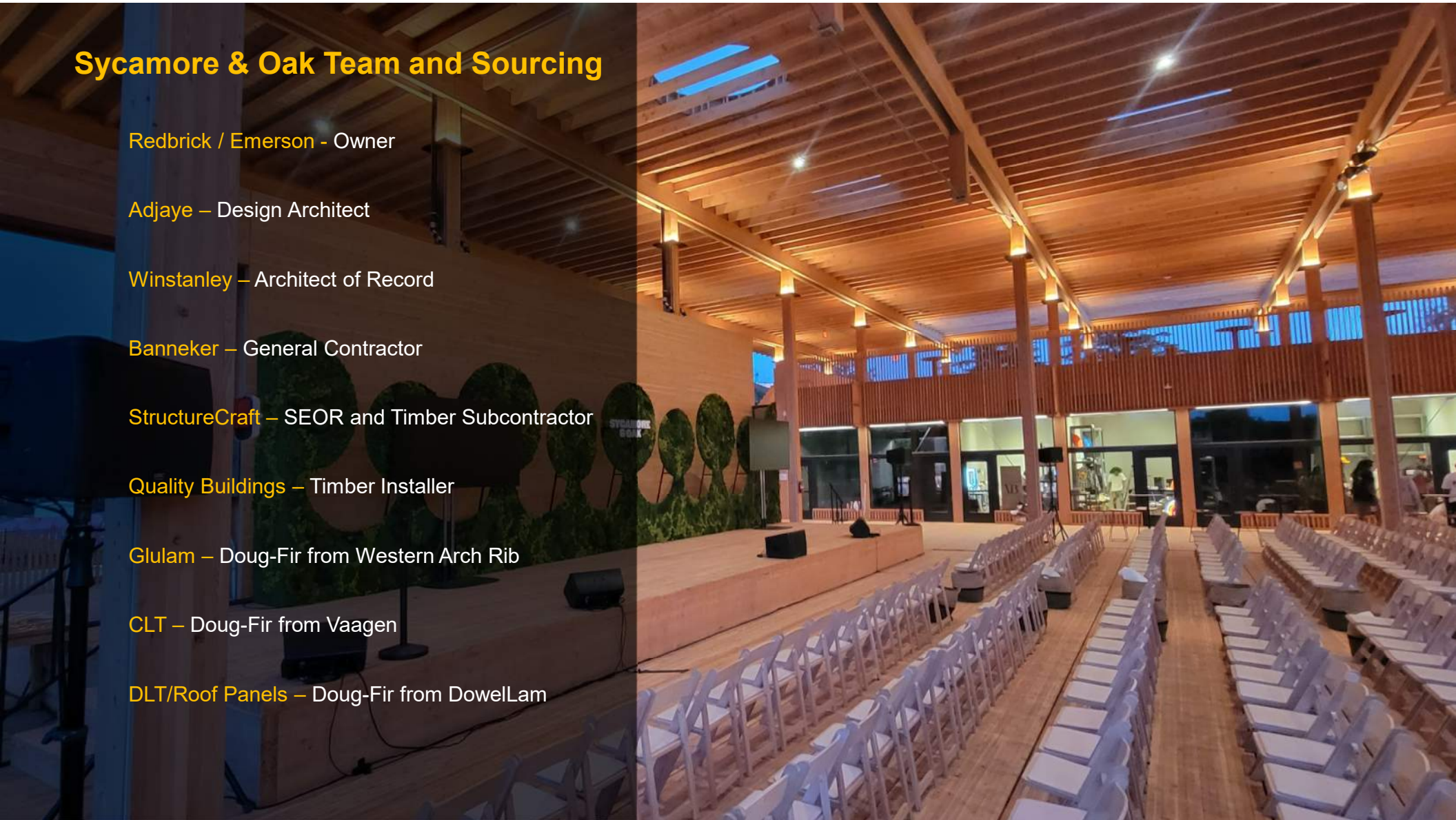
StructureCraft – SEOR and Timber Subcontractor

Quality Buildings – Timber Installer

Glulam – Doug-Fir from Western Arch Rib

CLT – Doug-Fir from Vaagen

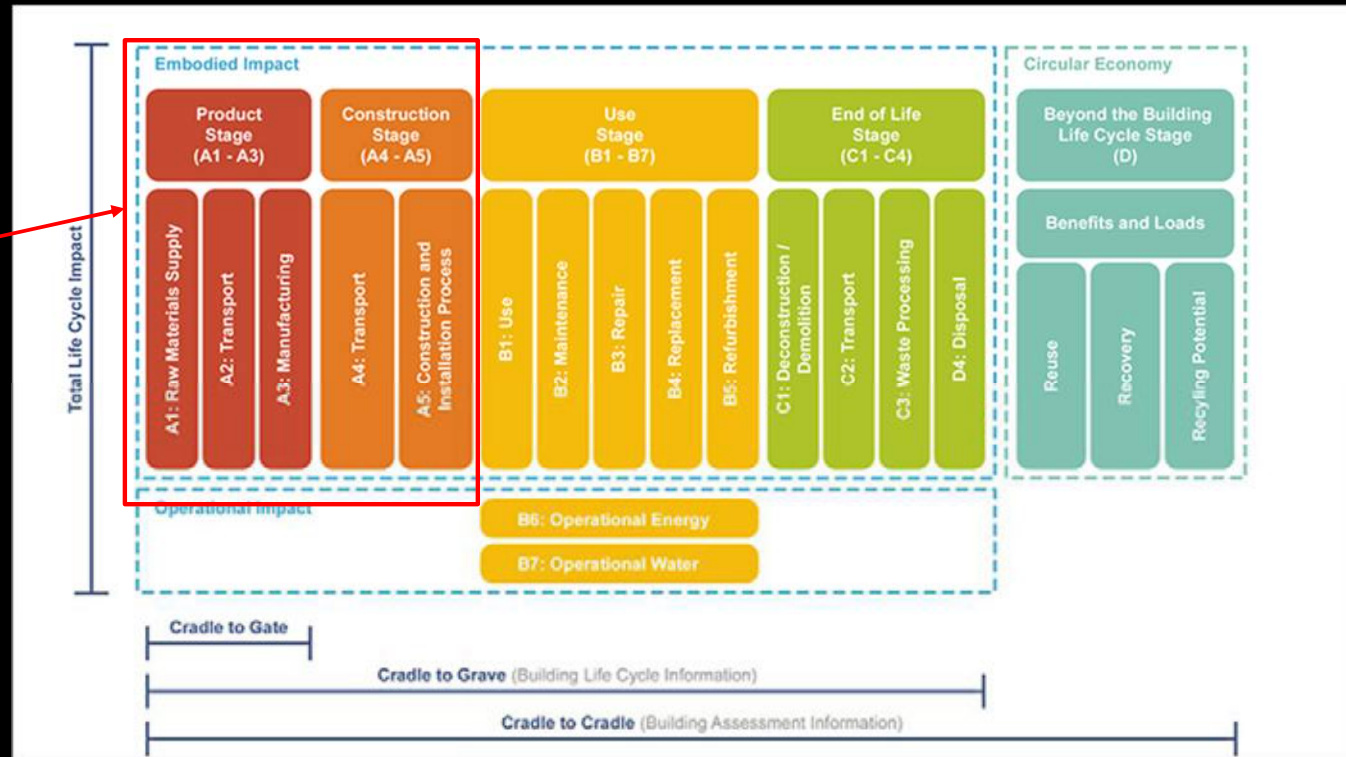
DLT/Roof Panels – Doug-Fir from Dowellam



Sustainability +

Mass Timber –

Sequestered Carbon, etc.



Sustainability +

Mass Timber –

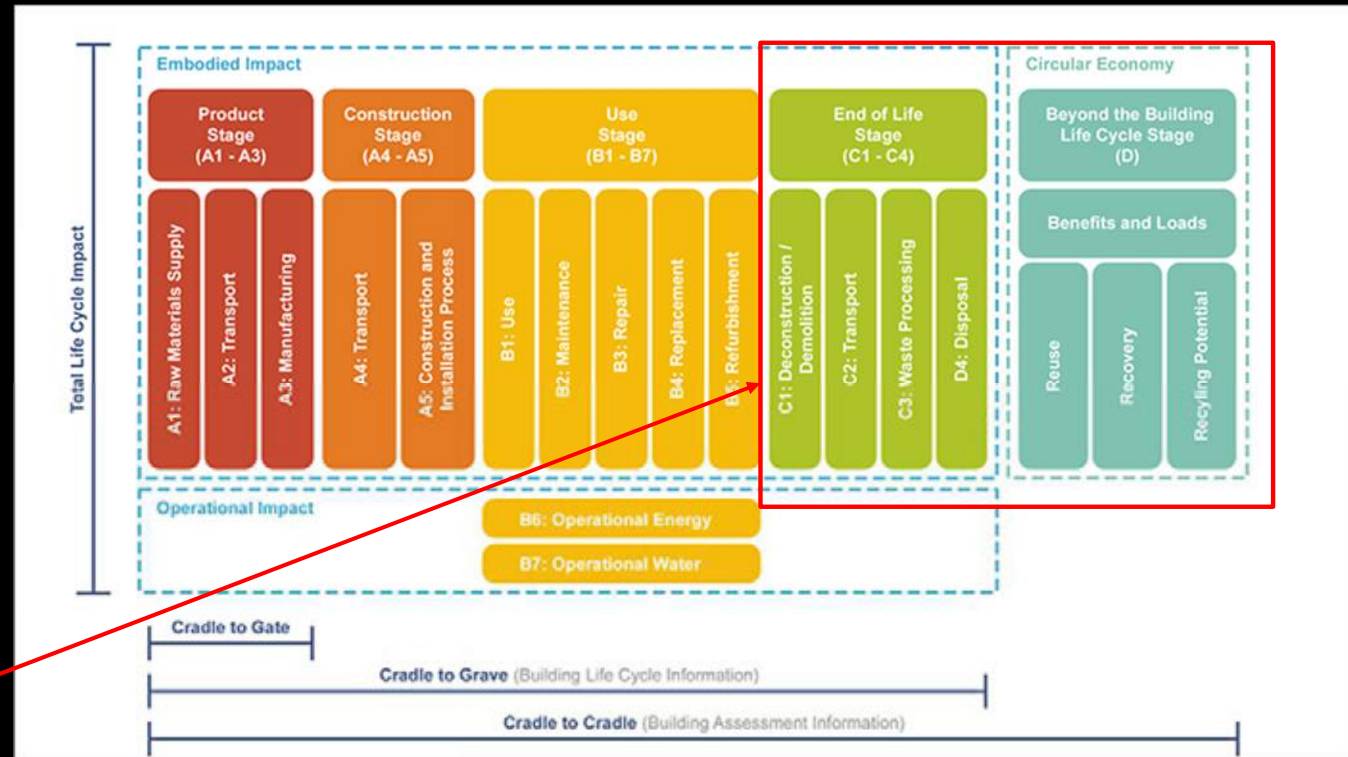
Sequestered Carbon, etc.

Design for Disassembly -

Addresses questions

around End of Life – what

happens down the road?

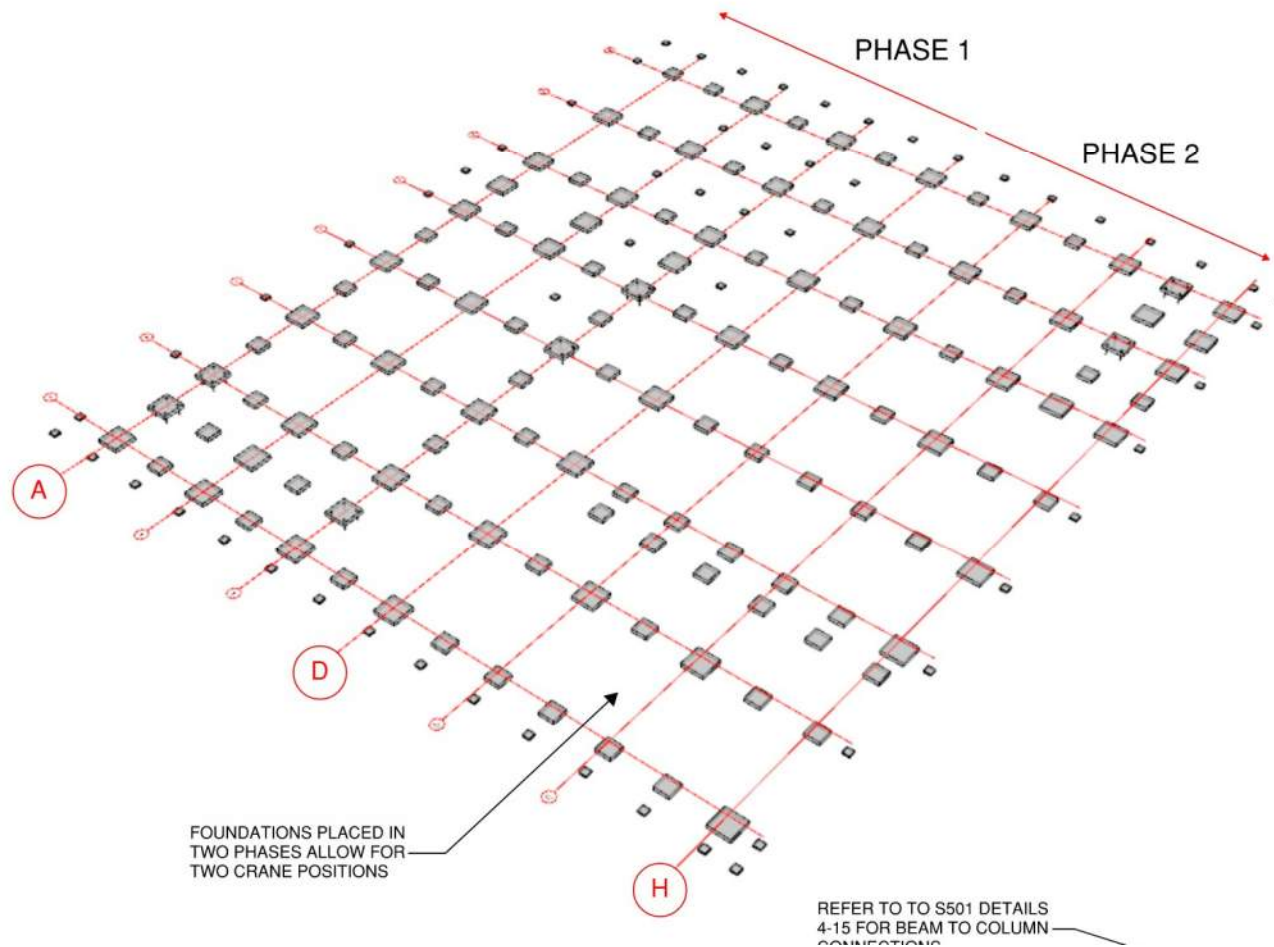


Assembly

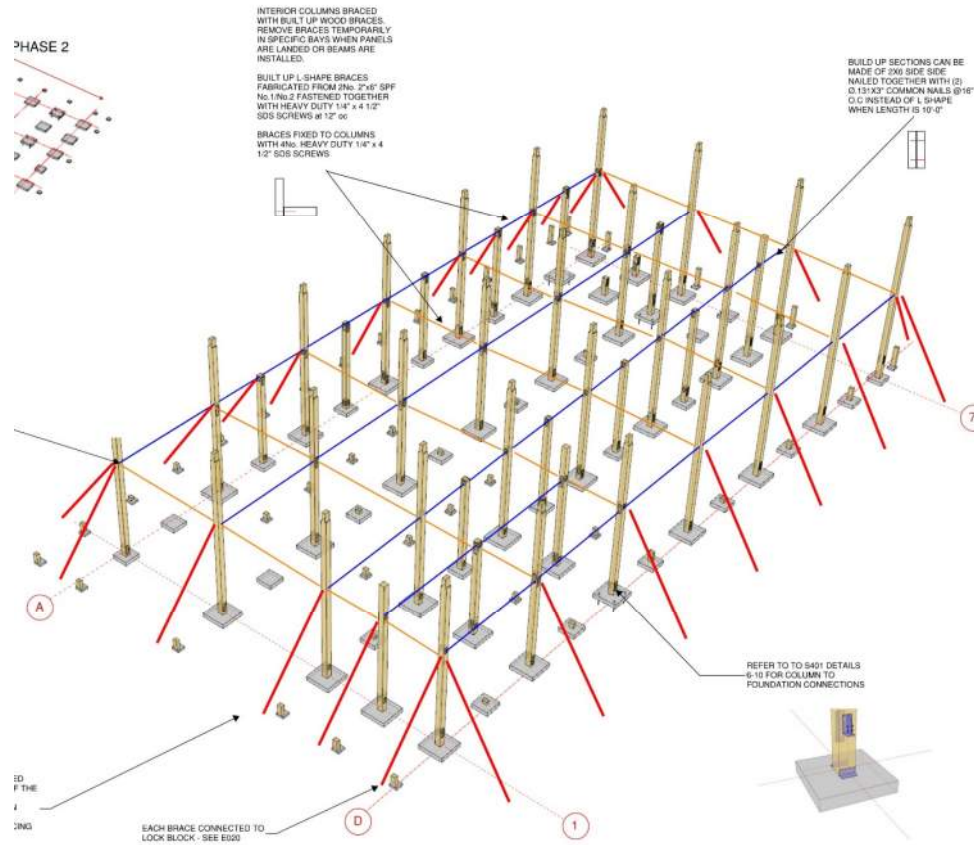


STEP 1

PRECAST CONCRETE PADS PRE INSTALLED BY
SUBCONTRACTOR REFER TO S401 FOR DETAILS



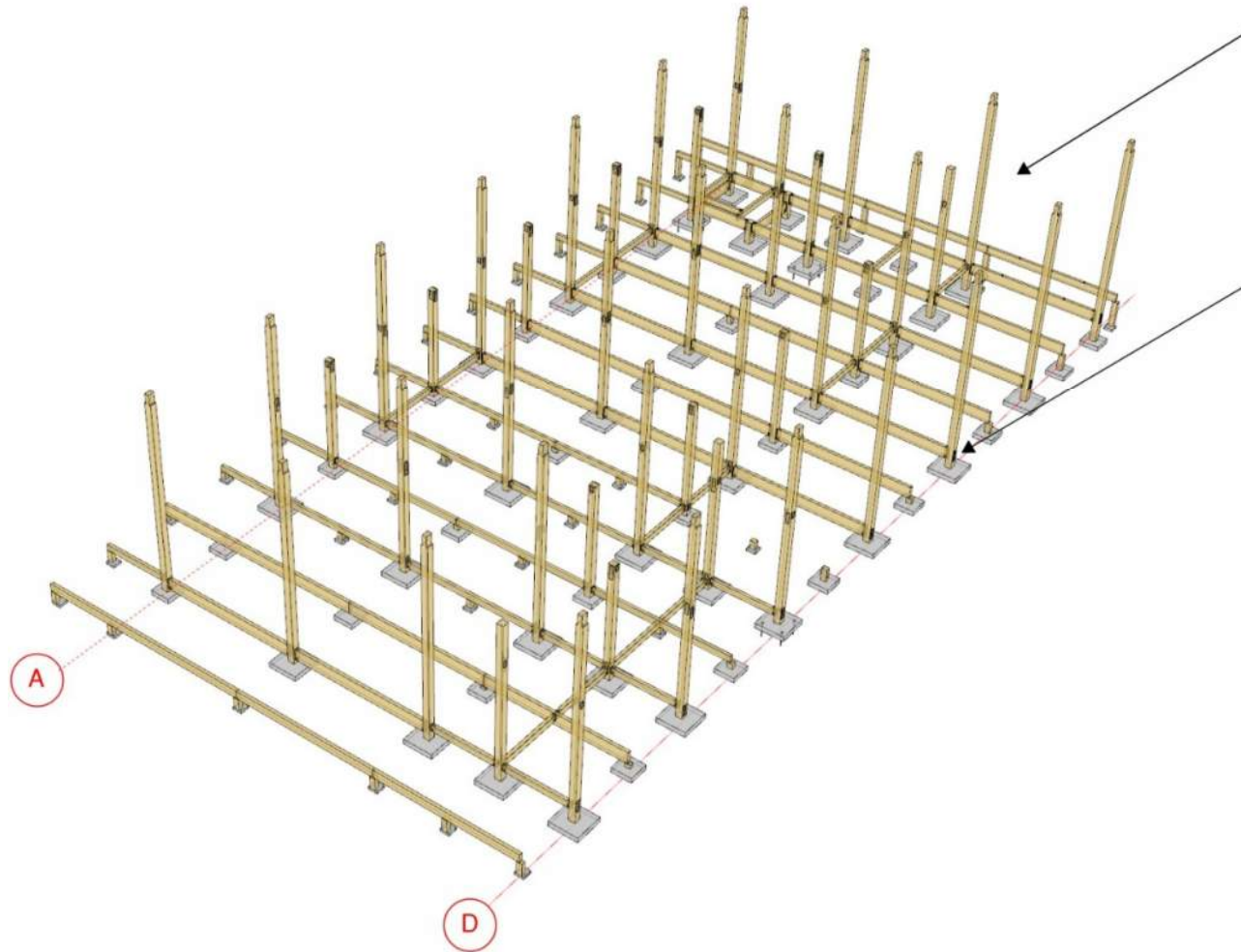
STEP 2 (PART PLAN - GRIDS A-D)
INSTALLATION OF COLUMNS STUBS AND PRIMARY COLUMNS:
START AT CORNERS AND INSTALL BRACES ON OUTSIDE FACES.
EACH COLUMN TO BE BRACED IN TWO DIRECTIONS



NOTE: REFER TO NEXT PAGES ABOUT NOTES RELATED TO TEMPORARY REMOVAL OF BUILT UP BRACES

STEP 3

INSTALLATION OF PLATFORM GLULAM BEAM



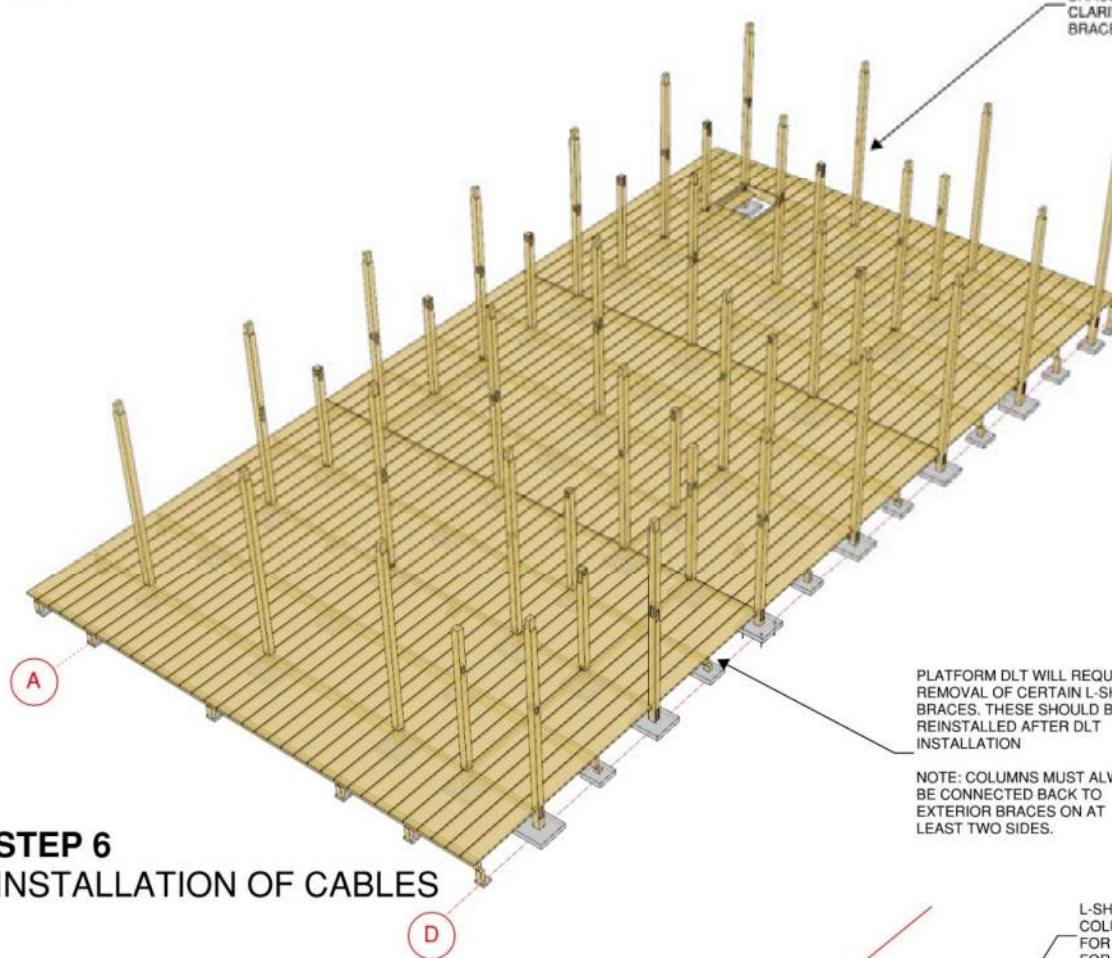
STEP 4

STEP 4 INSTALLATION OF PLATFORM DLT

BRACES AND COLUMN
BRACES OMITTED FOR CLARITY.
SEE STEP 2 FOR BRACE POSITIONS

L-SHAPE BRACES AND COLUMN
BRACES OMITTED FOR
CLARITY. SEE STEP 2 FOR
BRACE POSITIONS

IM
TO



PLATFORM DLT WILL REQUIRE
REMOVAL OF CERTAIN L-SHAPE
BRACES. THESE SHOULD BE
REINSTALLED AFTER DLT
INSTALLATION

NOTE: COLUMNS MUST ALWAYS
BE CONNECTED BACK TO
EXTERIOR BRACES ON AT
LEAST TWO SIDES.

L-SHAPE BRACES AND
COLUMN BRACES OMITTED
FOR CLARITY. SEE STEP 2
FOR BRACE POSITIONS

STEP 6 INSTALLATION OF CABLES

D

STEP 5 INSTALLATION OF MEZANINE GLULAM BEAM

CRITICAL NOTE: SOME BEAMS WERE FABRICATED SHALLOWER THAN THEY SHOULD HAVE BEEN. TO ENSURE THE DLT FITS PROPERLY, ALL OF THE TOPS OF THE BEAMS MUST BE AT THE SAME ELEVATION. TO ACHIEVE THIS, SHIM BEAMS UP TO CORRECT ELEVATIONS. RE-DRILL ANY STEEL HOLES SO THAT BOLTS WILL STILL GO THROUGH IN THE NEW POSITION

AT THIS STAGE ELEVATOR STEEL ELEMENTS SHOULD BE INSTALLED TO NOT INTERFERE WITH SUBSEQUENT STEPS

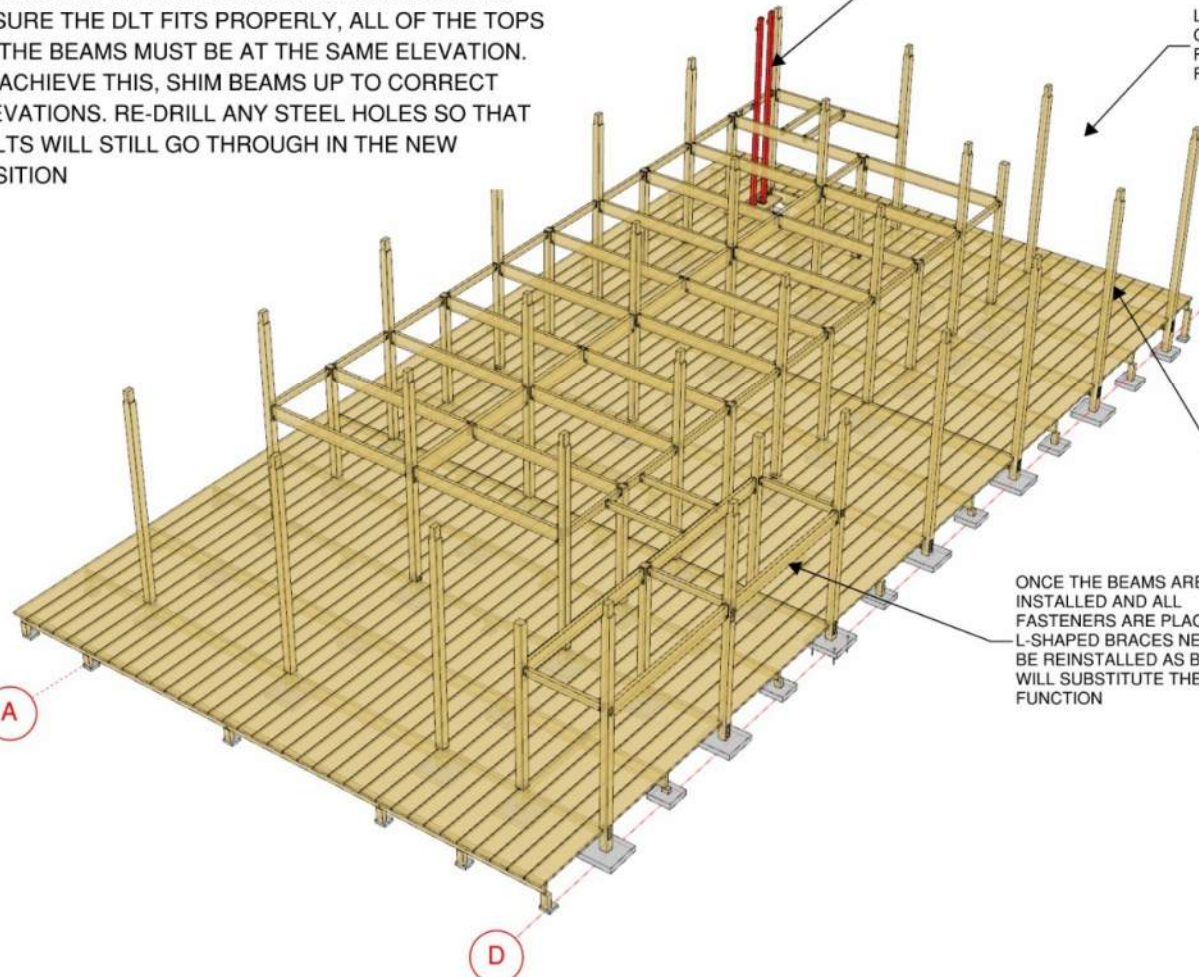
L-SHAPED BR/ COLUMN BR FOR CLARI FOR BRACE

ENS FRE ARE BR/ BUI REM ELE COI

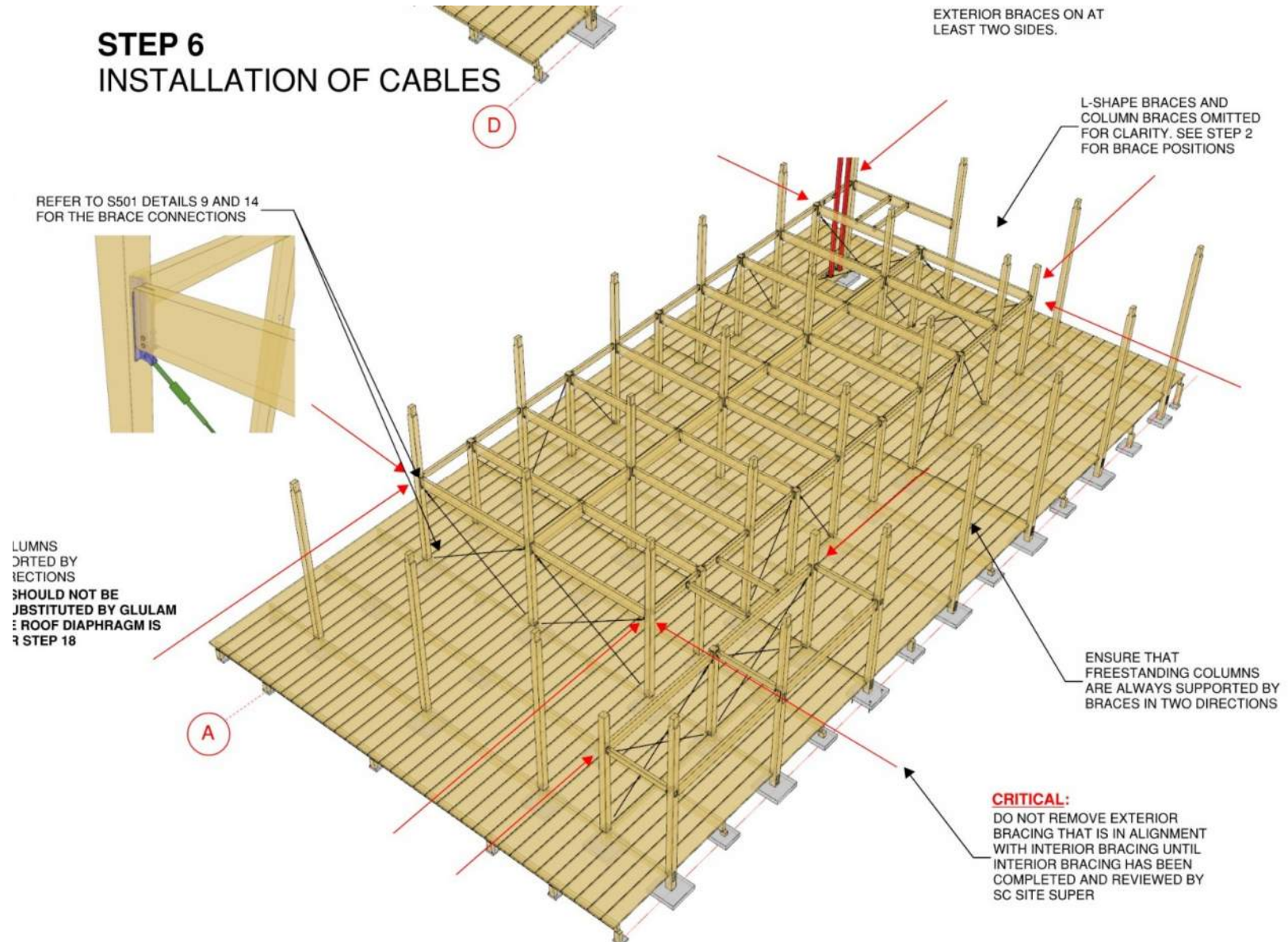
ONCE THE BEAMS ARE INSTALLED AND ALL FASTENERS ARE PLACED THE L-SHAPED BRACES NEED NOT BE REINSTALLED AS BEAMS WILL SUBSTITUTE THEIR FUNCTION

A

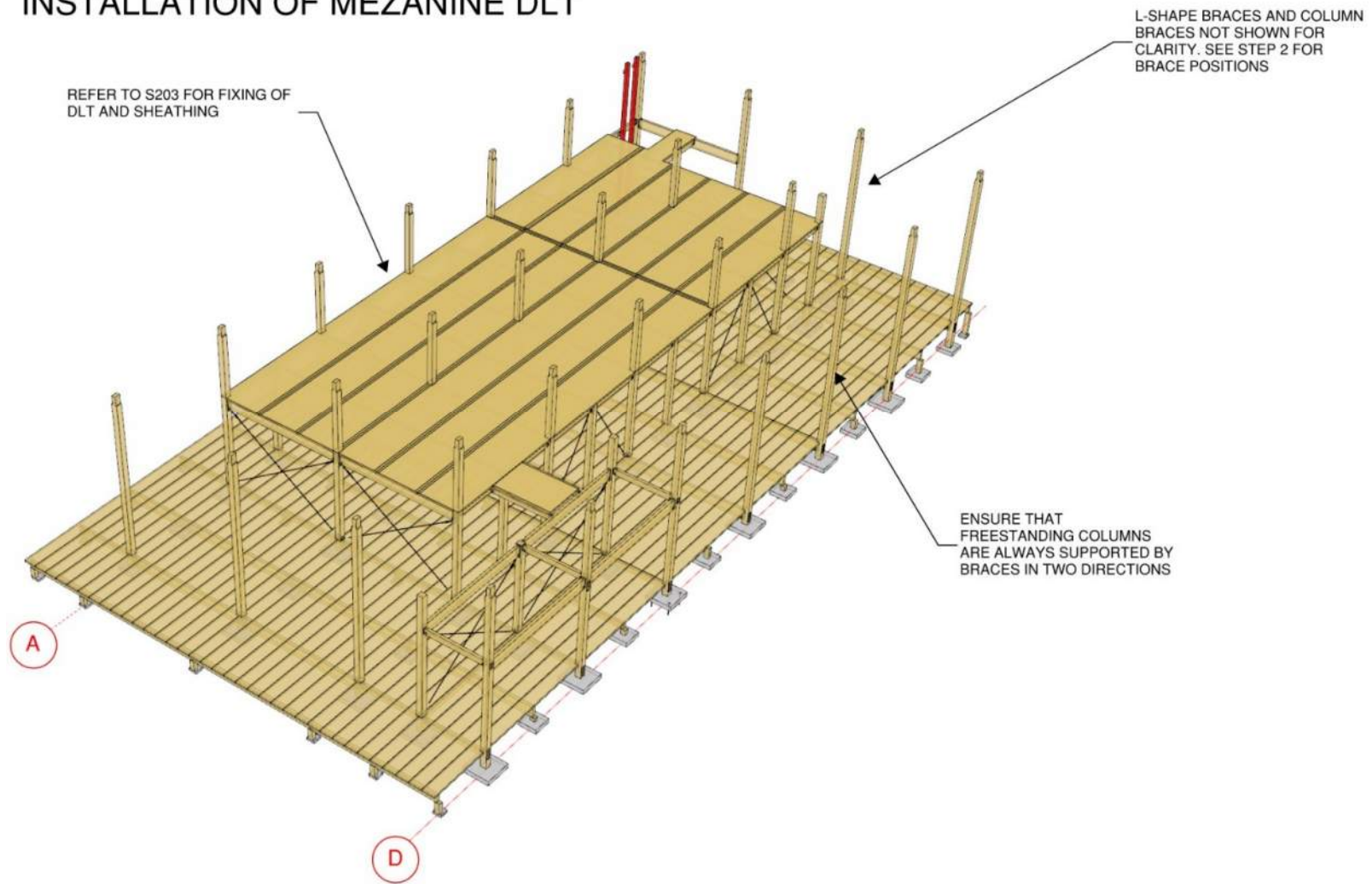
D



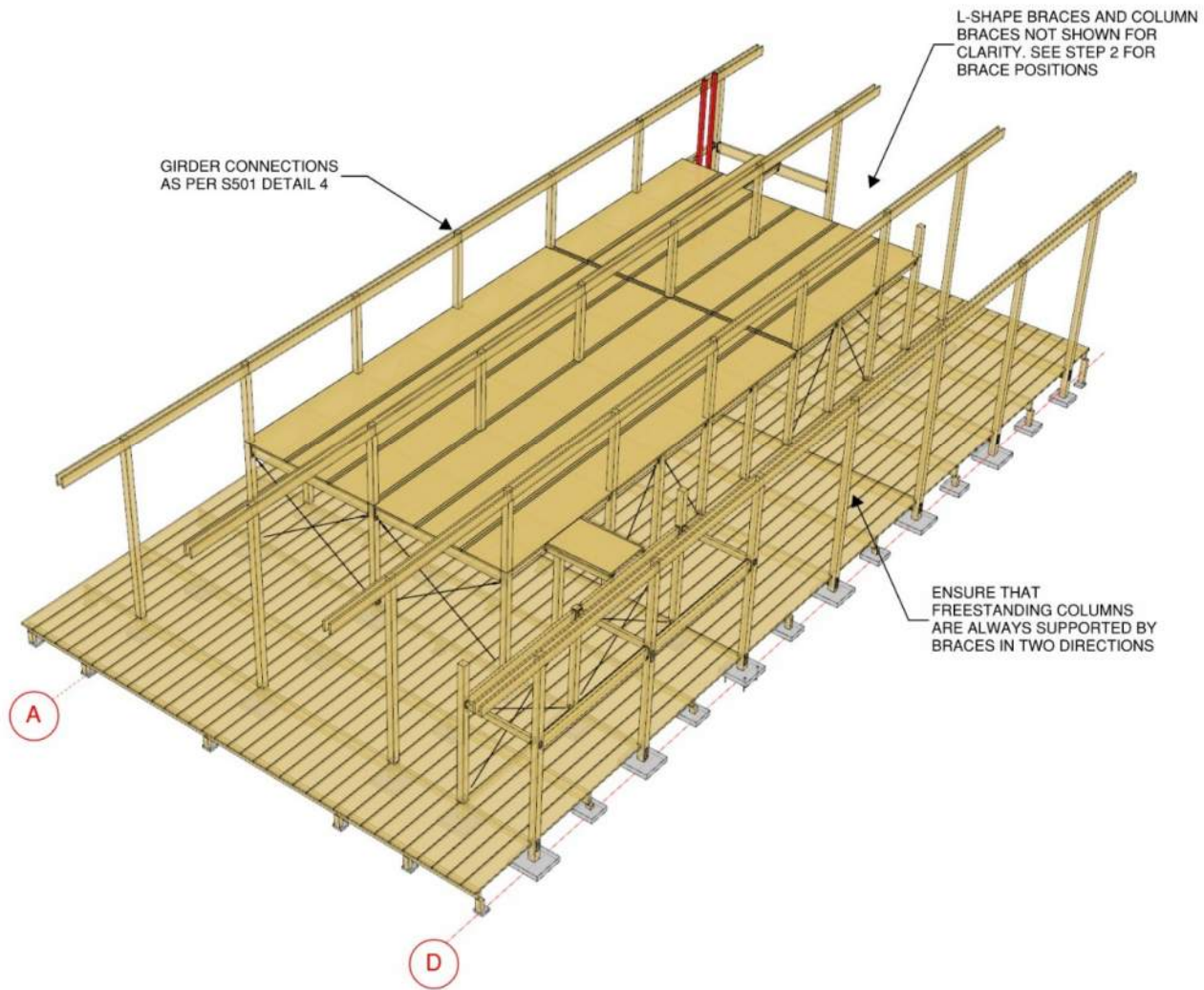
STEP 6 INSTALLATION OF CABLES



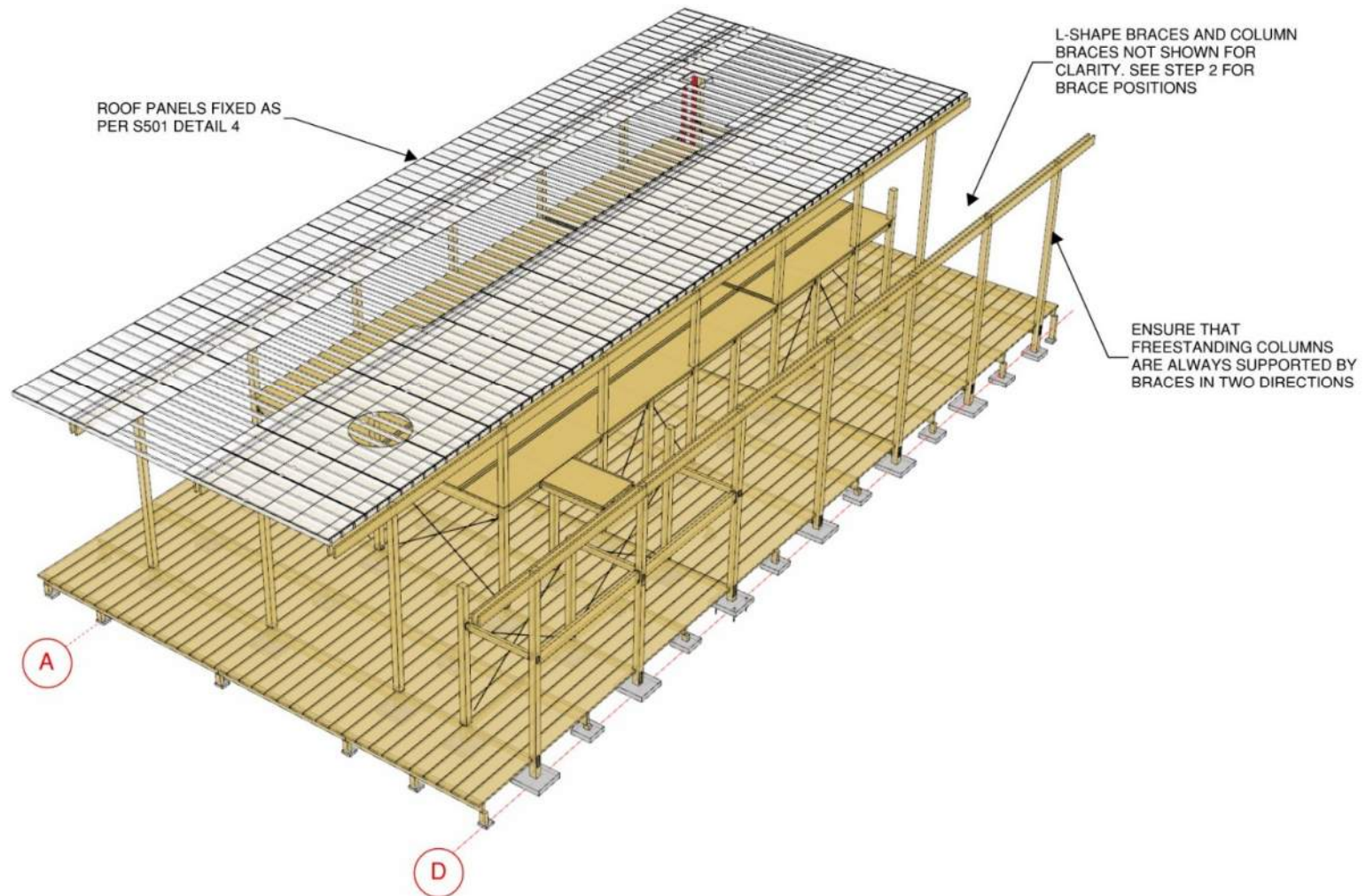
STEP 7 INSTALLATION OF MEZANINE DLT



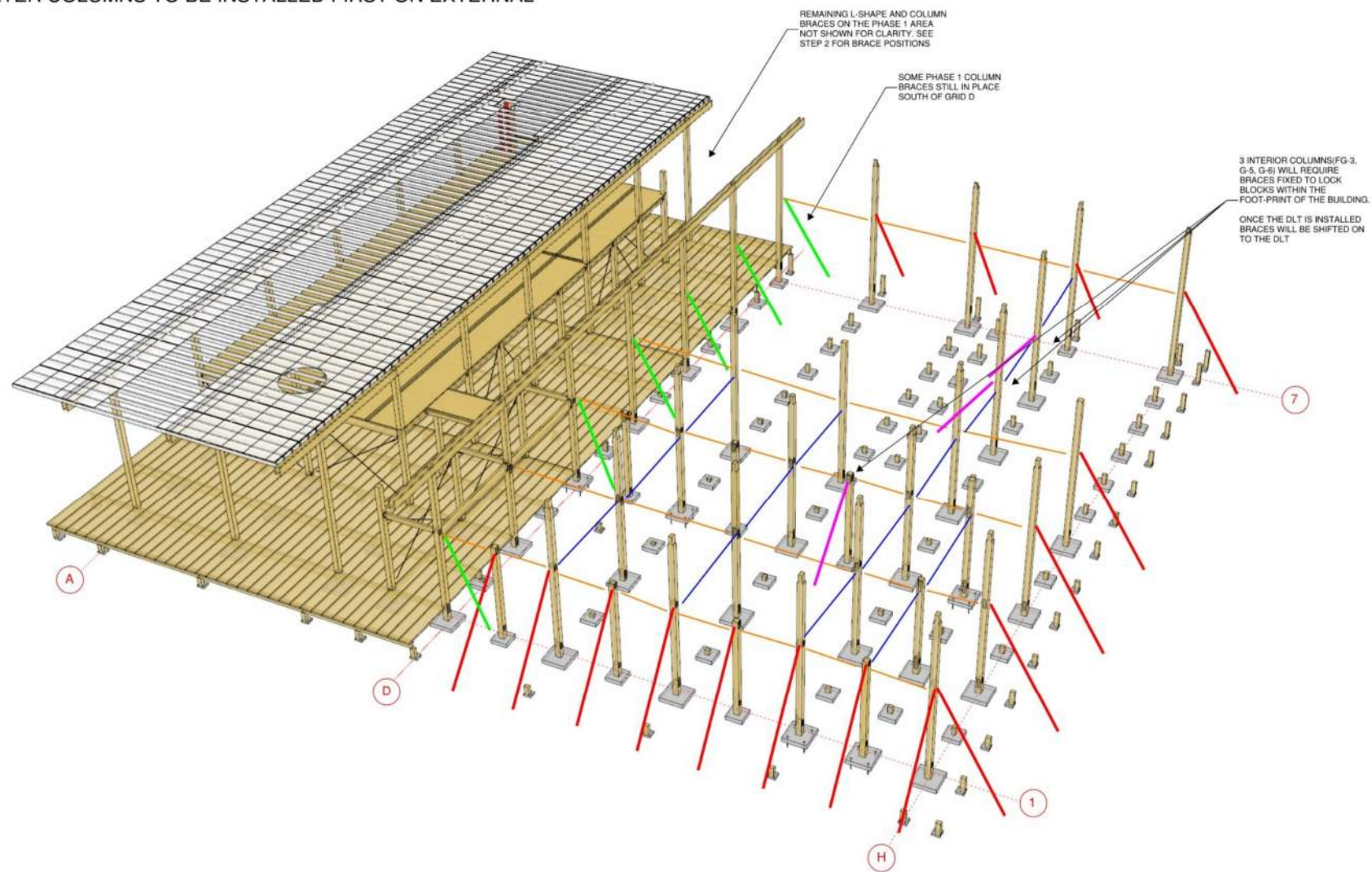
STEP 8 INSTALLATION OF ROOF GIRDERS

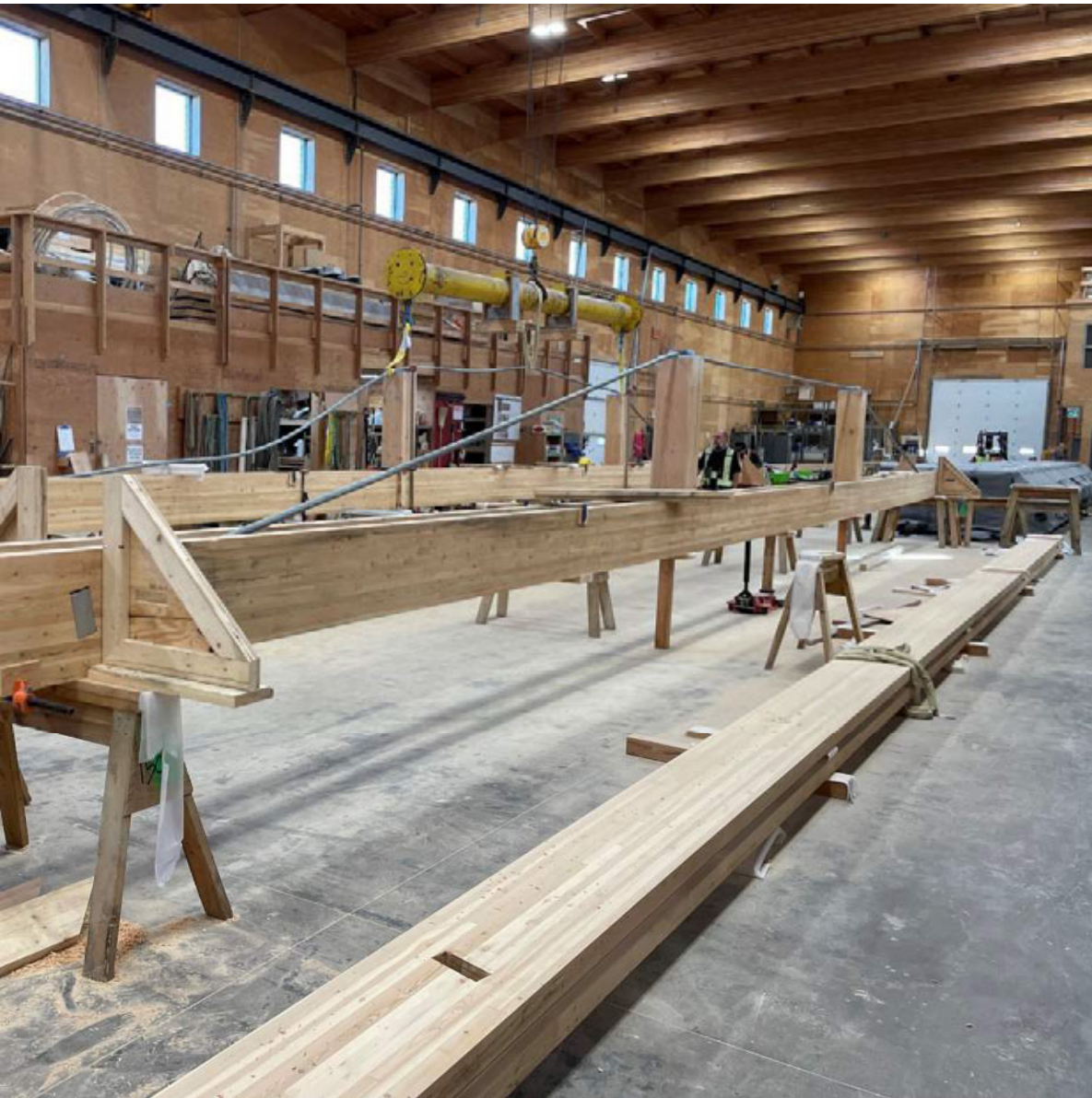


STEP 9 INSTALLATION OF ROOF PANELS



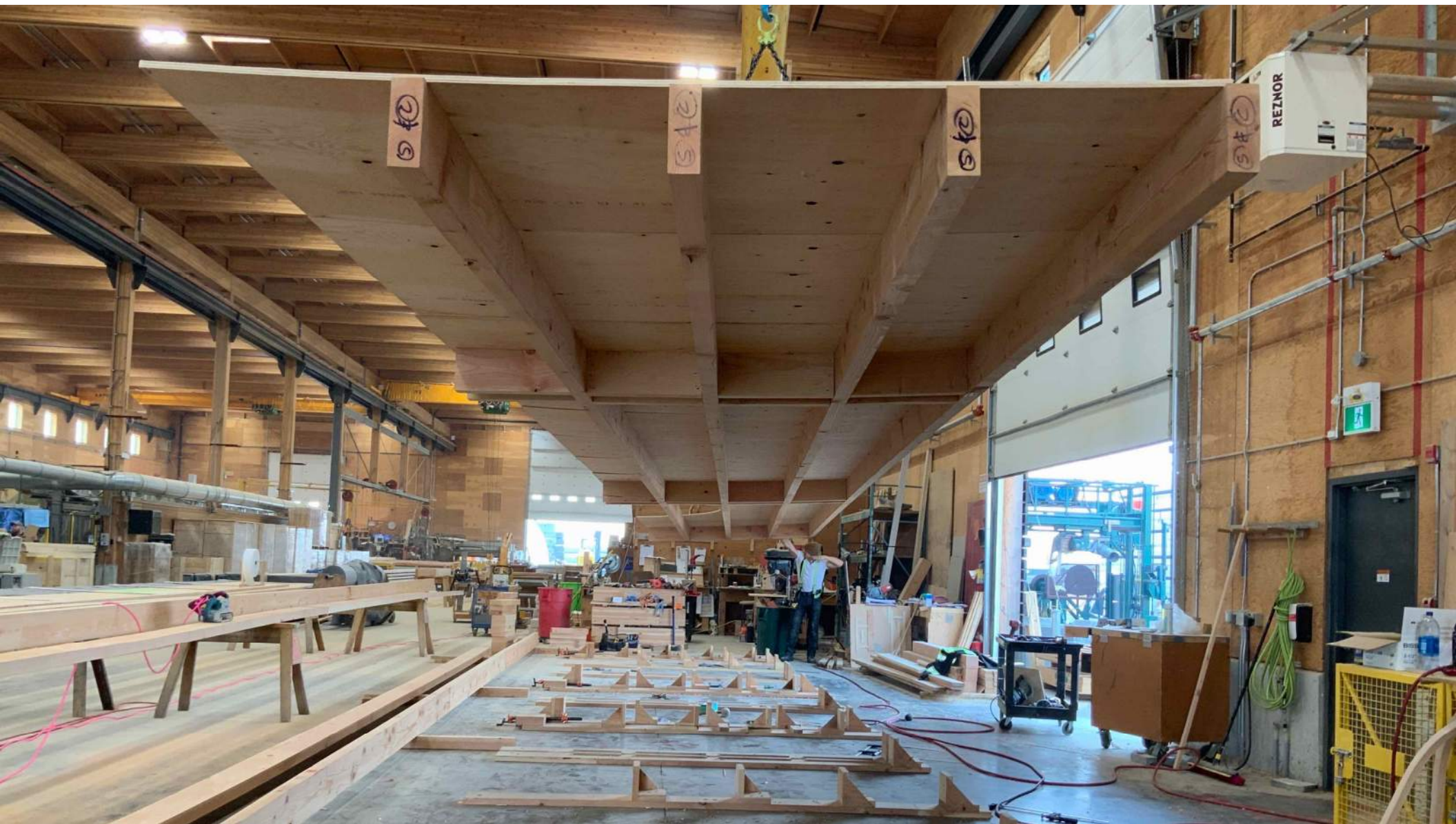
STEP 10 (GRID D - H)
INSTALLATION OF REMAINING COLUMNS
PERIMETER COLUMNS TO BE INSTALLED FIRST ON EXTERNAL
EDGES

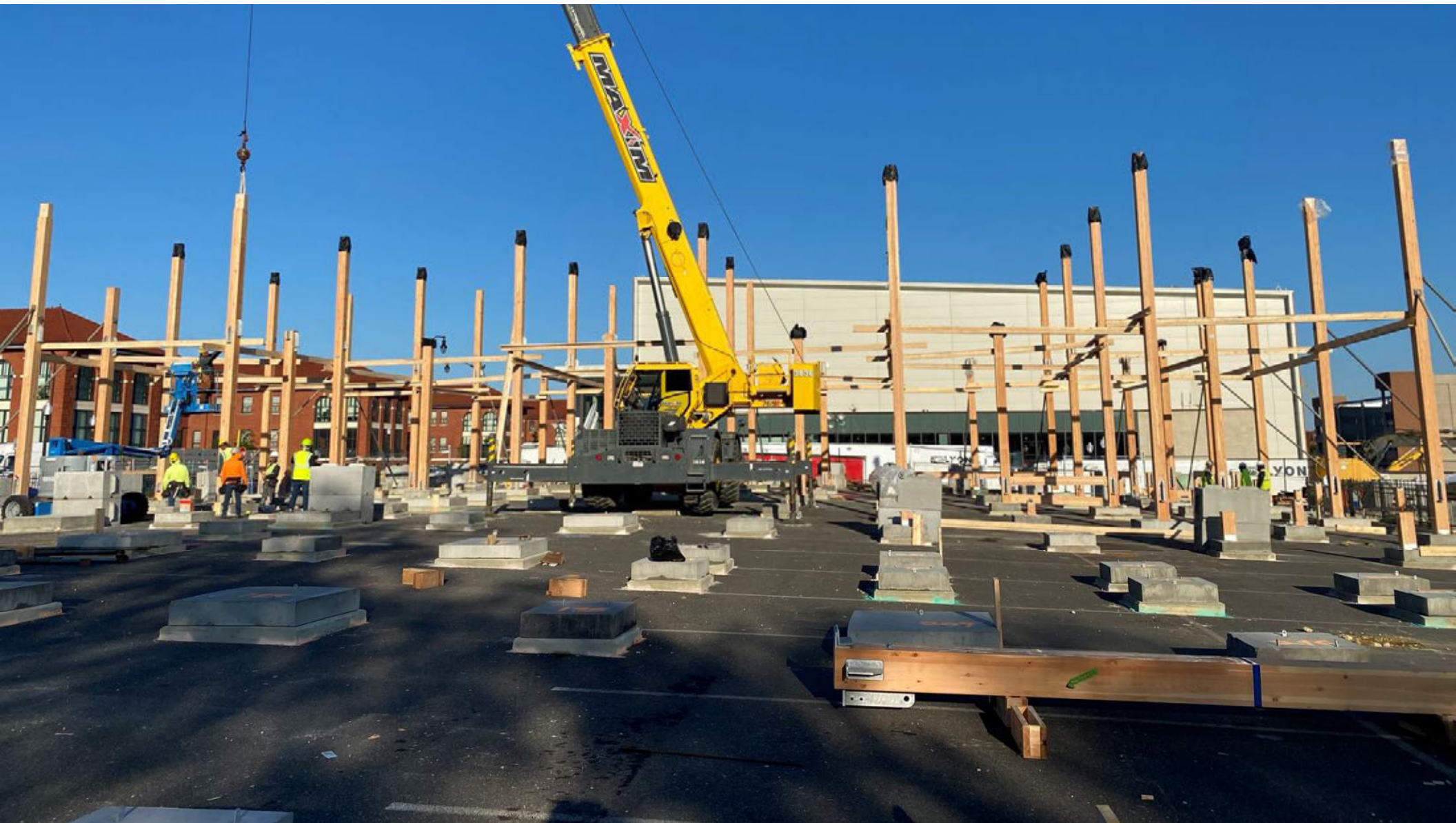










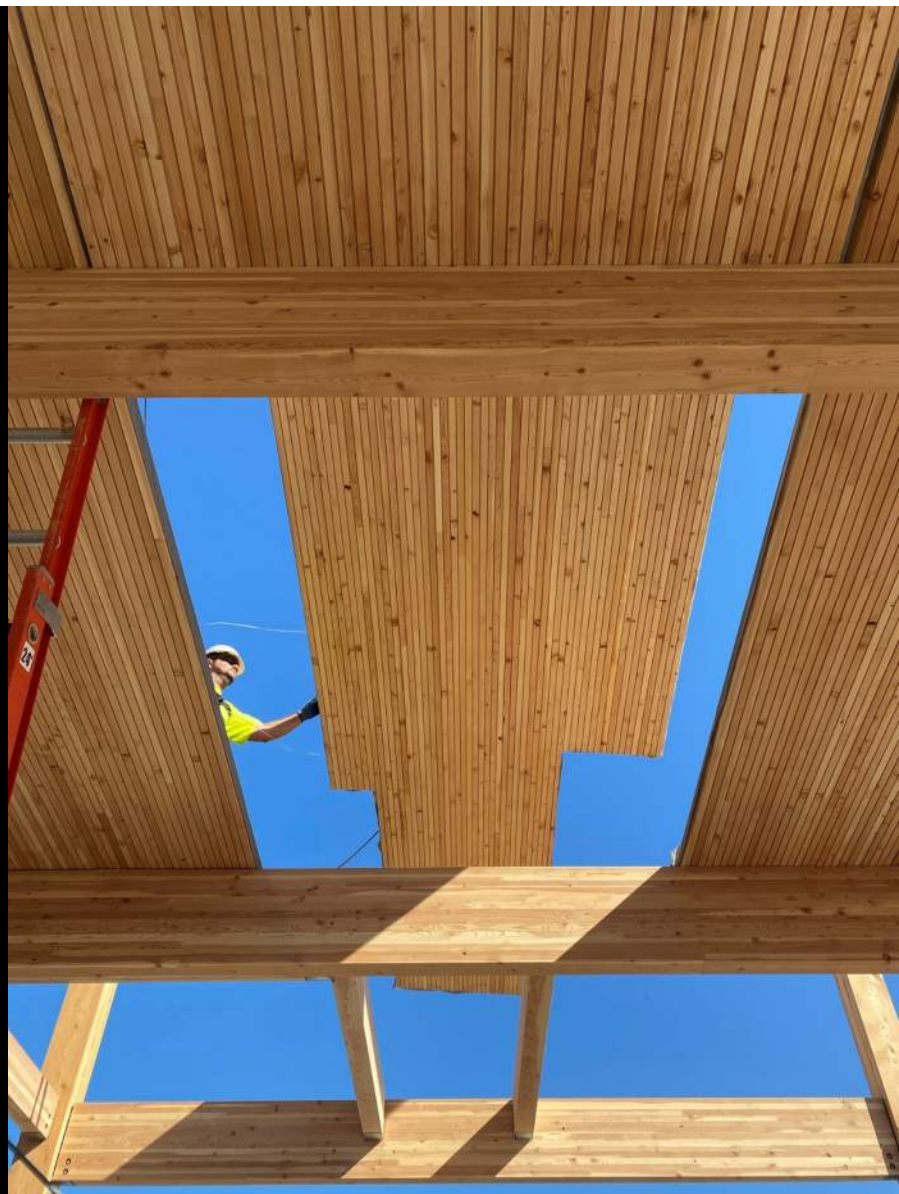
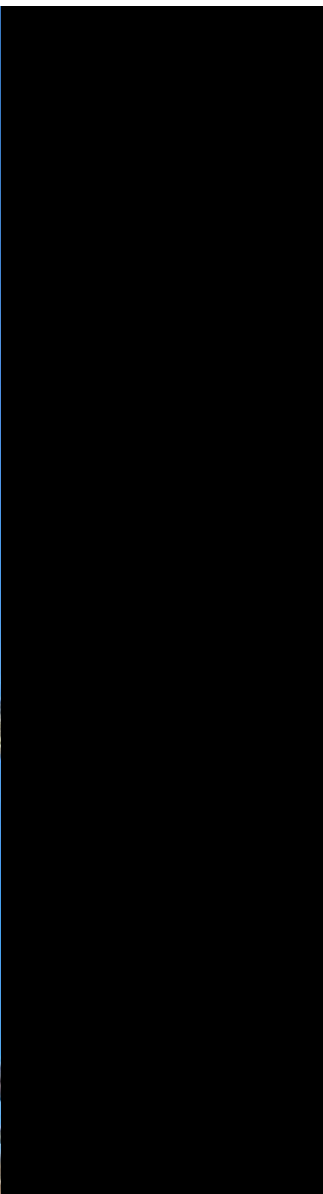


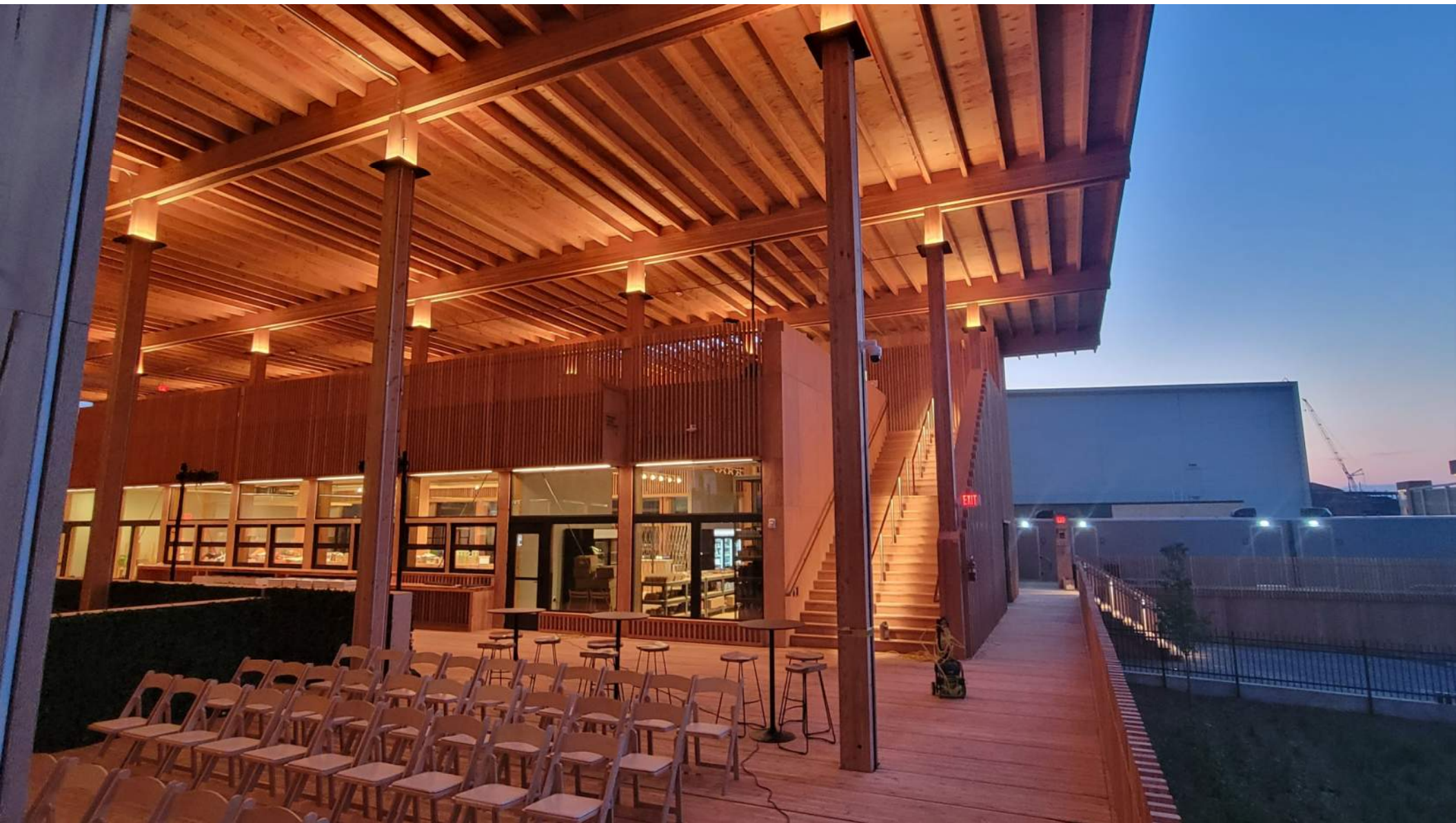


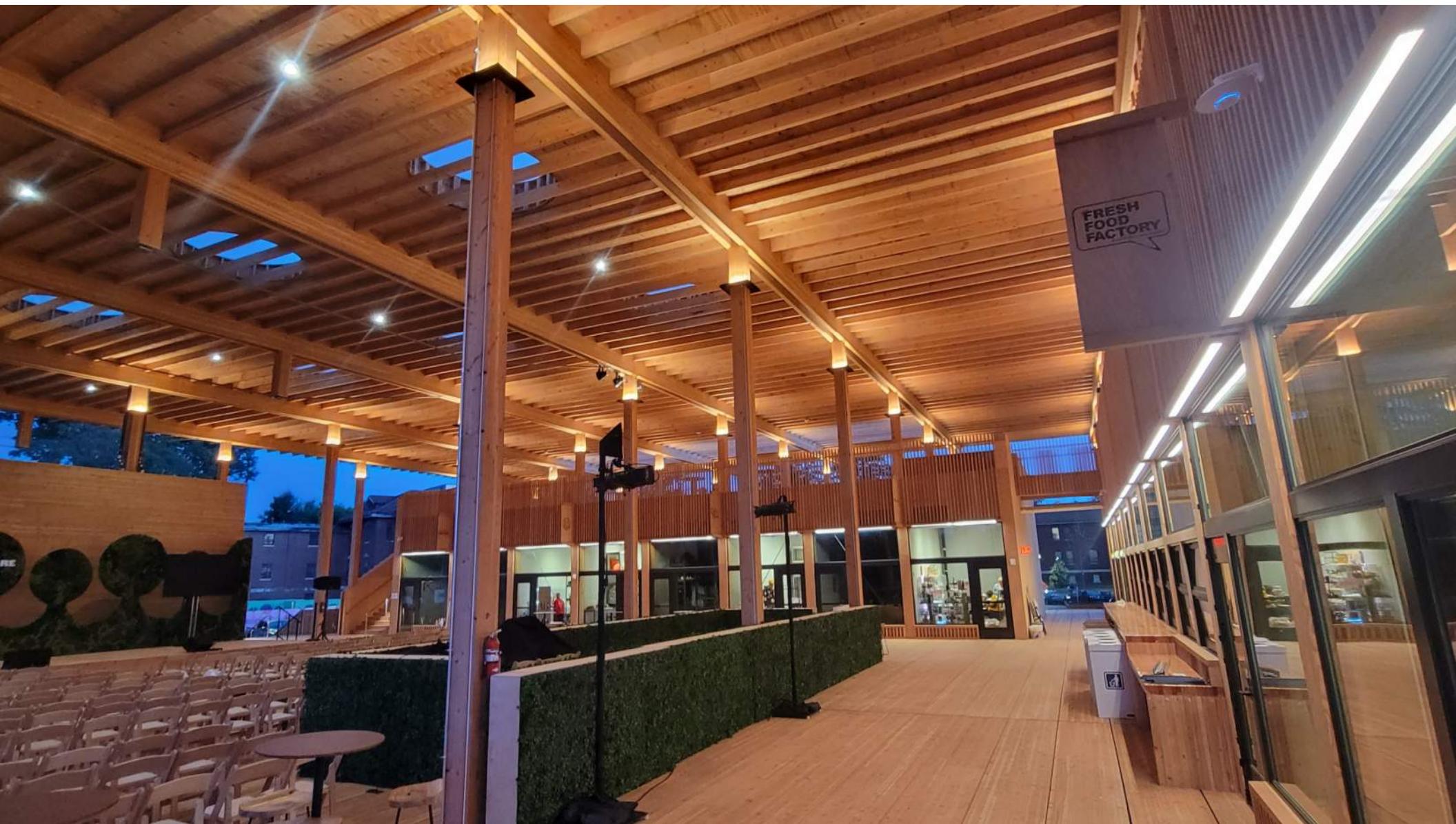




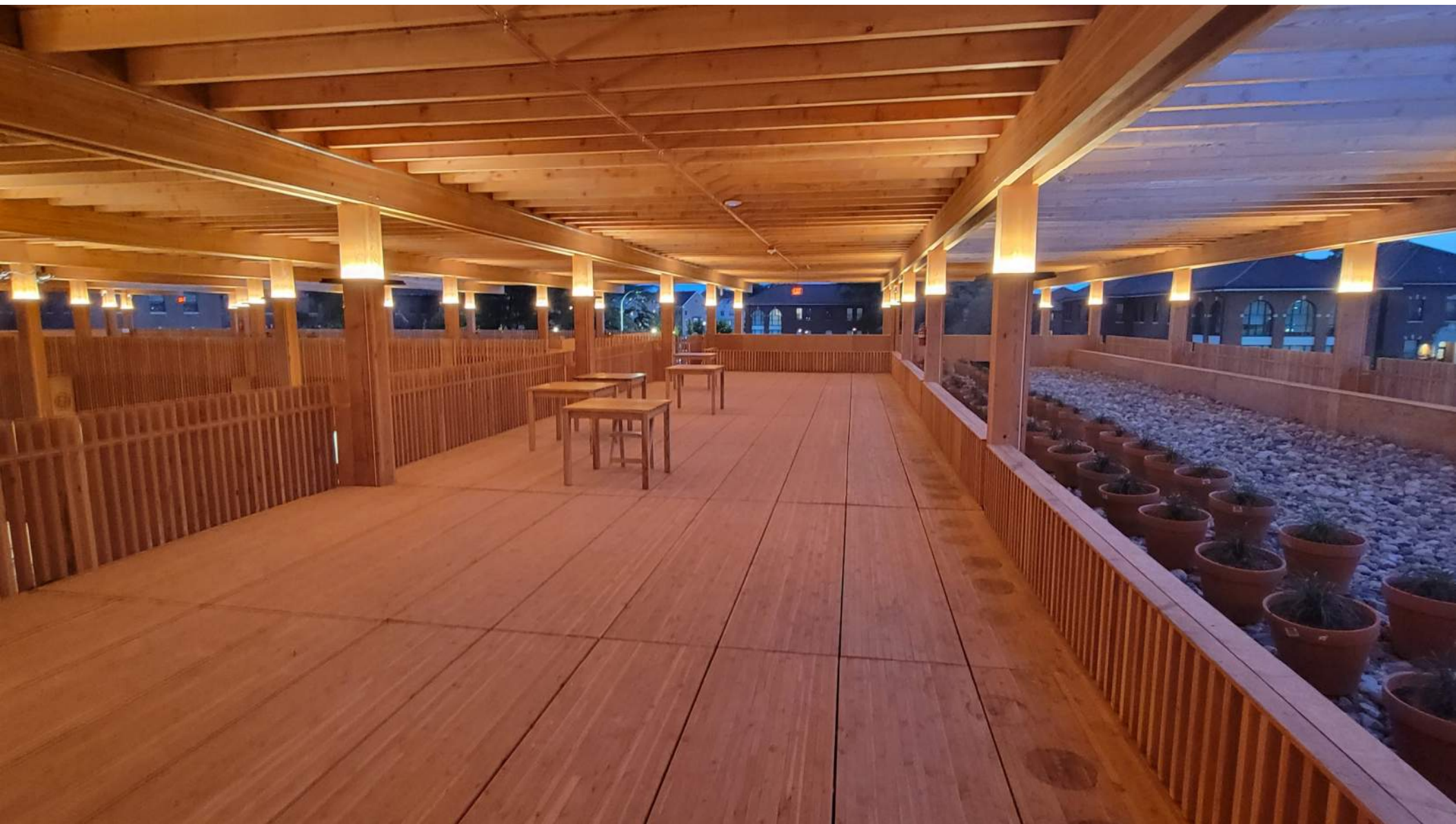






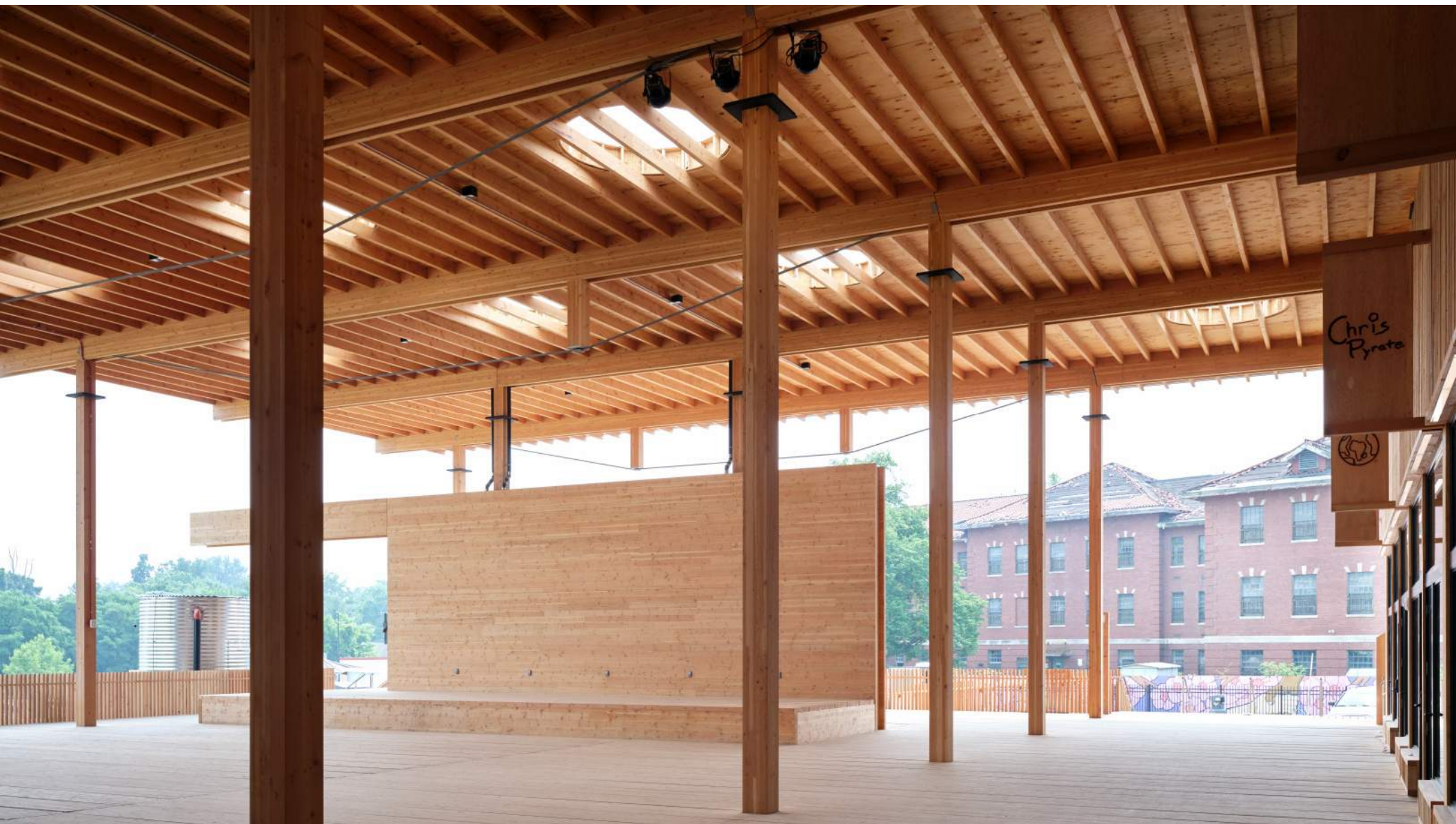








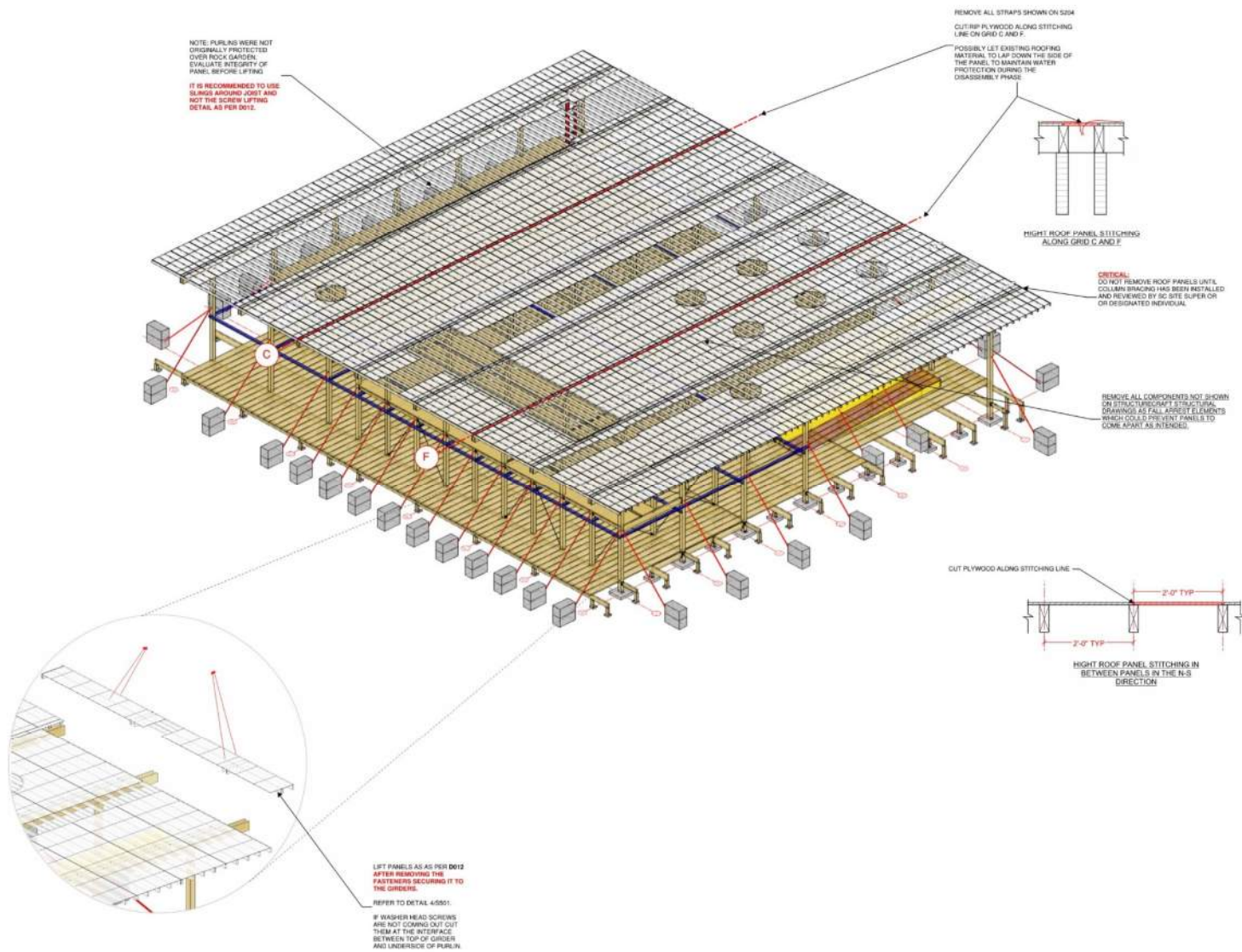






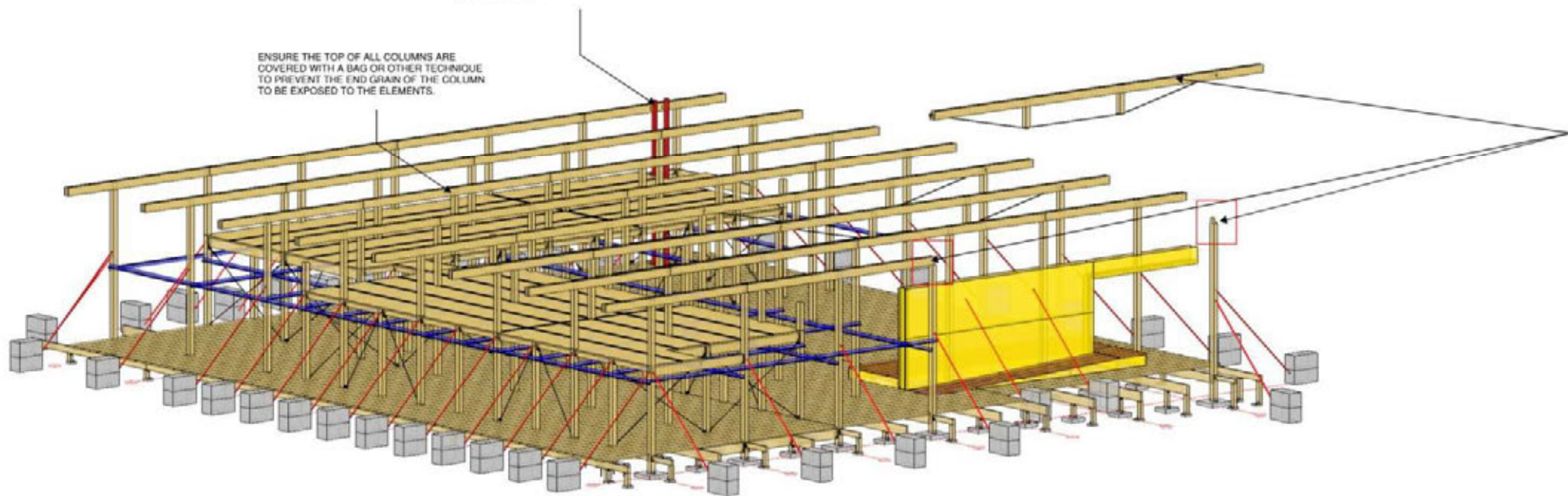
Disassembly



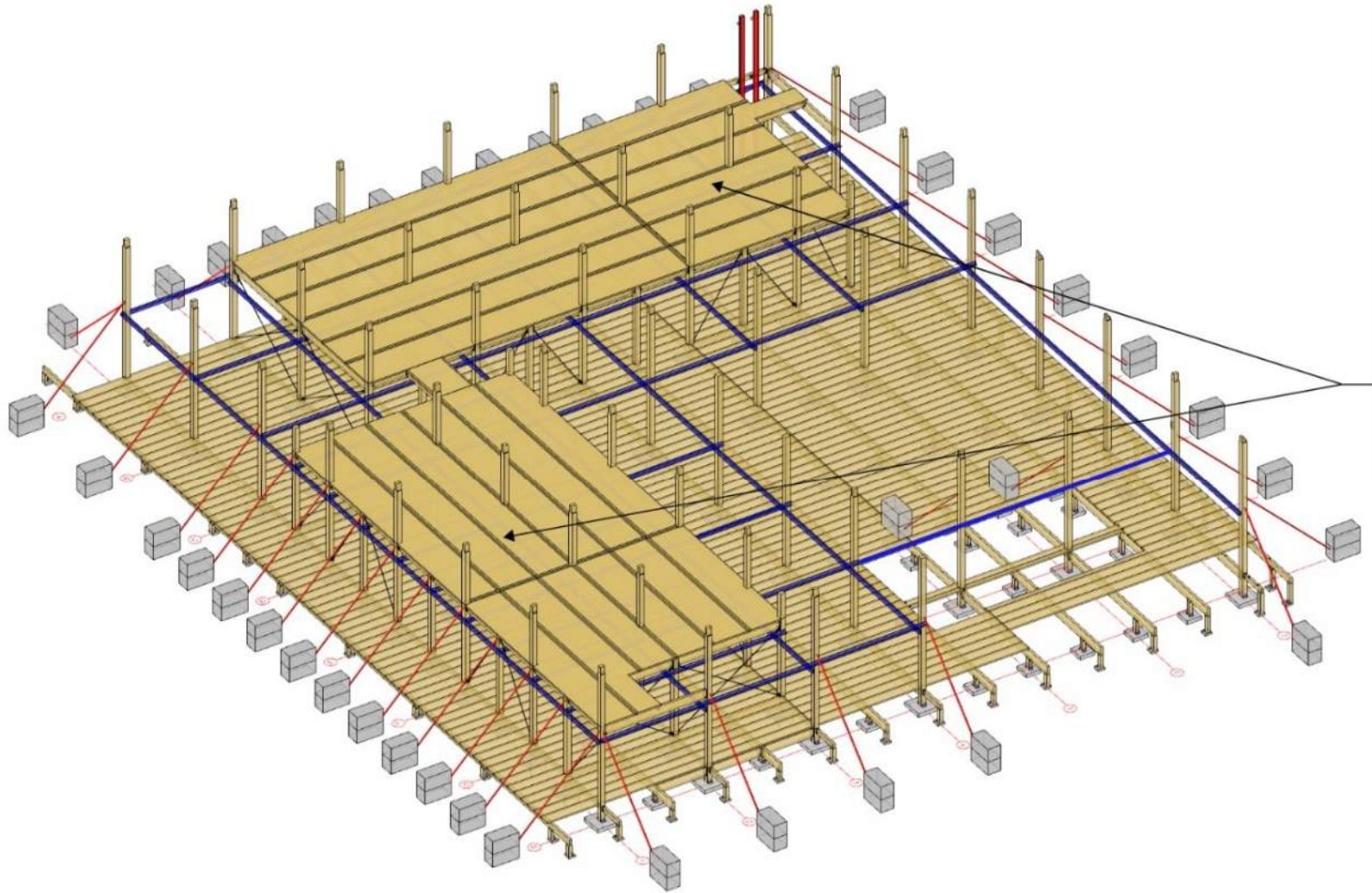


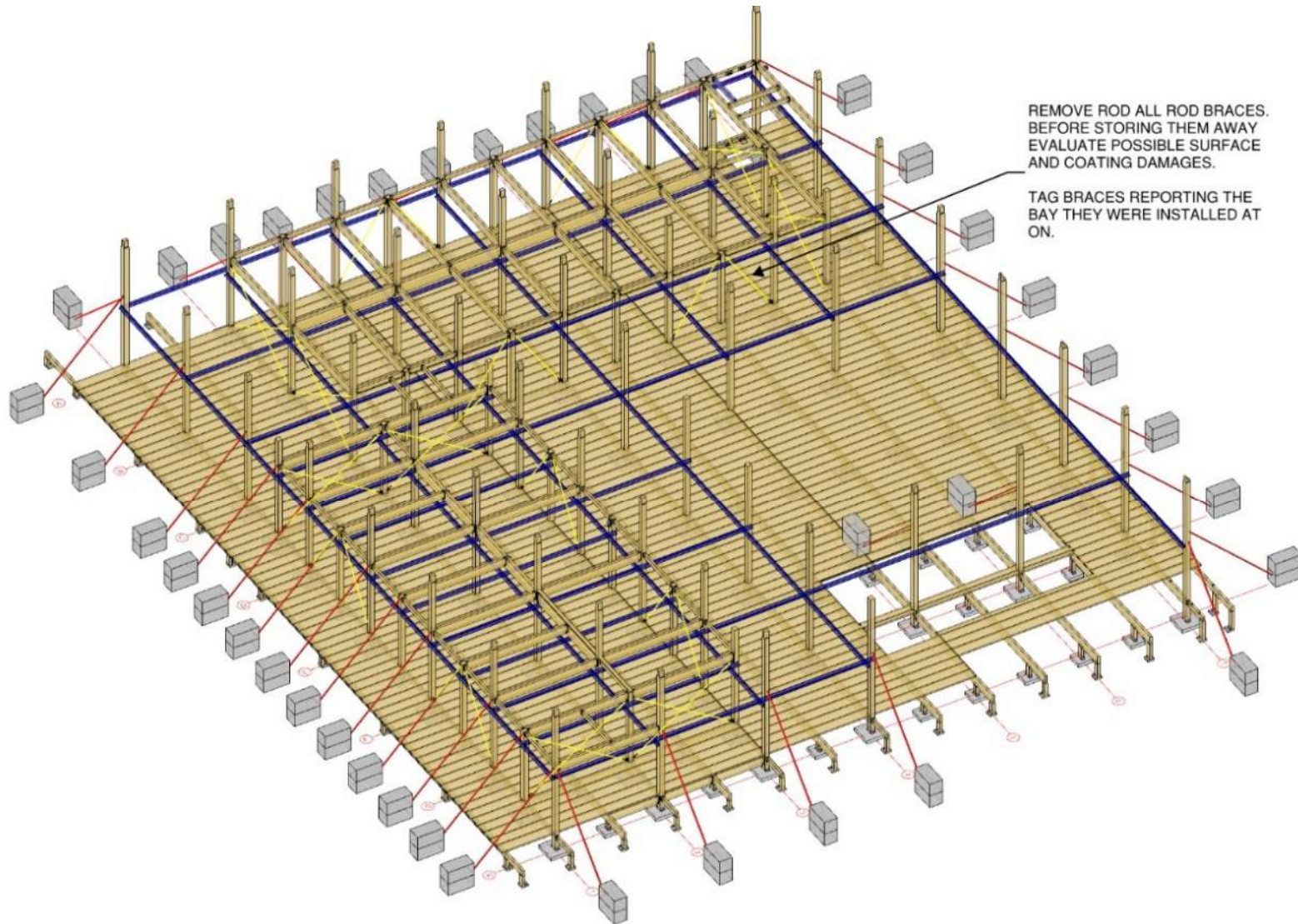
REMOVE ELEVATOR STEEL COMPONENTS TO BE
ABLE TO FINISH THE REMOVAL OF ALL THE HIGH
ROOF GIRDERS.

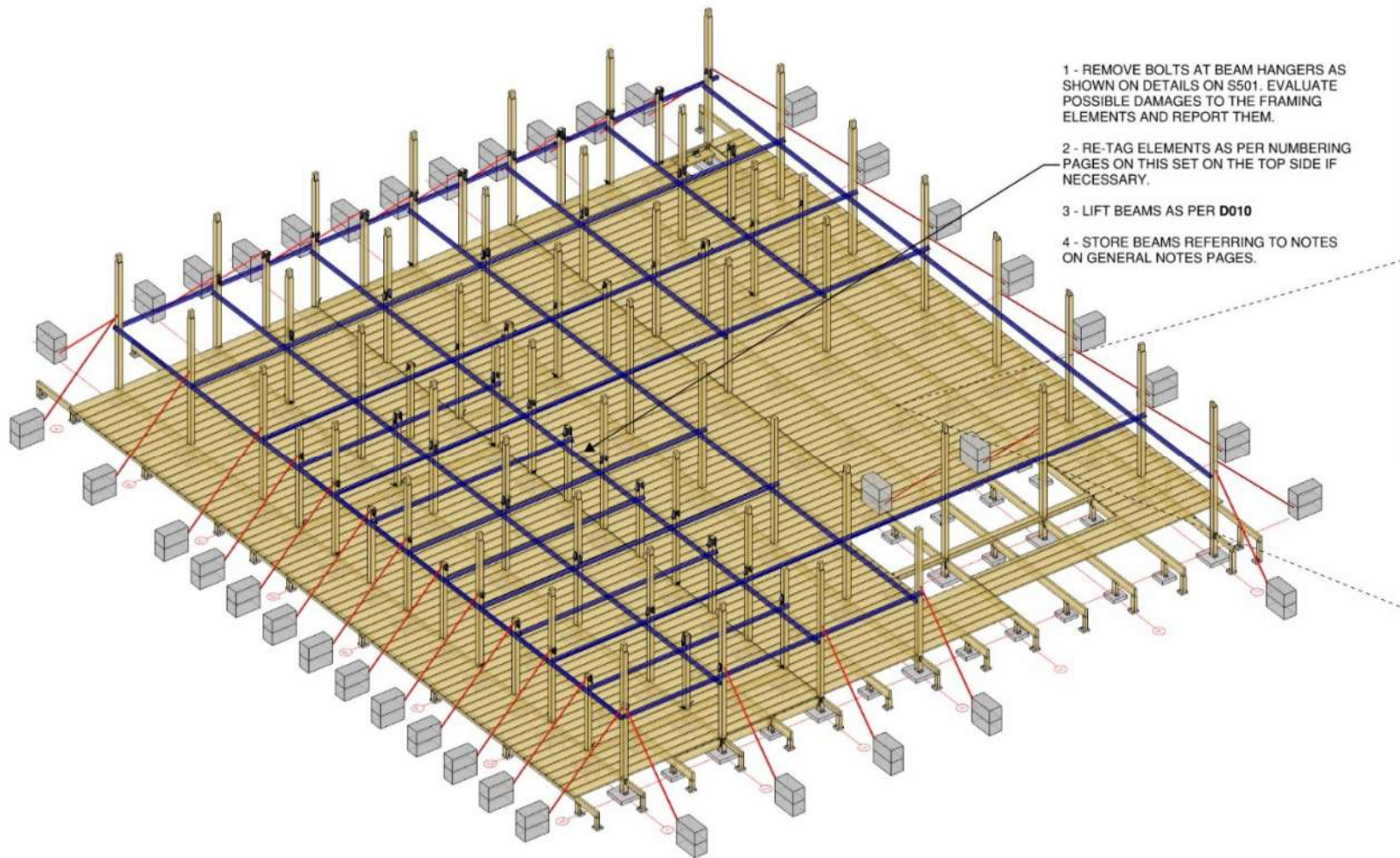
ENSURE THE TOP OF ALL COLUMNS ARE
COVERED WITH A BAG OR OTHER TECHNIQUE
TO PREVENT THE END GRAIN OF THE COLUMN
TO BE EXPOSED TO THE ELEMENTS.

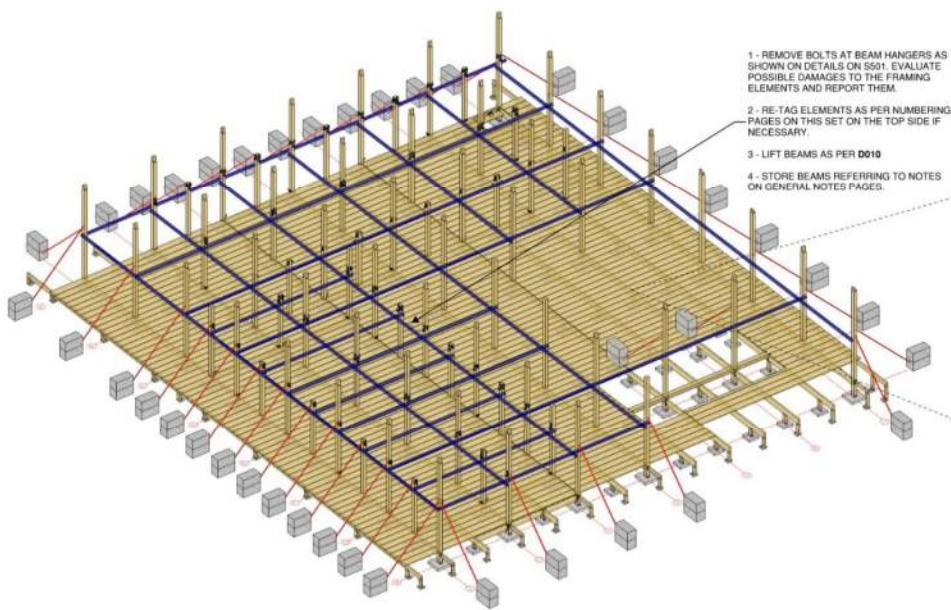


4 REMOVAL OF ROOF TRUSSES









- 1 - REMOVE BOLTS AT BEAM HANGERS AS SHOWN ON DETAILS ON S501. EVALUATE POSSIBLE DAMAGES TO THE FRAMING ELEMENTS AND REPORT THEM.
- 2 - RE-TAG ELEMENTS AS PER NUMBERING PAGES ON THIS SET ON THE TOP SIDE IF NECESSARY.
- 3 - LIFT BEAMS AS PER D010
- 4 - STORE BEAMS REFERRING TO NOTES ON GENERAL NOTES PAGES.

1. REMOVE BOLTS AT BEAM HANGERS AS SHOWN ON DETAILS ON S501. EVALUATE POSSIBLE DAMAGES TO THE FRAMING ELEMENTS AND REPORT THEM.

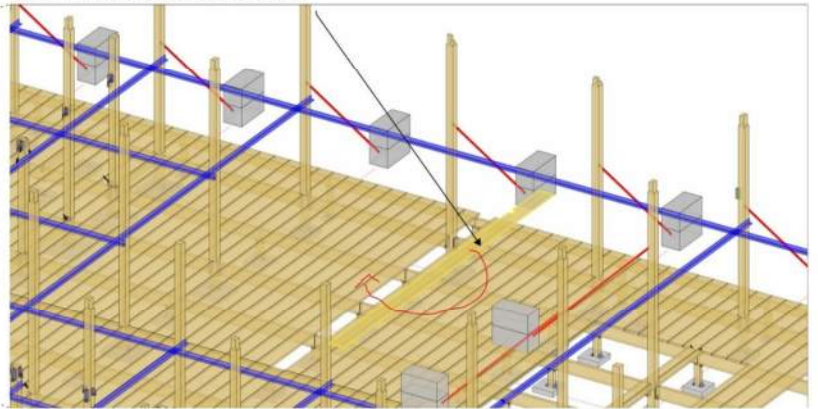
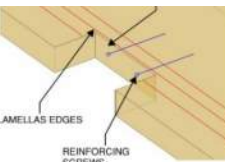
3 - START FROM THIS CENTRAL AREA WHICH WILL ALLOW PANELS TO BE LIFTED WITHOUT TEMPORARILY REMOVE THE WOOD BRACES BETWEEN COLUMNS. PANELS CAN BE LIFTED AND ROTATED.

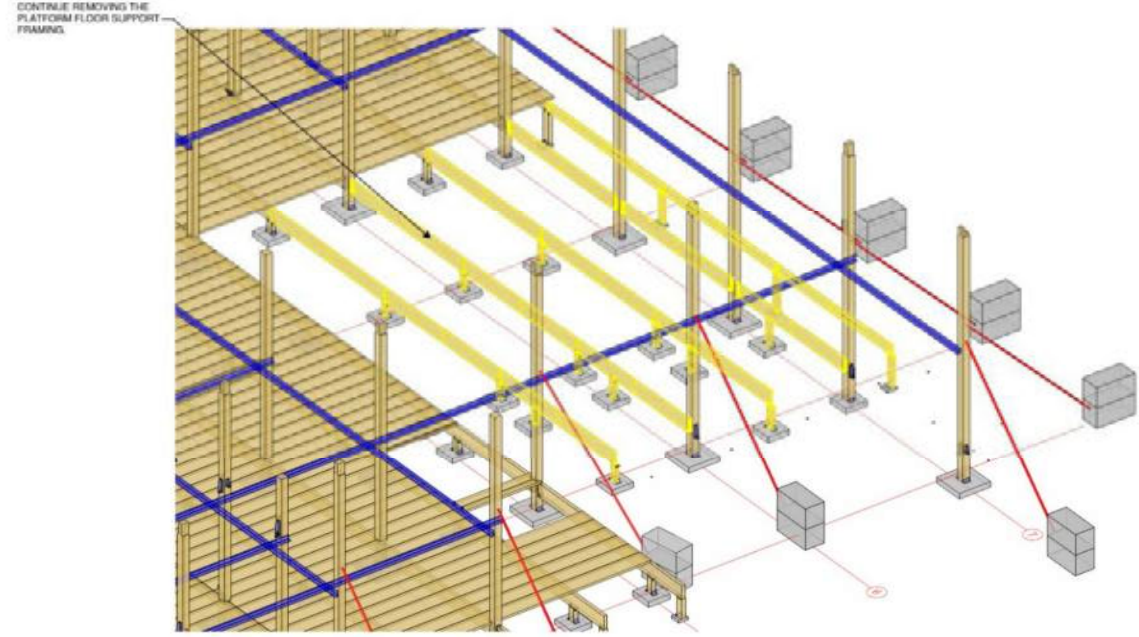
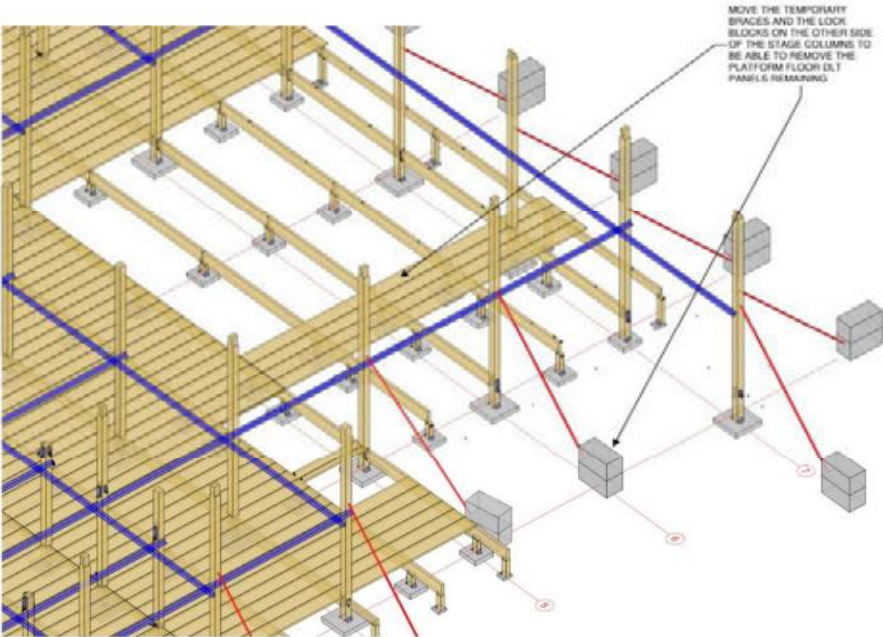
4 - STORE PANELS FOLLOWING RECOMMENDATION PROVIDED BEFORE IN RELATION TO WATER PROTECTION AND LABELING. REFER TO THE GENERAL NOTES PAGE.

NOTE: INSTALL EDGE REINFORCING SCREWS TO THE LOOSE EDGE LAMS BACK TO PANEL WHERE NEEDED.

INSTALL REINFORCING SCREWS TO TIE THIN LAMINATIONS AT COLUMN NOTCHES BACK TO PANEL. SIMILARLY TO WHAT SHOWN IN THE MAGNIFIED DETAIL ON THE SIDE.

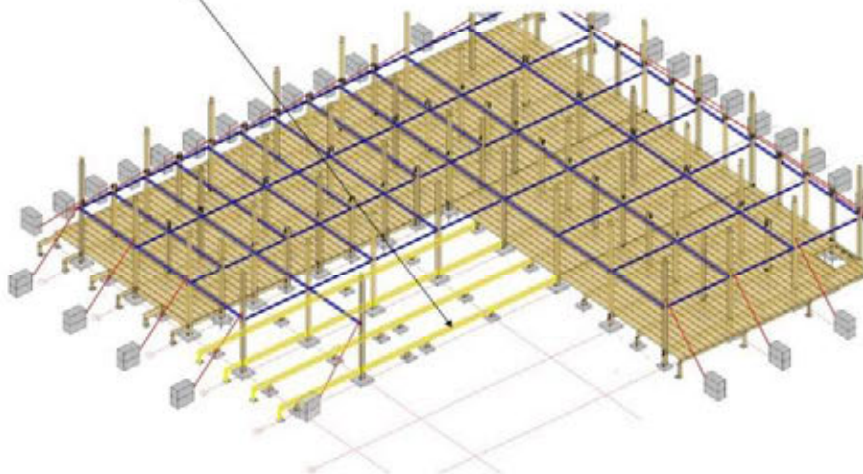
CONTACT STRUCTURECRAFT FOR A MORE DETAILED EVALUATION IF NEEDED. AS GENERAL REMEDIAL FASTENERS 0x1160 RAPID SSF (PT-FH) OR APPROVED EQUIVALENT SHOULD BE USED. SCREWS TO BE CENTERED WITH THE LAMINATION DEPTH. 3" EDGE DISTANCE FROM END GRAIN SHALL BE MAINTAINED.



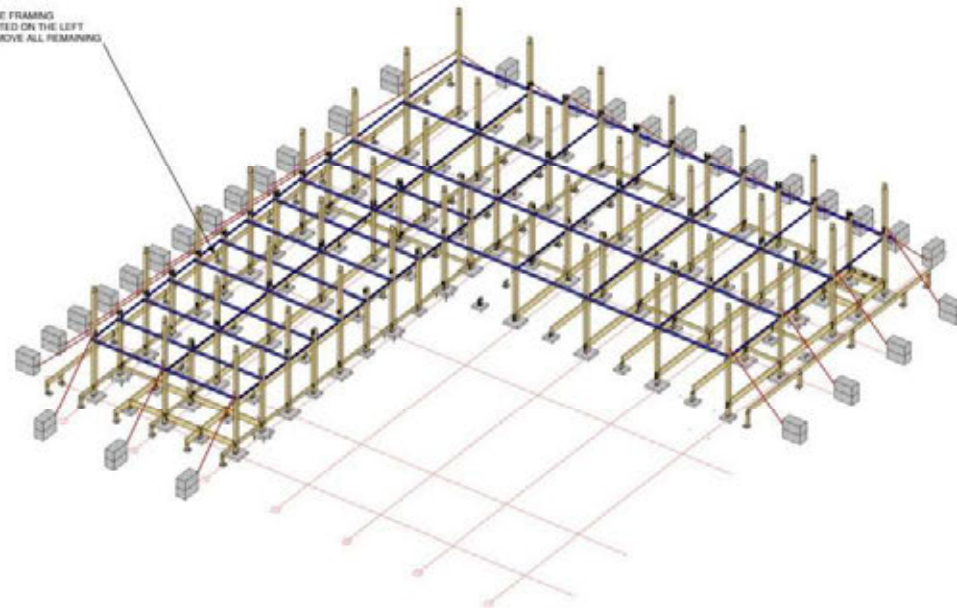


CONTINUE REMOVING PLATFORM FLOOR
SUPPORT FRAMING.

AS PER STEP 12 AFTER REMOVING BEAMS
DISASSEMBLE THE COLUMNS OF THE
SAME AREA.



AFTER REMOVING THE FRAMING
ELEMENTS HIGHLIGHTED ON THE LEFT
PROGRESSIVELY REMOVE ALL REMAINING
DLT FLOOR PANELS





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THE FUTURE OF MASS TIMBER DEVELOPMENT IN DC

Q&A Session:



DAN TANGHERLINI
Managing Director
EMERSON COLLECTIVE



PAUL ELIAS
Executive Vice President,
Construction
REDBRICK LMD, LLC



JJ RIVERS
Principal and
Studio Director
GENSLER



SCOTT CHARNEY
Market Manager,
Mass Timber
QUALITY BUILDINGS LLC



JASPREET PAHWA
NCARB, LEED AP® and
Director of Capital
Planning and
Construction
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HINES



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Engineering Director
STRUCTURECRAFT

