

Mass Timber Business Case Studies

CONRAD
INVESTMENT MANAGEMENT



Introduction

This document includes a series of case studies prepared by WoodWorks – Wood Products Council and Conrad Investment Management to address the performance of US properties constructed with mass timber structural systems. The goal is to substantively communicate the business case of mass timber buildings in a relevant and relatable fashion across a series of product sub-types, and new case studies will be added regularly.

To compile and analyze the data required for assessment, WoodWorks seeks developers/owners with completed mass timber projects that pass screening criteria for the property sub-type. Criteria are included in the methodology section of this report.

These case studies would not be possible without support from the developers/owners who share their data. WoodWorks is grateful to these firms/individuals for supporting our efforts to promote a deeper understanding of how mass timber might be a useful tool for investors, occupants and the community.

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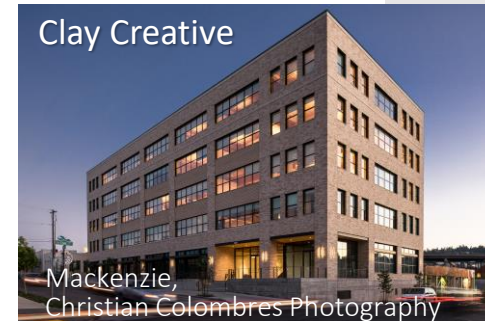
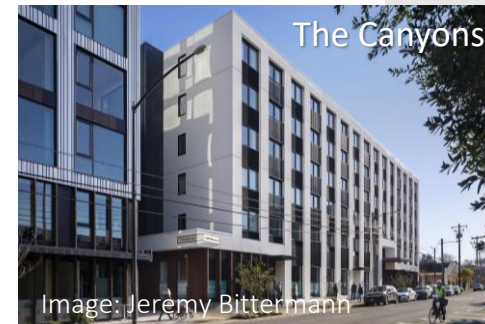
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For-Rent Institutional Housing

The Canyons

PORTLAND, OR



Photo: Jeremy Bittermann

The Canyons: Project Team

Developer
Kaiser Group



Development Partner
Hoosiers Corporation, Japan



Architect
Path Architecture



Structural Engineer
Catena Consulting Engineers



Contractor
R&H Construction



Image: Jeremy Bittermann

The Canyons: Mass Timber Development

Development Overview

Transaction Overview

- Seventy residential units of slightly larger than market norm sizes (808 sf to 1,090 sf)
- Six-story building with ground-floor retail and two smaller one-story buildings with commercial/retail space forming a micro-business shopping alley
- Thirty-five below-grade parking spaces plus 88 bicycle spaces
- Site owned for years as part of a multi-building development build-out approach

Product Strategy

- Hybrid multi-family residential target market
 - Attract both active older adults AND younger residents
 - Universal Design, 100% Americans with Disabilities Act (ADA) compliant and accessible
 - Offer concierge services and other amenities for all ages “luxury” experience
 - Price below independent living, above typical apartment
- Deliver notable sustainability features: EV charging stations, groundwater-supporting system buoyed by rainfall and renewable, locally-sourced timber
- Design for healthy living: 24/7 on-site paramedic, open-air atrium, no shared air ducts
- Sustainable design with mass timber for carbon sequestration and featuring exposed warm wood ceilings constructed with cross-laminated timber (CLT)

Investment Highlights

- Rents: Materially higher rents than nearby market rate apartments
- Costs: At market rate (holding COVID impacts aside) + 10% faster construction time (barring COVID)
- Synergies: Fueled design node distinction; as seen by adjacent condo project sales

Background

- Timing: Delivered at end of 2020; COVID-19 pandemic greatly disrupted senior housing market
- Shifted strategy during pandemic and leased 22 units to start-up for short-term stays



Image: Jeremy Bitterman

Property Information

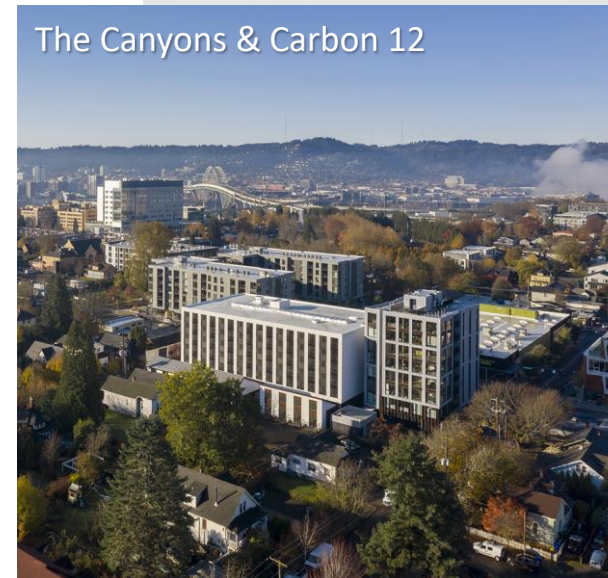
Property timing	Completed November 2020
Submarket	Close-in North Portland
Construction Type	3-A over 1-A
Site size	23,676 sf
Gross building area	113,314 sf
Total units	70 apartments over 6 retail suites
Net rentable/saleable area (total)	60,417 sf (residential) + 15,409 sf (retail)
Parking	37 stalls (underground) / 0.5 ratio

The Canyons: Context & Trends

North Portland Market

Submarket

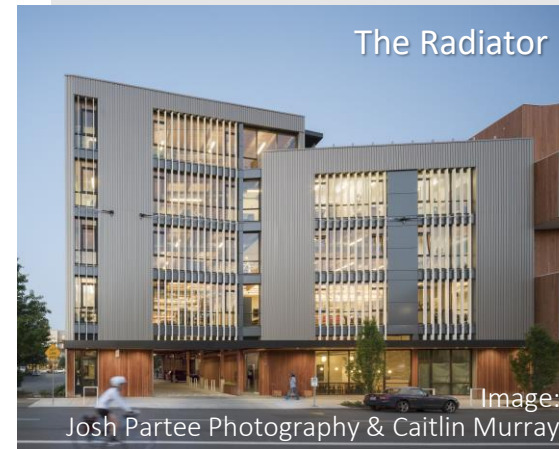
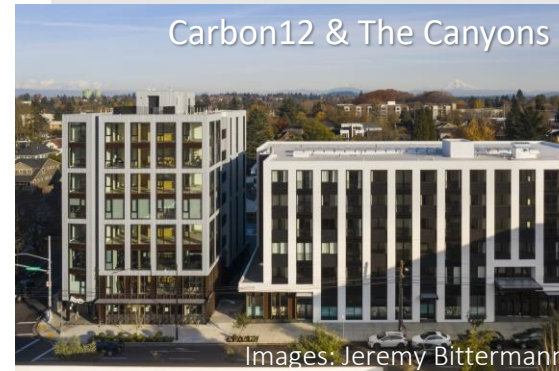
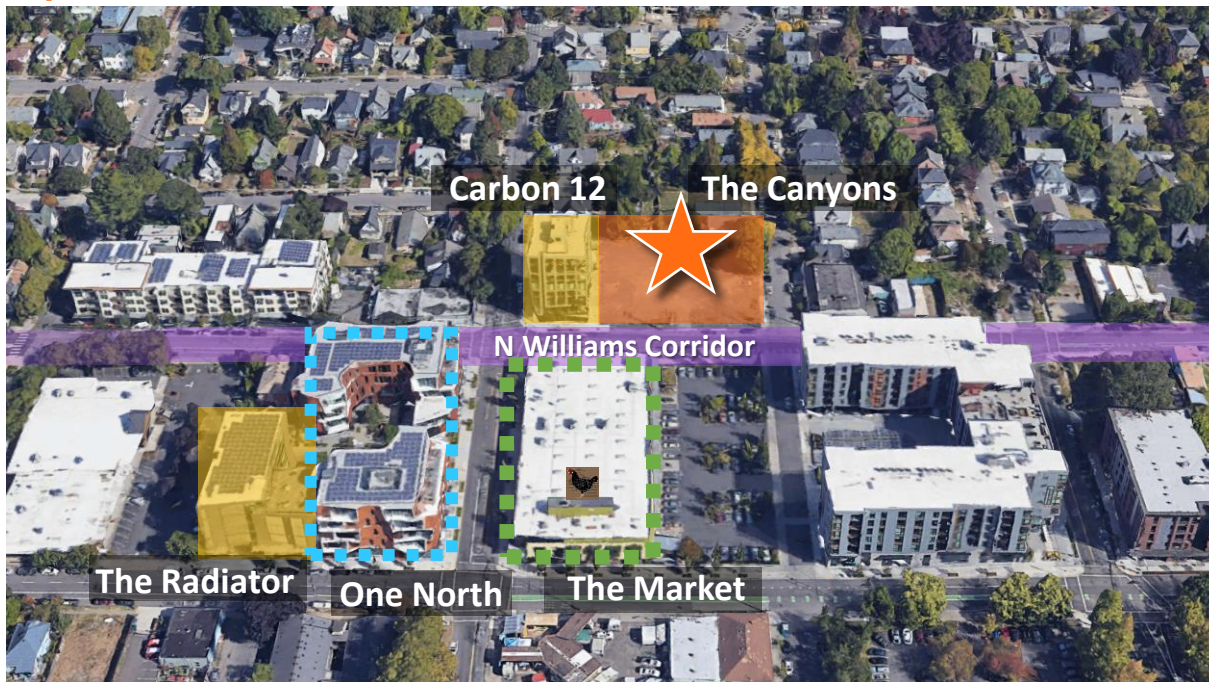
- Design-driven area popular with smaller “creative class” retail and employment
- Williams/Vancouver corridor: Emerging, gentrified close-in submarket
 - Diverse, high-quality dining and shopping options; adjacent to grocery
 - Popular bicycle commute route into city center jobs; walk score – 88; bike score – 94; good bus service; reliably 20 minutes from the airport
- Near multiple large hospital and clinical clusters



Design Innovative Cluster

- The Canyons continues innovative, progressive, and design-oriented new building node; other buildings also developed by project sponsor
 - Carbon12 is a luxury mass timber condo building, and once the tallest mass timber building in the US
- Even though Carbon12 was completed before The Canyons, their adjacency helped sell remaining units at Carbon12

Innovative Design Node on N. Williams Corridor



Quantitative Overview

Investment	
Total project cost	\$32,000,000
	\$457,143 / unit

Land:	Market	Proforma	Realized
	\$3,660,000	@ appraised value	
Construction costs (normalized wo/Covid):	\$186 (light-frame)	\$192 / GSF	\$186
Construction costs (w/Covid delays + adds):	N/A	N/A	\$210 / GSF

NOI				
Apartment	Market	Proforma	Realized	
Rental rates (avg. of renovation + new addition):				
Studio	\$1500	\$1722		15% higher
1-BR	\$2000	\$2924		46% higher
2-BR	\$2500	\$3473		39% higher
Occupancy after 13 months (stabilized)	80%	85%		Normal COVID lease-up

Parking Revenue	Market	Proforma	Realized
In addition to lease	\$125	\$130	\$135

Retail	Market	Proforma	Realized
Retail rental rates	\$32 / RSF/YR	\$32/ RSF/YR	\$0 / COVID
Rent type (e.g., NNN)	NNN	NNN	N/A
Tenant improvement allowance	\$30/sf	\$30/sf	N/A
Occupancy after 12 months	90%	90%	0%

Interview with listing retail broker confirmed substantial pre-leasing occurred (60% of space). COVID 19 pandemic wiped out retail market in latter half of 2020 & all of 2021; forced all retail leased to abandon. Recent activity is positive with five local, design-oriented tenants proceeding to take majority of space.

Return Performance (as of October 2021)			
Metric	Market	Proforma	Realized
Yield on cost – untrended	5.5%	5.7%	Lower (COVID impact on retail)
Cap rate (mkt vs. appraisal subject conclusion)	4.5%	4.5%	Not yet known
Value per unit	\$435,000	\$500,000	Not yet known
Leverage	60%	60%	Equal

Timeline		
Event	Date	Context/Comment
Date of conception (first dollar spent)	January 2018	
Date underwriting finalized (go/no-go decision)	December 2018	Equal
Date equity capital secured	October 2018	Equal
Permitting duration	11 months	Equal
GMP in place	January 2019	
Construction start	February 27, 2019	
Duration of construction (anticipated without COVID)	11 months	10% faster than normal
Duration of construction (realized w/COVID)	12 months	COVID slowed 1 month
Construction completed	September 2020	
Date stabilized (80% occupancy, NOI, or at proforma or refinanced)	Not yet stabilized (as of October 2021)	COVID impacted leasing

The Canyons: Qualitative Overview

Premium Rents; More Stable Tenants

Challenges

- Target clientele, 55 & older active adults, mostly restricted to their homes throughout the COVID-19 pandemic
- Retail component impacted the most by COVID; lost substantial pre-leasing; finally in Fall 2021 some units are leasing
- City design review requires active ground floor retail component but, with retail not leasing due to COVID, banks discounting retail to zero; banks not willing to lend on retail, which impacts loans
- Insurance rates tend to be high for mass timber; difficult to differentiate between higher insurance rates across the board from natural disasters and pandemics vs. higher price for a less known innovative system

Lessons Learned

- Appearing to command premium rents; owner decision to pursue best rents over fast lease-up was a market play to achieve more stable investment
- Slower absorption rate but more stable tenancy; older tenants tend to take longer to decide but, once moved in, typically stay for life and are more stable tenants than transient market renters
- Permitting tradeoffs related to fire code approvals created economic challenges for the one-story live/work units, which were more expensive to build and less competitive in leasing; had these components been constructed with mass timber, which would have easily passed fire testing, developer believes they would have been less expensive, and the differentiated product would have been more attractive to lease and performed better

Successes

- Clear rent premium achieved amid design-oriented submarket
- Open-air, double-loaded corridor leveraged CLT beauty AND provides fresh air at every front door; attractive feature in the era of COVID that appealed to tenants, banks and appraisers; open-air corridor adds initial cost because walls are treated as exterior but lowers operational costs as there is no need for heating or cooling
- Positive economic “spillover”; as soon as construction completed on The Canyons, remaining condos in the neighboring Carbon12 building sold
- The Canyons is the continuation of a design-oriented node established in the current market known for innovative and progressive office, condo, and now apartment buildings; market assessment of the node is positive, and these buildings are achieving premiums



Image: Jeremy Bittermann

Redevelopment/Additions

Timber Lofts

MILWAUKEE, WI



Image: ADX Creative and Engberg Anderson Architects

Timber Lofts: Project Team

Developer
Pieper Properties



Architect
Engberg Anderson Architects



Structural Engineer
Pierce Engineers, INC



Contractor
Catalyst Construction



Image: ADX Creative and Engberg Anderson Architects

Development Overview

Transaction Overview

- Purchased existing historic building with adjacent, small development site
- Building’s historic status created access to \$2 million Historic Tax Credit for renovation
- Supported by existing, related ownership of adjacent lot that provides parking option

Strategy

- Leverage historic charm and deliver market differentiation by connecting old building’s rustic timber beam aesthetic with new building’s exposed cross-laminated timber ceilings and timber frame
- Create more operationally efficient asset via adaptive reuse and new development
 - Redevelop 128-year-old, 5-story warehouse originally built by Pabst Brewing
 - Develop new apartment building with 27 units and ground-floor retail
- Delivery range of consumer choice to ensure rapid lease-up and sustained occupancy by programming studio, 1-BR and 2-BR units and providing for slightly larger units and homes with balconies via the new building

Key Contextual Elements

- Submarket is one where a premium on rents is difficult to achieve; goal was to ensure top rents were realized (rather than “gap” the market’s existing ceiling)
- Part of developer’s sustained, multi-property commitment to transform the street; saving historic charm and building an innovative new structure creates positive spillover effects on the developer’s nearby assets (parking, office and more apartment buildings)

Investment Highlights

- Developer’s proforma accomplished via:
 - Fast lease-up at top-of-market rents
 - Faster construction duration at costs just slightly more than traditional means and methods
 - Market rate leverage procured



Image: ADX Creative and Engberg Anderson Architects

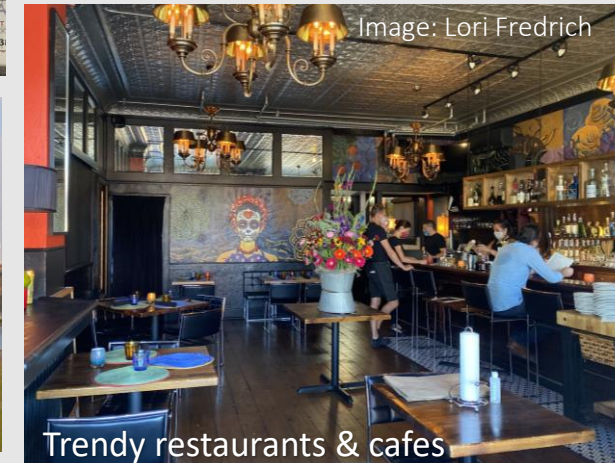
Property Information

Property timing	Completed June 2020		
Submarket	Downtown Milwaukee		
Construction Type	Type 3-B		
Site size	20,208 sf		
Building:	Total	Added	Original
Gross building area	68,400 sf	35,400 sf	33,000 sf
Total units (for rent)	60	27	33
Net rentable/saleable area	38,576 sf		
Parking	Zero owned (on-street parking & optional spots for rent in sister lots)		

Milwaukee Market

Submarket

- Walker's Point Historic District: Lies just south of downtown, showcasing its architectural roots through single family homes ranging from worker's cottages to Italianate-style single-family homes, and warehouse space dating back to the mid-1800s
- One of the few remaining well-preserved neighborhoods in Milwaukee, WI, and once the industrial heart of the city
- A diverse working-class neighborhood that has some of the city's best nightclubs alongside award-winning restaurants and locally-made artisan food products

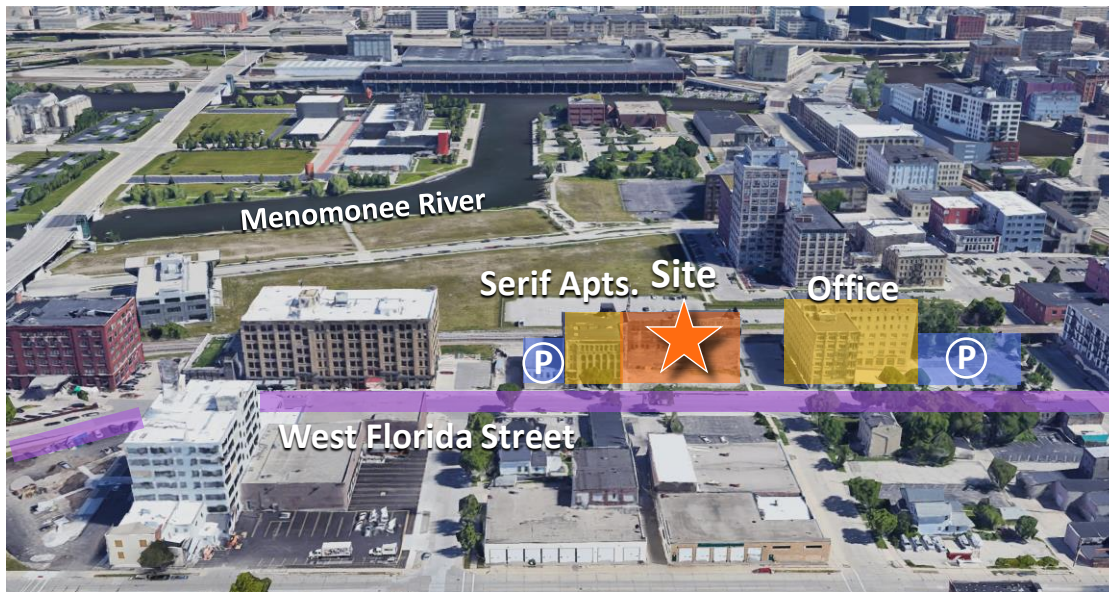


Developer's Investments on the Block

The Street

- Developer owns multiple properties along newly revitalized West Florida Street including Serif Apartments, an office building and parking
- Mass timber addition compliments the old heavy timber aesthetic in this historic industrial neighborhood
- An innovative building system attracts attention to this street and can have a positive impact on the neighboring properties

Harmonizing Old and New



Serif Apartments



Timber Lofts – historic timber



Serif – historic timber



Timber Lofts – mass timber

Image: ADX Creative and Engberg Anderson Architects

Quantitative Overview

Investment

Total project cost	\$14,600,000	Supported by \$2 million Historic Tax Credit (HTC)
	\$243,333 / unit	Returns calculated at after subsidy (i.e., @ \$12m)
Land:	\$435,000	Excludes cost of adjacent parking lot that provides asset its parking resource

	Market	Actual	
Construction costs (entire project):	N/A	\$157 / GSF	
Construction costs (mass timber addition):	\$163 (light-frame)	\$174 / GSF (mass timber)	~6.7% higher

NOI

Apartment	Market	Realized	
Rental rates (avg. of renovation + new addition):			
Studio	\$1173	\$1105	6% lower
1-BR	\$1384	\$1406	2% higher
2-BR	\$1920	\$1892	1% lower
Occupancy after 6 months (stabilized)	95%	93%	

Parking Rates (no cost nor revenue)

	Market	Proforma	Realized
Included or in addition to lease	Additional	Additional	Additional
Rate (paid to sister lots, this property owns zero parking)	\$70-80 / month (daytime only)	\$70-130 / month (day + night)	\$70-140 / month (day + night)

Retail	Market	Proforma	Realized
Retail rental rates	\$18-24 / RSF/YR	\$21 / RSF/YR	Zero (COVID)
Rent type (e.g., NNN)	Modified gross	Modified gross	None
Tenant improvement allowance	N/A	Negotiable	None
Occupancy after 6 months	N/A (COVID)	N/A	None

COVID 19 pandemic wiped out retail market in latter half of 2020 & all of 2021

Return Performance (at Stabilization)

Metric	Market	Proforma	Realized
Yield on cost – untrended	5.5%	5.5%	Equal
Cap rate (mark-to-market if not sold)	5.5 %	5.25%	Equal
Value/rentable SF	N/A	\$329/ RSF	Equal
Leverage	70%	70%	Equal

Timeline

Event	Date	Context/Comment
Date of conception (first dollar spent)	July 2018	HTC secured (and then scaled up from original redevelopment for a larger project)
Date underwriting finalized (go/no-go decision)	Winter 2019	Equal
Date equity capital secured	Oct 2019	Equal
Permitting duration	5 months	Normal wait time
GMP in place	May 2019	Not more difficult to establish
Construction start	May 2019	
Duration of construction	14 months	20% faster than normal
Construction completed	July 2020	
Date stabilized (80% occupancy, NOI, or at proforma or refinanced)	December 2020	Faster lease-up Excludes retail (COVID-impacted)

Notable Aesthetic & Economic Impacts

Challenges

- Project relied on \$2 million in historic preservation tax credits and with that came many requirements from credit administrators at the National Park Service—e.g., making the new addition shorter than the historic building
- Retail demands at all-time lows during COVID pandemic and retail still not leased (as of Oct 2021)
- Overcoming the myth that mass timber is considerably more expensive

Lessons Learned

- Met developer's aggressive leasing assumptions and leased up faster than comps in the submarket, some of which were overpriced by out-of-town developers
- Mass timber contributed to a differentiated product
- Units on the historic side had lower rental rates but leased up faster than units on the new addition
- Learning curve for prefabricated systems impacts timeline since everything (MEP, timber fabrication, etc.) shifts earlier in schedule
- Insurance costs higher than proforma; may have been the general market and not necessarily mass timber
- The sustainable benefits of mass timber recognized by the project team, but surveys suggest that might not have been a priority for tenants

Successes

- Architect, engineer and GC were all on board from the beginning of the design and supportive of pursuing mass timber
- Integrated innovative mass timber structure into an already innovative, complex project
- Entire winter well occupied; people in Wisconsin don't typically move in the winter due to the cold/snow, but because of COVID, were moving all year long
- Mass timber allowed new addition to harmonize with existing historic brick and timber beam building
- Project created positive economic "spill-over" effects via its noteworthy nature that helps fuel positive momentum and perceptions of submarket/street; whole is worth more than the sum of the individual properties

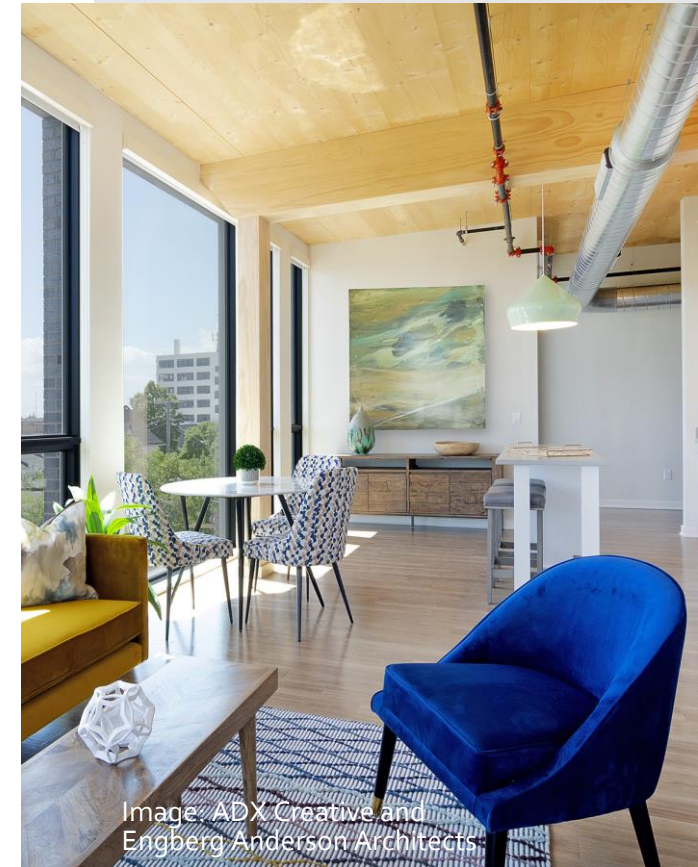


Image: ADX Creative and Engberg Anderson Architects

Institutional Offices



Clay Creative

PORTLAND, OR

Mackenzie,
Christian Colombres Photography

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

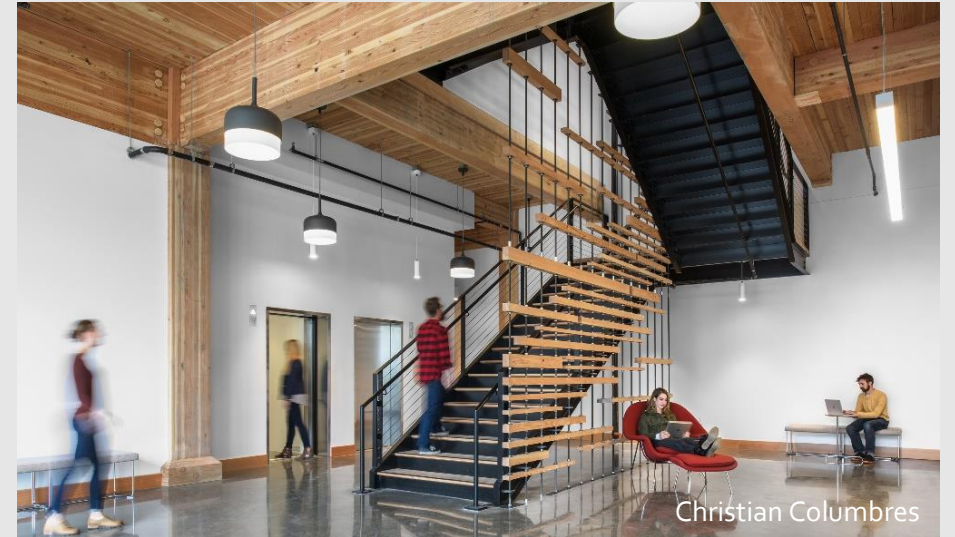
- Embody millennial ethics and goals so the office space creates value to the corporate tenant
- Align design with identity of neighborhood
- Differentiate to avoid direct competition with existing office supply

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



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

Portland Market

Submarket

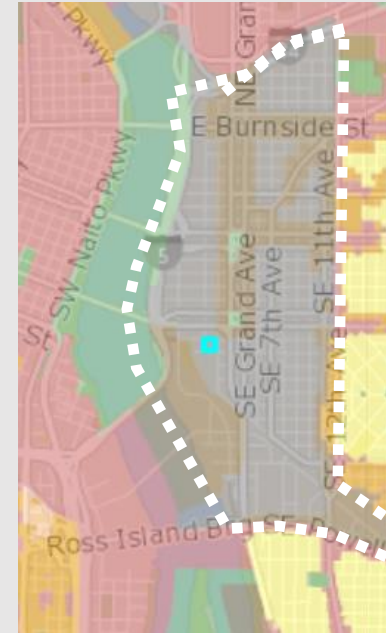
- Central Eastside: Industrial, historic and culturally distinct area
- Small, local industrial and “services” businesses
- Entrepreneurial, makers, no-rules spirit
- Centrally located, across river from downtown and adjacent to charming urban residential detached residential areas
- Restricted, idiosyncratic small-massing zoning; now up-zoned
- New and adaptive reuse development influx including dining, nightlife, entertainment, apartments, office
- Employment and retail users preceded housing and hospitality
- Approximately 18,000 now employed across digital, food, manufacturing, educational, retail, entertainment

Location Highlights

- Well-connected via freeway, light rail, local streetcar and easy walk/bike paths

Office Market

- Historically a “low-rent” area, but no longer; early-cycle “desirable” office started at \$24NNN, rising to \$35NNN by 2017
- Equal or better rents than any submarket; better velocity amid restricted supply
- Portland office market experienced better increases in rents and absorption from 2011 to 2019 than it had in decades



Quantitative Overview

Costs			
	Market	Actual	Realized
Total project cost	\$325 / RSF	\$356 / RSF \$27,250,000	~ 9% higher
Construction costs	\$190 / RSF	\$213 / RSF \$16,250,000 <i>(raised floor plenum HVAC + mass-timber drove premium)</i>	~ 12% higher
Tenant improvement allowance	\$60 / RSF	\$46 / RSF	23% savings
Broker commissions	\$15 / RSF	\$16 / RSF	

NOI			
Office	Market	Proforma	Realized
Office rental rates	\$22.00 / SF/YR	\$24.00 / SF/YR	\$27.00 / SF/YR
Lease structure	NNN	NNN	NNN
Expenses	\$10.00 / RSF/YR	\$8.00 / RSF/YR	\$8.00 / RSF/YR
Load	15% to 18%	18%	18%
Lease term (years)	5 – 7 Years	8.5 Years	10 Years
Occupancy after 18 months (stabilized)	90% – 95%	94%	93%

Parking Revenue			
	Market	Proforma	Realized
Included or in addition to lease	Additional	Additional	
Rate	\$125 / Month	\$150 / Month	\$25 / Month

Retail			
	Market	Proforma	Realized
Retail rental rates	NA	NA	NA
Rent type (e.g., NNN)	NA	NA	NA
Tenant improvement allowance	NA	NA	NA
Occupancy after 18 months	NA	NA	NA

Return Performance (at Stabilization)			
Metric	Market	Proforma	Realized
Yield on cost – untrended	7.50%	7.50%	7.70%
Cap rate (mark-to-market if not sold)	5.75%	6.00%	5.75%
Value/rentable SF	\$375 to \$450 / RSF	\$460 / RSF	\$479 / RSF
Leverage	60%	65%	67%
Gross leveraged IRR (mark-to-market if not sold)	N/A	Not measured	Higher
Gross leveraged equity multiple (deal level)	1.75x	1.90x	2.00x

Timeline		
Event	Date	Context/Comment
Date of conception (first dollar spent)	End of 2012	Very early-cycle
Date underwriting finalized (go/no-go decision)	Early 2015	Early-cycle
Date equity capital secured	Early 2015	
Permitting duration	7 months	Longer than standard methodology
GMP in place	Early 2015	
Construction start	Spring 2015	Mid-cycle
Duration of construction	Approx. 12 months	Shorter than standard methodology
Construction completed	Spring 2016	Mid-cycle
First TI completed	Spring 2016	
Date stabilized (80% occupancy, NOI, or at proforma or refinanced)	Summer 2016	Mid-cycle

Mindset and Diligence Outweigh Experience

Challenges

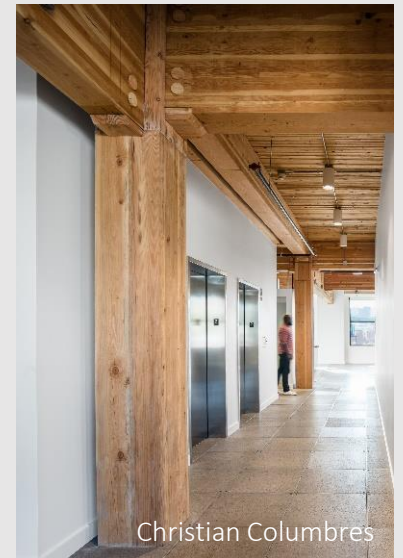
- **Permitting:** Took longer and was more complicated due to more nuanced or “new” details (AHJs risk-averse mindsets)
- **Iterative design process:** Designers needed to test design options to balance aesthetics, function and cost
- **Construction:** Subcontractors underestimated the implications of mass timber on their trade (absent a strong GC, would have driven more change orders and/or delays)
- **Insurance:** More expensive than traditional buildings
- **Financing:** Limits potential lenders as some are risk and/or effort averse

Lessons Learned

- **Permitting:** Approval agency leadership really matters
- **Innovative team mindset:** Need a team willing to explore new options and learn from mistakes to advance innovation
- **Construction:** Detail-oriented GC needed to offset subcontractor inexperience and preference for “easy” button
- **Insurance:** Engage early and budget for higher costs
- **Financing:** Select lender with an internal champion for something different; don’t worry about obtaining cheapest competitive rates, size or terms
- **Cost:** Mass timber structures can cost more than those of other materials

Successes

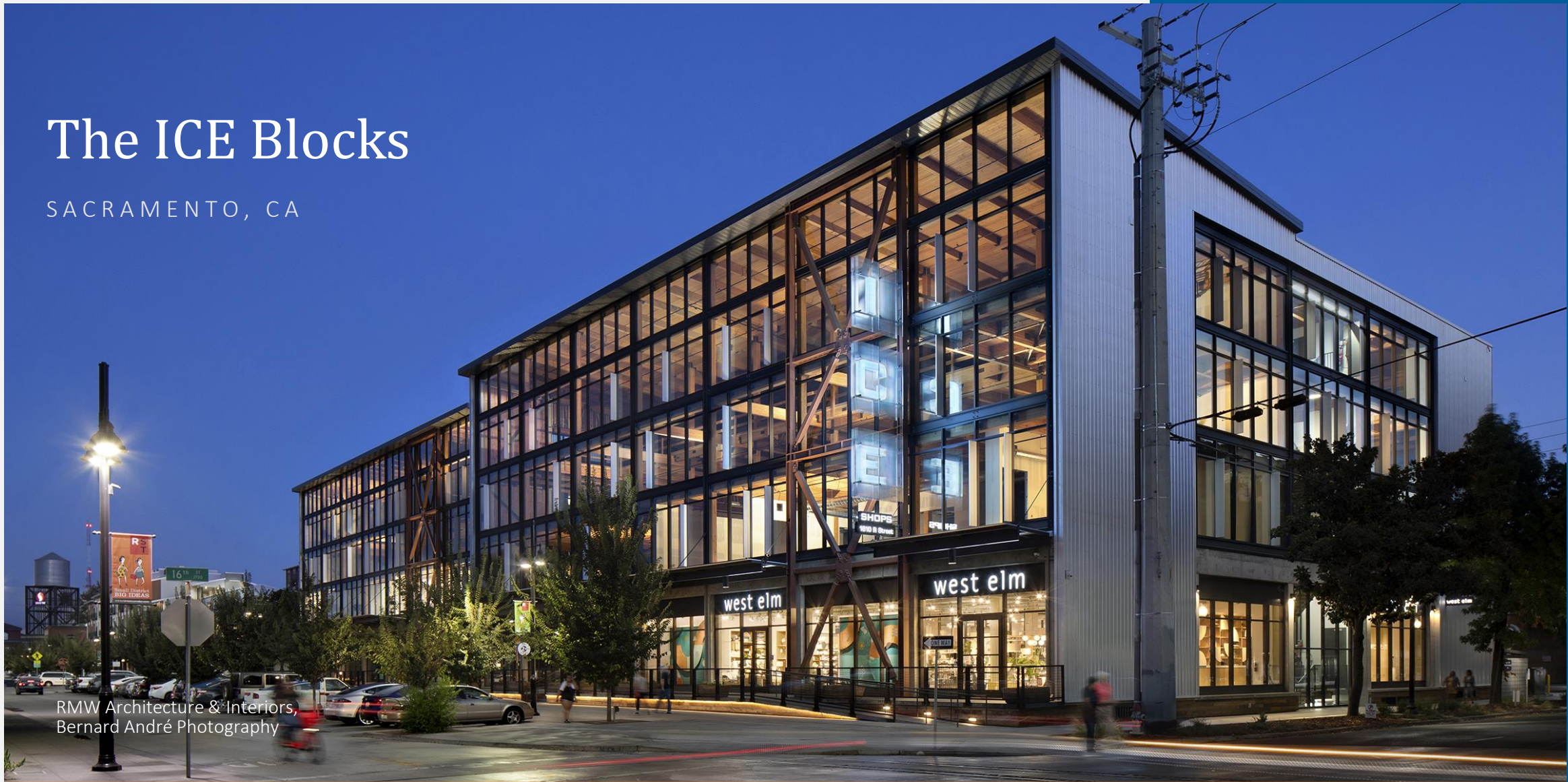
- **Delivery speed:** Fast construction, enabled TI build-out concurrent with core and shell, achieving occupancy sooner
- **Leasing:** Achieved better-than-market leasing velocity and attracted credit-worthy, desirable tenants at proforma rents
- **Absorption:** Tenant demand outpaced submarket peers
- **Occupancy:** Subsequent sub-leasing and releasing has been strong
- **Synergies:** Costs of underfloor MEPF systems and ceiling finishes can be partially offset with mass timber
- **Tenant layout:** Mass timber facilitates adapting to non-standard tenant demands, inclusive of bathroom locations (not as constrained by structural elements)



Christian Columbres

The ICE Blocks

SACRAMENTO, CA



RMW Architecture & Interiors,
Bernard André Photography

The ICE Blocks: Project Team

Developer
Heller Pacific



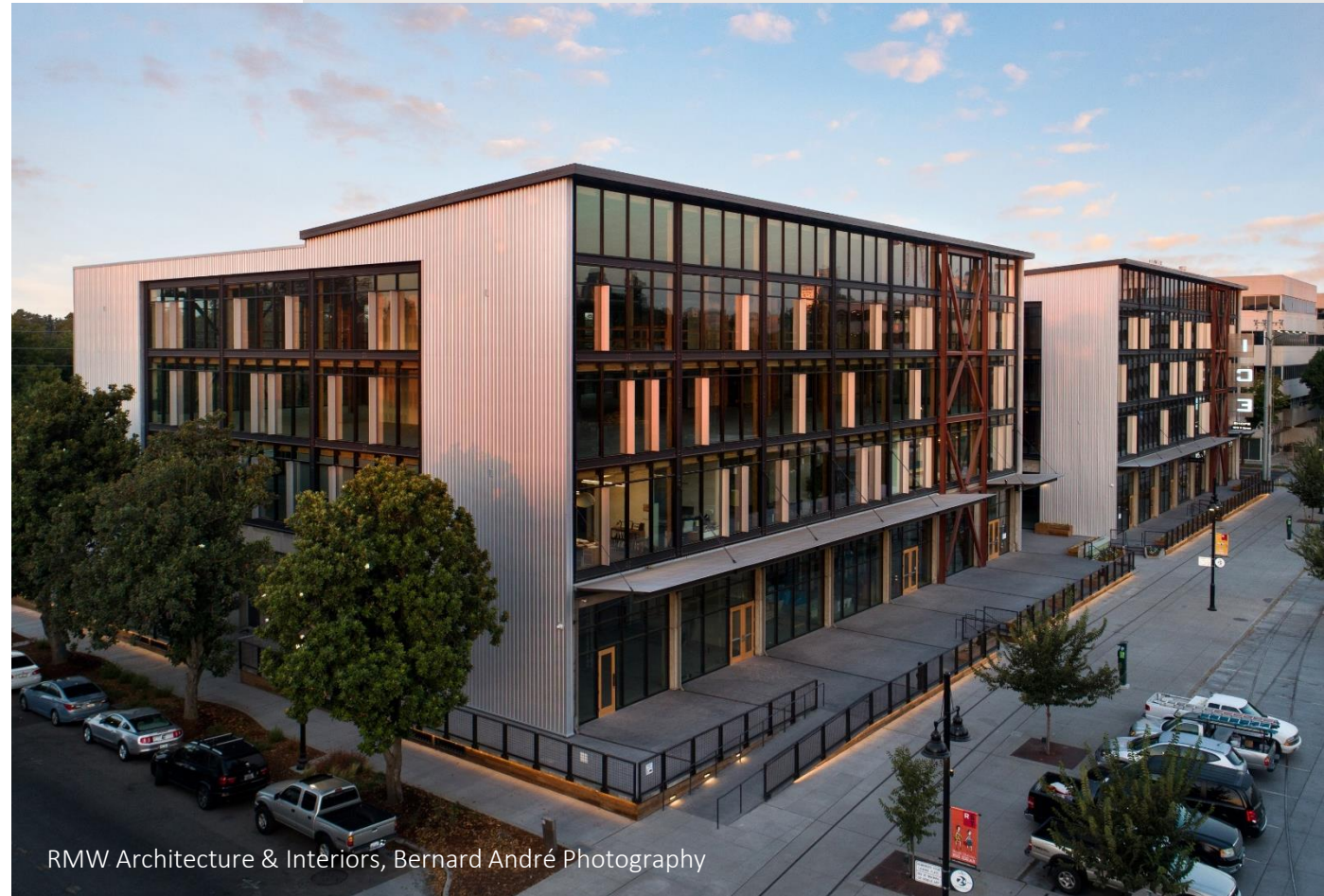
Architect
RMW Architecture & Interiors



Structural Engineer
Buehler Engineering



Contractor
Ascent Builders



RMW Architecture & Interiors, Bernard André Photography

The ICE Blocks: Mass Timber Development

Development Overview

Transaction Overview

- Started as a multi-building adaptive reuse of dilapidated, historic brick and beam industrial warehouses; one building was lost to fire just before construction
- Sought similar feel to old warehouses in the new building

Strategy

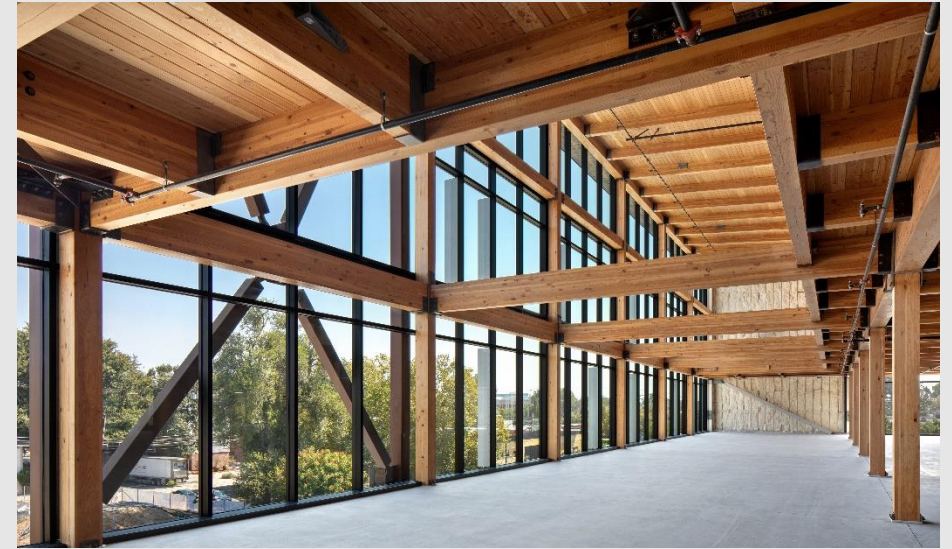
- Redevelop lost building using mass timber to create a look and feel that resonated with other brick and beam projects and was differentiated from the bulk of Sacramento office inventory

Investment Highlights

- Low basis
- Excellent location, heavy traffic counts and foot traffic
- Building supports tenants' brand identity

Background

- Timing: Developed early in cycle
- Sponsor: Over 30 years of experience in the market
- Underwriting:
 - Built on "gut" feeling
 - Ignored negative market data on vacancy rates due to belief in product differentiation
 - Wood provides instant warmth and character



Property Information

Property Name	The ICE Blocks
Submarket	Midtown Sacramento CA
Construction Type	Type 1-A/3-B
Site size	54,000 sf
Gross building area	170,000 sf
Net rentable area (total)	132,000 sf
NRSF retail	32,000 sf
NRSF office	100,000 sf
Actual load	16%
Parking ratio	1/1000
Nature of parking	Office tenants

The ICE Blocks: Market Context

Sacramento Market

Submarket

- Midtown is the cultural core of the city
- With new development came an influx of dining, nightlife and entertainment options
- Demand for living in the area attracted new developments and revitalization

Top Private Employers¹

- Kaiser Permanente: 17,538
- Sutter Health: 15,505
- Dignity Health: 7,000
- Intel Corp.: 6,200

Location Highlights

- Midtown Sacramento
- Ideal location along Blue and Gold light rail lines

Office Market (Q2 2018 data)²

- Office vacancy 10.4%
- 541,226 SF of office supply under construction and coming to market
- Sacramento recorded 527,499 SF absorbed YTD Q2 2018
- Total Sacramento office supply: 89,132,771 SF

Sources:

1. Sacramento Business Journal – Largest Sacramento Area Private-Sector Employers
2. Colliers International – Research & Forecast Report Sacramento | Office Q2 2018



Quantitative Overview

Costs			
	Market	Actual	Realized
Total project cost	\$356 / RSF	\$367 / RSF	~3.2% higher
	\$47,000,000	\$48,500,000	
Construction costs	\$193 / RSF	\$205 / RSF	~5.9% higher
	\$25,500,000	\$27,000,000	
Broker commissions	\$9 / RSF	\$11 / RSF	~25% higher

NOI			
Office	Market	Proforma	Realized
Office rental rates	\$27.00 / SF /YR	\$31.80 / SF/YR	\$34.80 / SF/YR
Lease structure	FSG	FSG	FSG
Tenant improvement allowance	\$60 / RSF	\$60 / RSF	\$65 / RSF
Expenses	\$10.2 / RSF/YR	\$10.2 / RSF/YR	\$10.2 / RSF/YR
Load	N/A	N/A	16%
Lease term (years)	5 – 7 years	N/A	8 – 12 years
Occupancy after 18 months (stabilized)	87.8%	95%	95%

Parking Revenue	Market	Proforma	Realized
Included or in addition to lease	Additional	Additional	Additional
Rate	\$150 / month	\$150 / month	\$175 / month

Retail	Market	Proforma	Realized
Retail rental rates	\$42.00 / RSF/YR	\$36.00 / RSF/YR	\$42.00 / RSF/YR
Rent type (e.g., NNN)	NNN	NNN	NNN
Tenant improvement allowance	N/A	\$100 / RSF	\$150 / RSF
Occupancy after 18 months	85.0%	95%	95%

Return Performance (at Stabilization)			
Metric	Market	Proforma	Realized
Yield on cost – untrended	7.25%	7.68%	Higher
Cap rate (mark-to-market if not sold)	6.50%	6.00%	Lower
Value/rentable SF	N/A	\$450 / RSF	Higher
Leverage	65%	65%	Equal
Gross leveraged IRR (mark-to-market if not sold)	N/A	N/A	Higher
Gross leveraged equity multiple (deal level)	N/A	2.00x	Higher

Timeline		
Event	Date	Context/Comment
Date of conception (first dollar spent)	Early 2016	Significantly shorter
Date underwriting finalized (go/no-go decision)	Early 2016	Equal
Date equity capital secured	Early 2016	Significantly shorter
Permitting duration	7 months	Significantly shorter
GMP in place	Fall 2016	Longer
Construction start	Fall 2016	Equal
Duration of construction	Approx. 18 months	Shorter
Construction completed	Spring 2018	Shorter
First TI completed	Spring 2018	Shorter
Date stabilized (80% occupancy, NOI, or at proforma or refinanced)	Early 2019	Shorter

Distinctive Interiors Attract Quality Tenants at Competitive Rents

Challenges

- **Details matter:** “When everything is exposed, it really matters how you run your conduit”
 - Subs must focus on aesthetics with mass timber
 - Needed to be highly detail oriented during design
- **Managing cost:** Subs did not price the job with so many pre-construction meetings, creating friction
- **Tenant improvements and releasing:** Demising walls are not easy to move, “finished spaces are what they are”
- **Costs:** Burned through contingency plus a few extra dollars
- **Leasing:** Office leased up fast, retail a little slower due to rigorous selection process
- **Broker commissions** were higher than anticipated due to higher office rents
- **Capital partners:** “Stuck it out” accepting uncertainty and delays caused by the fire

Lessons Learned

- **Expenses:** Only slightly more expensive to deliver differentiated space that is instantly warm and inviting
- **Execution:** Need to be very focused on the details
- **Subs:** Limited availability of capable subs can constrain ability to use mass timber
- **Rents:** Did not achieve above market rents
- **Leasing:** “It turns out architecture *DOES* matter even in a government-centric city” – Sponsor

Successes

- **Entitlements:** Limited pushback on entitlements/permits
- **Community/municipal support:** Sacramento embraced the innovation and environmental benefits of mass timber and came to table as a partner to resolve challenges
- **Leasing:** Project leased up quickly as it was being built
- **Renewals:** Leasing agent believes it will lease at a premium on second go-around: “I wish I had 4 more of them to lease up”
- **Tenants enjoyed** the natural elements, modern look, natural light and glass, and general “newness” of the building



Methodology

For-Rent Institutional Housing Screening Criteria

- **Scale:** Large enough to satisfy institutional interest, constraints and objectives
- **Impetuses:** Sponsors are “market driven and bound” (as opposed to non-market actors who do not have traditional return-oriented motives)
- **Location:** City and/or submarket scale is sufficient to enable comparative reference and generally representative of how markets function across the nation
- **Perspective:** The project team had sufficient experience to enable and ensure informed alternative (non-timber) approaches were considered
- **Asset Class:** Focus on traditional asset class characteristics of multifamily for-rent, with limited or no additional uses
- **Status:** In pre-development, under construction, in lease-up or occupied

Redevelopment/Additions Screening Criteria

- **Scale:** Adaptive reuse that uses mass timber in additions, either horizontal additions increasing the building footprint or vertical additions increasing density of existing buildings
- **Impetuses:** Sponsors are “market driven and bound” as well as non-market-driven actors like smaller local builders, historic/cultural preservation and passion projects
- **Location:** City and/or submarket scale is sufficient to enable comparative reference and generally representative of how markets function across the nation
- **Perspective:** The project team had sufficient experience to enable and ensure informed alternative (non-timber) approaches were considered
- **Asset Class:** Very broadly defined
- **Status:** At any stage of redevelopment

Institutional Offices Screening Criteria

- **Scale:** Large enough to satisfy institutional interest, constraints and objectives
- **Impetuses:** Sponsors are “market driven and bound” (as opposed to non-market actors like foundations or governments who operate outside of capital market forces)
- **Location:** City and/or submarket scale is sufficient to enable comparative reference and generally representative of how markets function across the nation
- **Perspective:** The project team had sufficient experience to enable and ensure informed alternative (non-timber) approaches were considered
- **Asset Class:** Focus on traditional asset class nomenclature and distinction (office)
- **Status:** In pre-development, under construction, in lease-up or occupied

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