

The Business Case for Mass Timber: Completing the Value Proposition

June 15, 2023

Presented by

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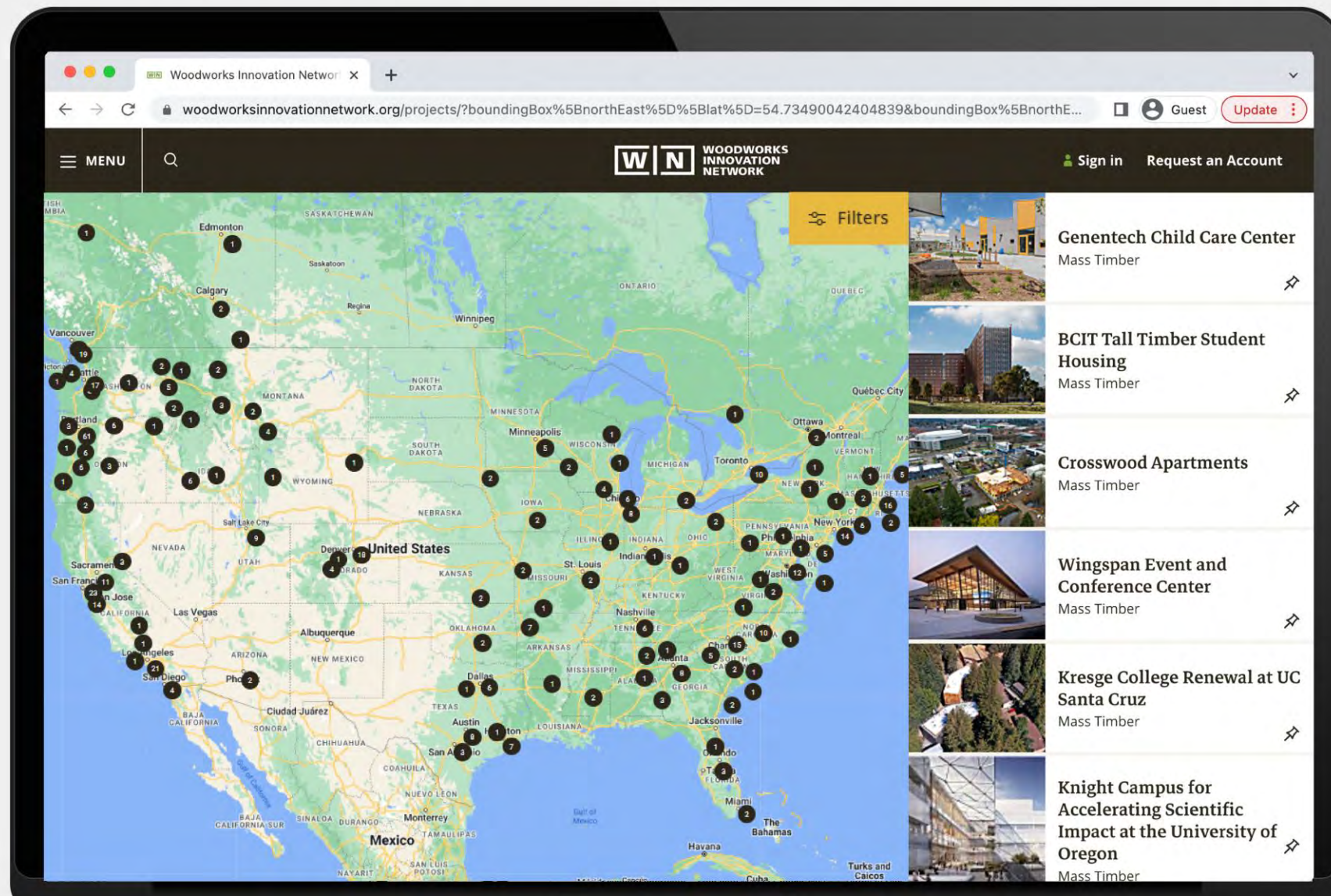
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Andy Quattlebaum Outdoor Education Center, Clemson University / Cooper Carry / Photo Jonathan Hillyer

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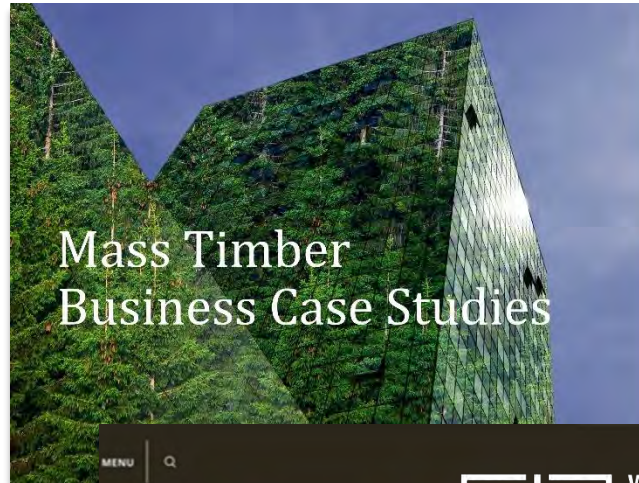


The screenshot displays the Woodworks Innovation Network website. The browser address bar shows the URL: `woodworksinnovationnetwork.org/projects/?boundingBox%5BnorthEast%5D%5Blat%5D=54.73490042404839&boundingBox%5BnorthE...`. The page features a navigation menu, a search bar, and a "Filters" button. The main content area is dominated by a map of the United States, with numerous black circular markers indicating project locations across various states. To the right of the map, a list of featured projects is displayed, each with a thumbnail image, project name, and the organization "Mass Timber".

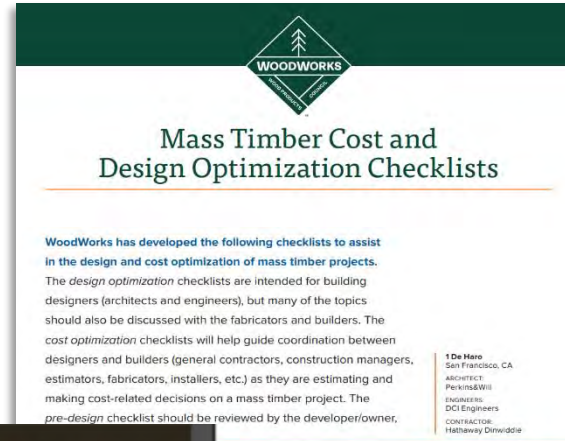
| Project Name | Organization |
|--|--------------|
| Genentech Child Care Center | Mass Timber |
| BCIT Tall Timber Student Housing | Mass Timber |
| Crosswood Apartments | Mass Timber |
| Wingspan Event and Conference Center | Mass Timber |
| Kresge College Renewal at UC Santa Cruz | Mass Timber |
| Knight Campus for Accelerating Scientific Impact at the University of Oregon | Mass Timber |

Resources for Developers/Owners

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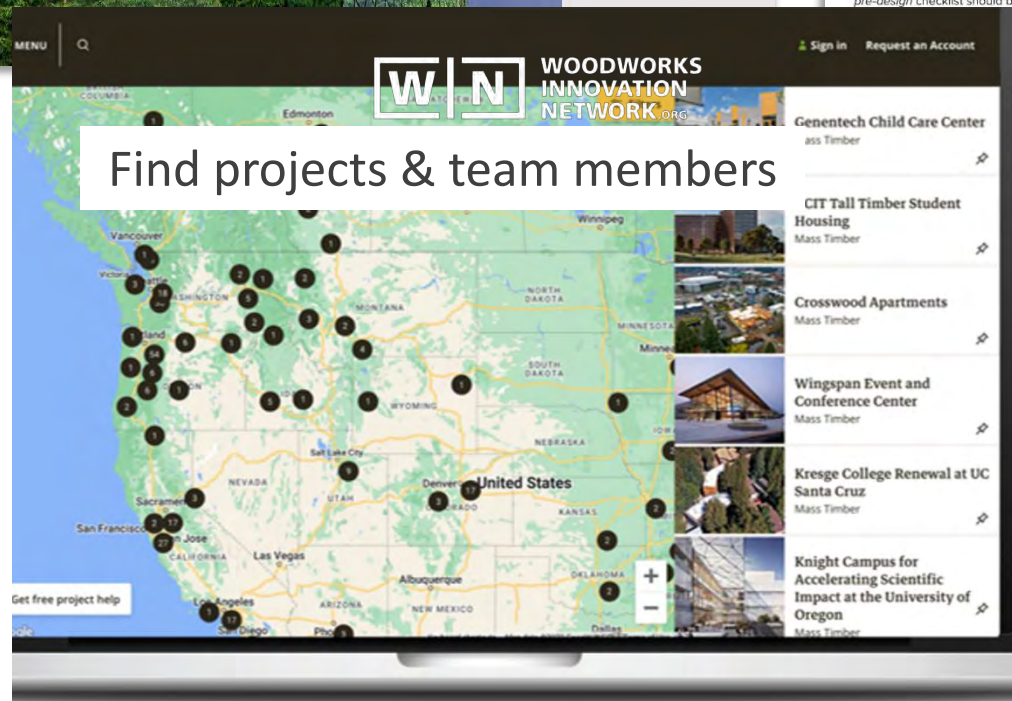
Mass Timber Business Case Studies



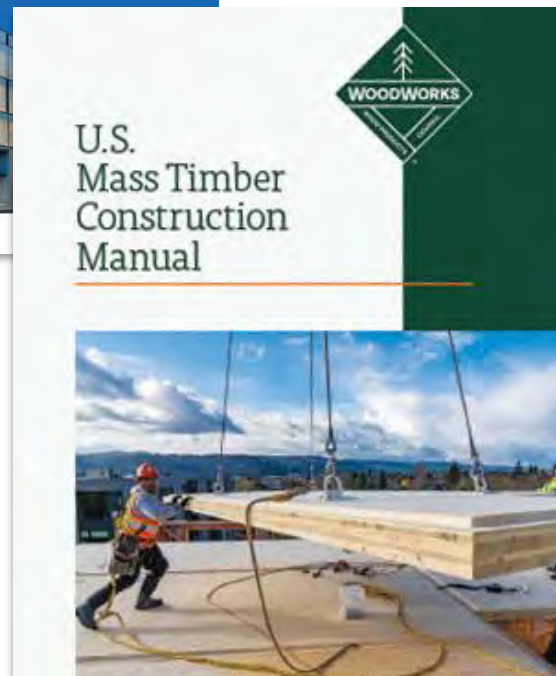
Mass Timber Cost and Design Optimization Checklists

WoodWorks has developed the following checklists to assist in the design and cost optimization of mass timber projects. The design optimization checklists are intended for building designers (architects and engineers), but many of the topics should also be discussed with the fabricators and builders. The cost optimization checklists will help guide coordination between designers and builders (general contractors, construction managers, estimators, fabricators, installers, etc.) as they are estimating and making cost-related decisions on a mass timber project. The pre-design checklist should be reviewed by the developer/owner.

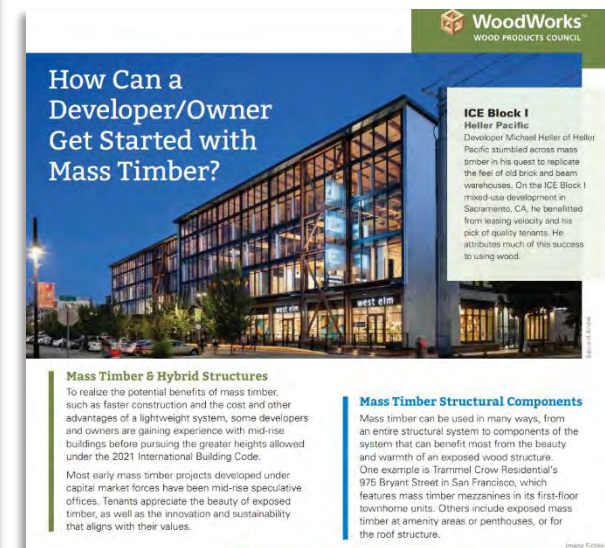
1 De Haro
San Francisco, CA
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U.S. Mass Timber Construction Manual



How Can a Developer/Owner Get Started with Mass Timber?

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ICE Block I
Developer Michael Heller of Heller Pacific stumbled across mass timber in his quest to replicate the feel of old brick and beam warehouses. On the ICE Block I mixed-use development in Sacramento, CA, he benefited from leasing velocity and his pick of quality tenants. He attributes much of this success to using wood.

Mass Timber & Hybrid Structures

To realize the potential benefits of mass timber, such as faster construction and the cost and other advantages of a lightweight system, some developers and owners are gaining experience with mid-rise buildings before pursuing the greater heights allowed under the 2021 International Building Code.

Most early mass timber projects developed under capital market forces have been mid-rise speculative offices. Tenants appreciate the beauty of exposed timber, as well as the innovation and sustainability that aligns with their values.

Mass Timber Structural Components

Mass timber can be used in many ways, from an entire structural system to components of the system that can benefit most from the beauty and warmth of an exposed wood structure. One example is Trammel Crow Residential's 975 Bryant Street in San Francisco, which features mass timber mezzanines in its first-floor townhome units. Others include exposed mass timber at amenity areas or penthouses, or for the roof structure.

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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.



Course Description

Would you like to pitch sustainable mass timber to a client? Are you wondering how mass timber might pencil in a project pro forma? If so, attend this session to learn how to complete value proposition for developers and owners. The aesthetic differentiation and biophilic benefits of mass timber have broad appeal to a wide range of stakeholders, from end users to ESG-investors. Professionals hoping to influence decisions to use mass timber will learn how this appeal can translate to return on investment in an overview of initial findings from WoodWorks' Mass Timber Business Case Study series, written for the developer/owner/investor audience. This session will provide an overview of the case study series highlighting key takeaways. Developers/owners, architects, engineers and builders will all learn how mass timber can create value.

Learning Objectives

1. Discuss the environmental benefits of mass timber and how they resonate with a wide range of stakeholders from occupants to project teams, investors and communities.
2. Understand how the biophilic benefits of wood can contribute to occupant health, tenant appeal and the financial value of a real estate development.
3. Through case study examples, explore code-compliant design of mass timber structures.
4. Learn talking points to translate the biophilic and ESG-related benefits of mass timber into potential value creation for developers, owners, and investors; helping to convince these decision makers to invest in a more sustainable and healthier built environment.

MODERATOR



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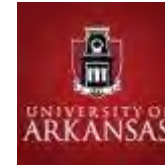
Users:

- **Finance-side**
(investors, developers/owners, appraisers, lenders)
seeking to "make informed decisions"
- **Services-side**
(architects, engineers, contractors)
seeking to "influence decisions"
- **Government-side**
(building code, policy or zoning)
seeking to "regulate decisions"



Contributors

Contributing Developers/Owners & Investors



We are grateful to the developers, owners and investors who have publicly shared their stories and financial data in these case studies.



Lead Analysis Team



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Mass Timber Business Case Studies: Value Creation Analysis

Development Overview

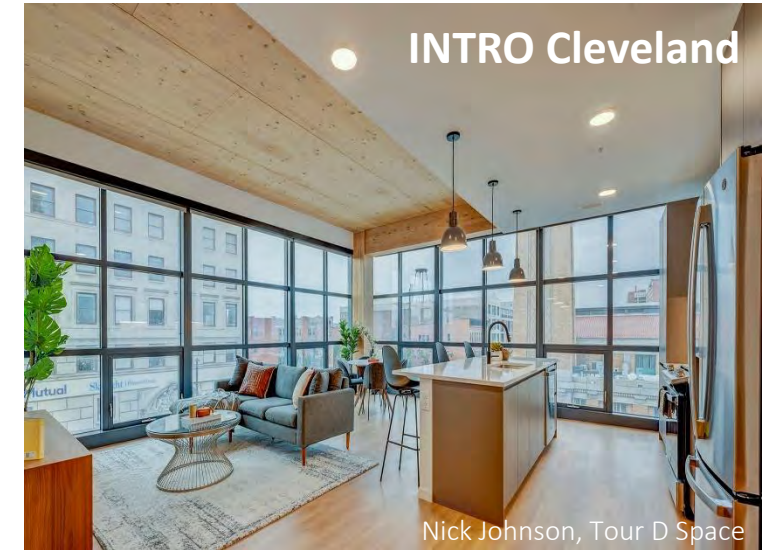
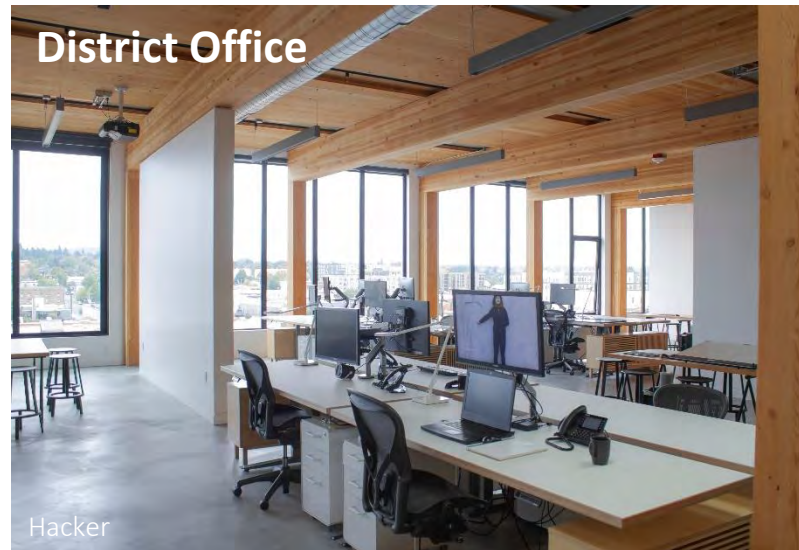
- Property Information
- Product Strategy
- Investment Highlights

Qualitative Discussion

- Challenges
- Lessons Learned
- Successes

Quantitative Overview

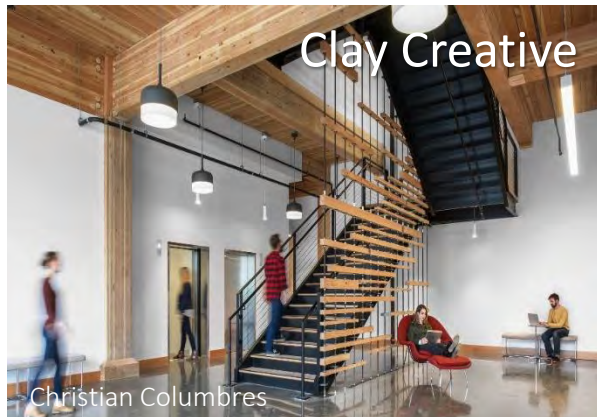
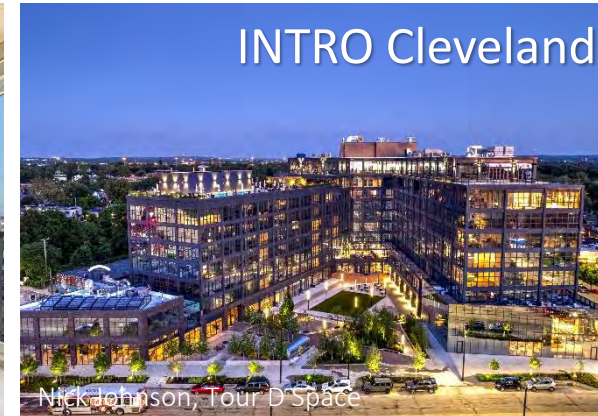
- Development Timeline
- Costs
- Rents
- Lease up



Comparative Return Analysis

| | Market | Pro Forma | Realized |
|-------------------|------------|------------|-------------------|
| Yield on cost | 6.25% | 7.00% | 7.35% |
| Cap rate | 4.75% | 4.50% | TBD |
| Value/rentable SF | \$550/ RSF | \$717/ RSF | TBD (\$800+/ RSF) |
| Leverage | 65% | 65% | N/A |

Mass Timber Business Case Studies: Value Creation Analysis



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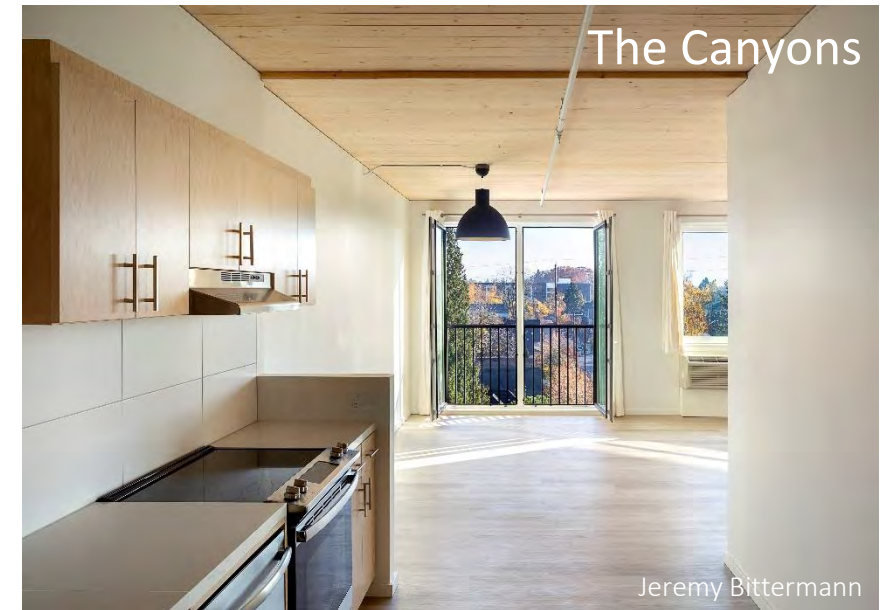
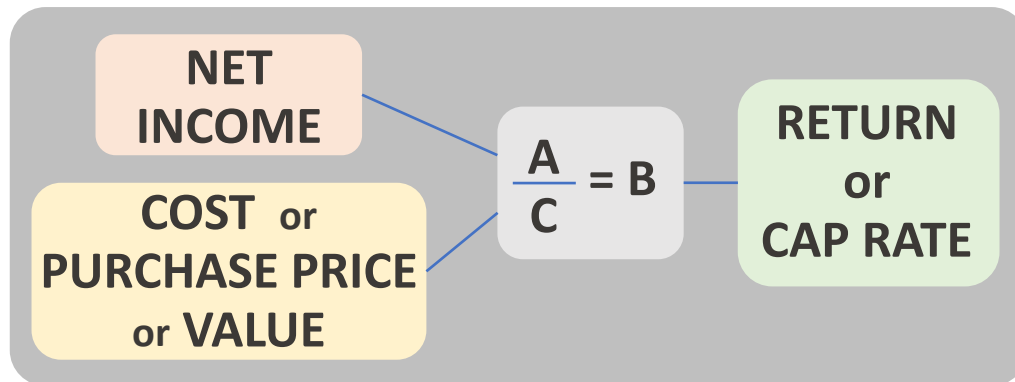
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Analysis

The study uses simple, industry standard means of understanding economic viability

- Net Income (cashflows)
- Cost to develop (purchase price)
- Cap rate (initial return, excluding loans)

Levers for Value Creation



Initial Findings: General

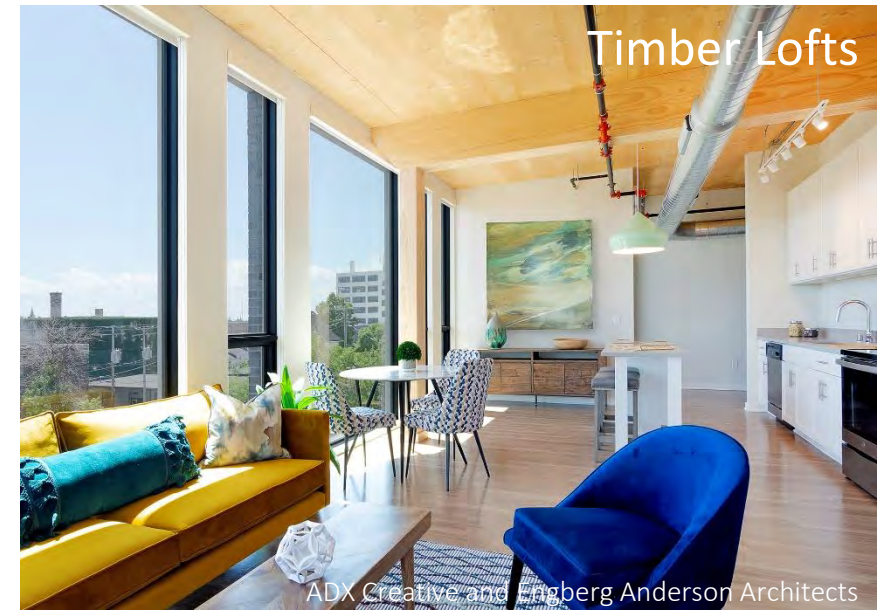
Office & Multifamily Tend to:

Lease up faster than submarket norms;
which translates to:

- Higher net income
- Lower income volatility
- Better IRR
- Lower risk via quicker to refinance/ sell

Attract quality tenants; which translates to:

- Better rent collection
- Better (lower) cap rates
- Better (stable) occupancy





Ascent: New Land Enterprises, Welchmann Enterprises
Image: C.D. Smith Construction



INTRO Cleveland: Harbor Bay Ventures
Image: Nick Johnson, Tour D Space



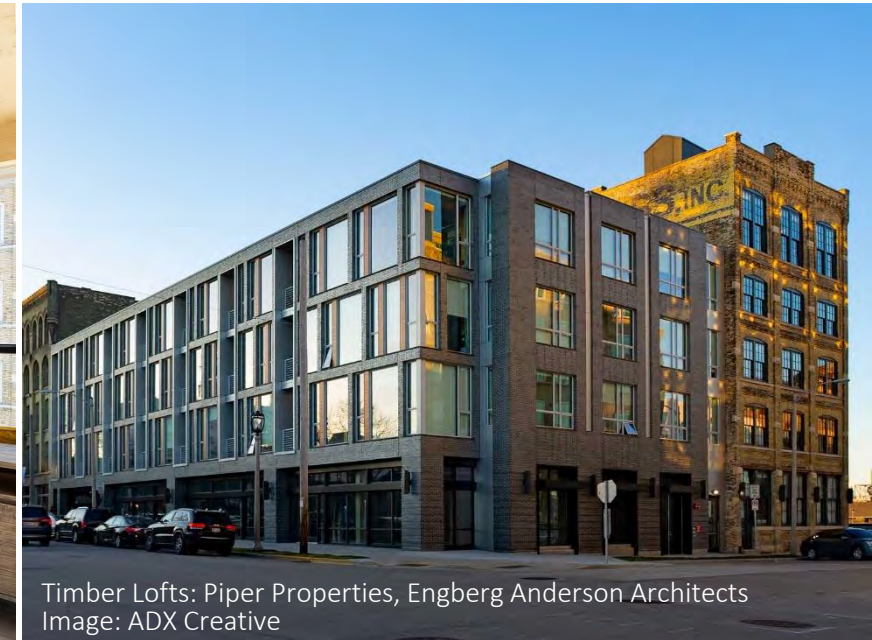
The Canyons: Kaiser Group
Image: Jeremy Bittermann



Adohi Hall, University of Arkansas
Image: Timothy Hursley



Timber Lofts: Piper Properties, Engberg Anderson Architects
Image: ADX Creative and

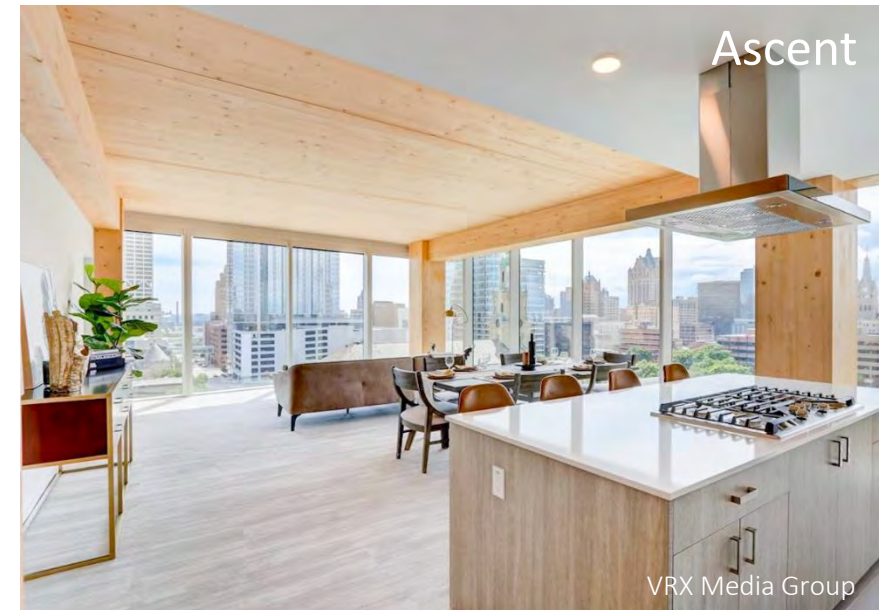


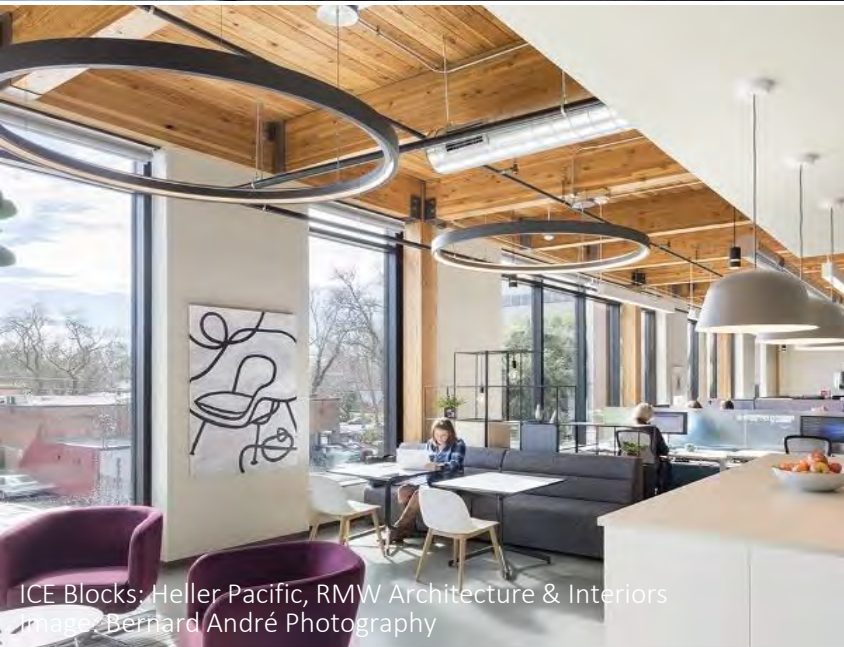
Timber Lofts: Piper Properties, Engberg Anderson Architects
Image: ADX Creative

Initial Findings: Residential

Residents respond to "look & feel"

- Aesthetics seem to be broadly appealing; wider target markets = better market demand
- Robust pre-leasing = lower costs & risks
 - More income sooner = lowers operating & interest budgets
 - Faster to stabilization = faster to refinance
- Tangible distinction = mitigates future supply risk
- Tangible realization of desired brand identities





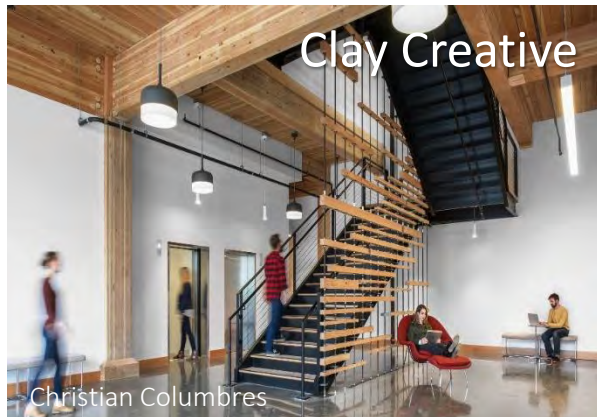
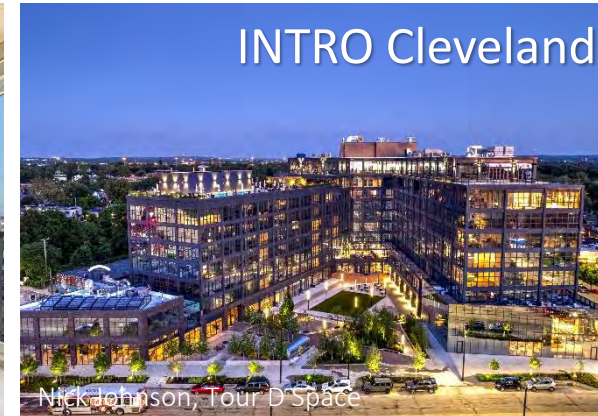
Initial Findings: Office

Firms Attracted for Myriad Reasons

- Most tenants are "creditworthy"
- Desire intangible stakeholder benefits
 - Workforce Desires
 - Regulatory Perceptions
 - Brand Position
- Tend to see impressive pre-leasing
 - Enables better construction debt
 - Sets perceptions of desirable development
- Seeing sustained occupancy via subleasing
 - Tested by COVID disruptions



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QUESTIONS?

This concludes The American Institute of
Architects Continuing Education Systems Course.



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Funding provided in part by the Softwood Lumber Board

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