

Mass Timber Builder's Risk Insurance: Strategies for Success

Credits: 1.0 AIA/CES LUs, 1.0 PHD credit, 0.10 ICC credit (no HSW)

MASS TIMBER+SM
OFFSITE CONSTRUCTION CONFERENCE

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WoodWorks | The Wood Products Council

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



Course Description

This course explores the landscape of mass timber builder's risk insurance, with insights from an insurance broker and insurance carrier on how they collaborate to navigate insurance challenges and manage cost considerations to support project success. Attendees will gain a well-rounded understanding of how to procure builder's risk insurance, how insurance considerations impact design choices, and proactive engagement with insurers that can streamline the process, promote safer building practices, and improve project outcomes.

Learning Objectives

1. Understand the roles and perspectives of the insurance broker and insurance carrier in the builder's risk insurance process to facilitate better project coordination and risk management.
2. Identify key risks associated with mass timber construction and understand how insurers evaluate builder's risk policies.
3. Learn what information is required to submit a builder's risk insurance application, including project details, construction specifications, fire protection measures, and risk mitigation strategies.
4. Explore strategies to streamline the insurance process, promote safer building practices, and integrate insurance considerations into early-stage design decisions to improve project feasibility and success.

What is new in Mass Timber Insurance?

Evolving Strategies, Some Market Adoption, & Expanding Occupancy Segments

Zurich Construction Mass Timber Builders Risk

Our Strategy



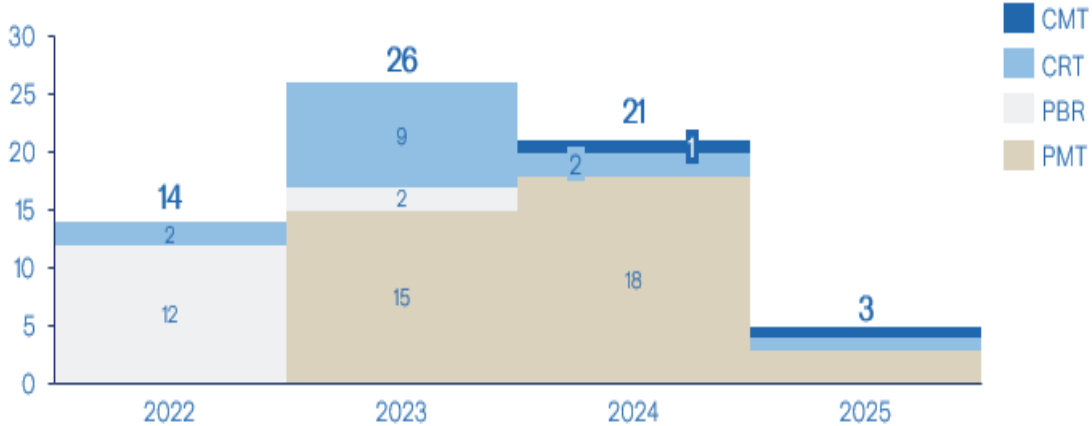
Zurich views mass timber (commonly referred to as CLT or Glulam) as its own, distinct construction material, separate from traditional light wood frame.



- Zurich U.S. can provide **capacity up to \$50M** per mass timber project for qualifying risks.
- Zurich U.S. provides protection for mass timber projects via specialized **MTMBR (Master Builders Risk)** and **MTPBR (Project Builders Risk)** policy products.
- Zurich's Mass Timber solution is intended to provide meaningful and needed capacity in order to support our **current construction clients**.
- Zurich's new (required) **Mass Timber Questionnaire** is tailored to the unique project specifics that Zurich Risk Engineers will need to properly evaluate the risk.
- Zurich's trusted **Risk Engineers are engaged on every project**, providing skilled, mass timber specific insights that support customers through the project lifecycle.



Count of Policies



Expanding Occupancy Segments

New York – 500-unit apartment complex (Staten Island); \$700m Redevelopment of Governor’s Island	
32 Story High Rise, Milwaukee Wisconsin	
Large Manufacturing Facility, Chesterfield County, Virginia	
Pharmaceutical Manufacturing, Durham, North Carolina	
Data Center, Northern Virginia	
Mass Timber Manufacturing Facility, Millersburg, Oregon	

Mass timber perceptions in the Insurance market

Opportunities and challenges of insuring mass timber

Opportunities

Mass timber (MT) has better fire performance than conventional dimensional lumber (light frame structures).

Construction timelines are reduced due to the prefabricated nature of mass timber elements.

Offsite fabrication is performed in controlled manufacturing environments.

MT use allows for improved site safety and reduced onsite waste.

MT is a more sustainable product with reduced carbon emissions over conventional materials (e.g., steel/concrete).

MT is aesthetically pleasing when left exposed (without encapsulation), promoting psychological well-being for the occupants.



Underwriting considerations

The use of any wood product elevates other exposures, including but not limited to Nat Cat, moisture/mold, supply chain bottlenecks, pre-fab, or modular elements.

Compressed construction schedules can contribute to costly mistakes, potentially increasing frequency and severity of claims.

Pre-fabricated elements often present challenges for transit, offsite storage, and tie-ins to existing project elements will be considered in the underwriting process.

Site-specific security measures must be implemented and are required for review by insurers prior to binding coverage.

Lumber costs are more volatile (on average) than conventional building materials, posing a risk for inflated replacement costs or sizeable value changes.

MT without encapsulation will burn faster, (reducing “better performance” benefits over light wood frame) while elevating exposure to char, smoke, or “visual deficiencies.”

Mass timber loss considerations

Common mass timber losses

As the use of mass timber becomes more popular in the U.S. market, claims data is becoming more available, however still limited in relation to traditional methods.

Common causes of builder's risk loss on mass timber projects include, but are not limited to:

Fire and resulting damage such as charring and smoke damage.

Water damage, including damage to mass timber products from staining, swelling, cracking, etc.

Damage resulting from “delamination” (faulty work/failure of adhesive).

Inadequate engineering and/or design experience with the product.

Natural catastrophe (Nat Cat) - if located in a high-hazard zone.

Collapse during building erection.

Arson and vandalism.

Mass Timber submissions

DNA of an ideal risk

Relationship

A well-established, long-term relationship between the project owner/developer and prime general contractor.

Protection

Water mitigation plan and PPC; project will deploy operable fire hydrants (within 500 feet of the site) prior to mass timber elements arriving on site for storage or erection.

Established

The use of established mass timber manufacturers certified by APA - The Engineered Wood Association (www.apawood.org).

Experience

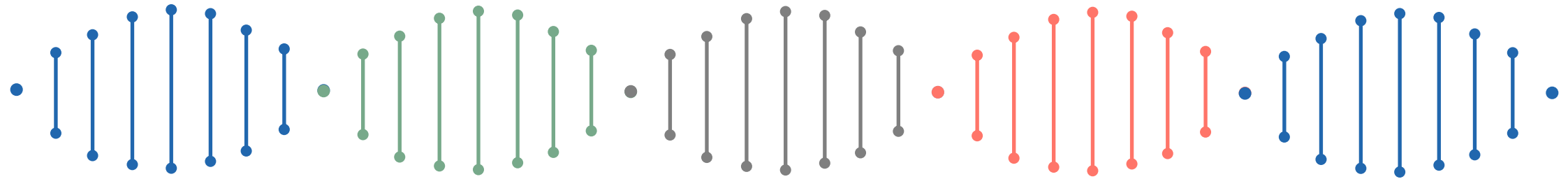
A lead architect, structural engineer and general contractor with extensive experience in conventional building means and methods (for the type of project under consideration), ideally with prior mass timber construction experience¹.

Classification

Project falls within ISO Municipal Public Protection Class 1-5 and IBC classified Type IV A, B, C or IV-HTs.

Quality

Positive Zurich Risk Engineering review and proactive implementation of any ZRE recommendations.



¹Qualifying General Contractors without mass timber construction experience may still be considered.

Mass timber underwriting considerations

Key mass timber-specific underwriting questions

Experience and Capabilities of the Owner, Designers, Engineers, General Contractors & Subcontractors

- What are the owner's and contractor's goals with mass timber?
- Is the design complete?
- How efficiently has the contractor created the construction schedule?

Manufacturer, Supplier & Sourcing

- How are materials being certified as mass timber?
- Who are the proposed manufacturer and installer?
- Why was the manufacturer selected?
- What are the manufacturer's quality control procedures?
- Have constructability reviews been held between all key design consultants, main contractor and key subcontractors?
- What is the proposed on-site supervision (including details of on-site technical assistance) from the chosen manufacturer or mass timber engineering firm?
- Where is the material being sourced from?



Hybrid Construction

- Do mass timber elements serve in an aesthetic or structural capacity?
- Is the project truly a Mass Timber project?

Materials Transportation Storage & Protection

- How is material being shipped to the project site once inland?
- How is material protected during shipment?
- How is material being stored?

Construction Methodology

- What does the GC's subcontractor pre-qualification process entail?
- Has the construction schedule been finalized and is it detailed enough to ensure mass timber elements are installed as the owner desired?
- Has the design for the project been completed, including proper design of MEP elements?



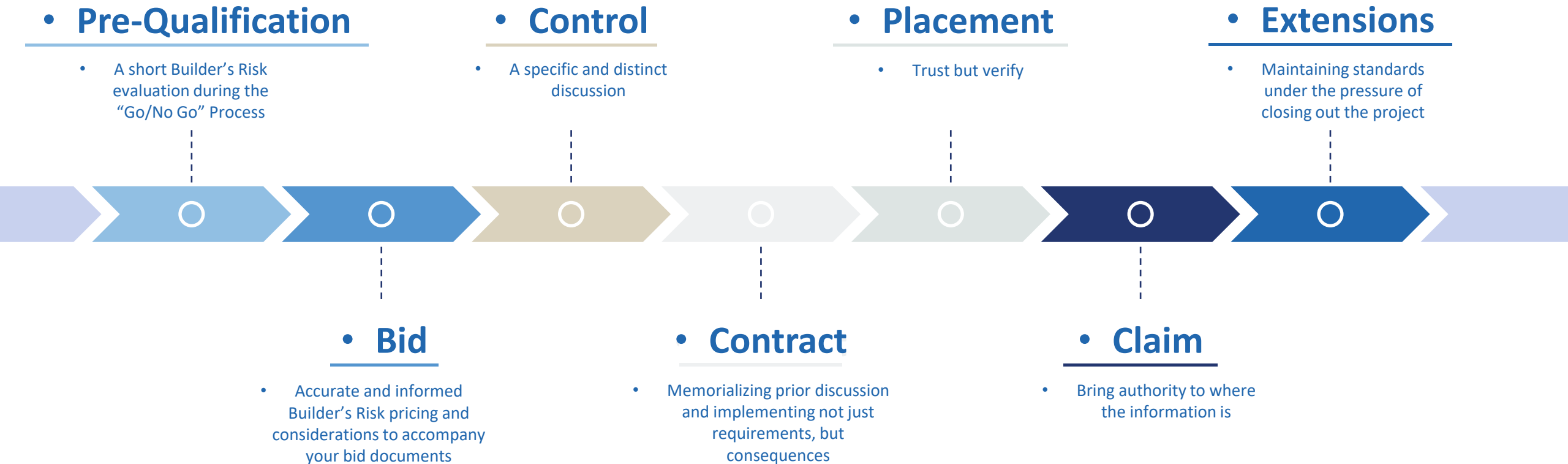
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Application & Procurement Process



Builder's Risk Process Roadmap



Building a strong application

•Scope & Timeline

- budget, location, Geotech, Site Plans, & Renderings
- Full project schedule (Gantt preferred)

•Mass Timber Components

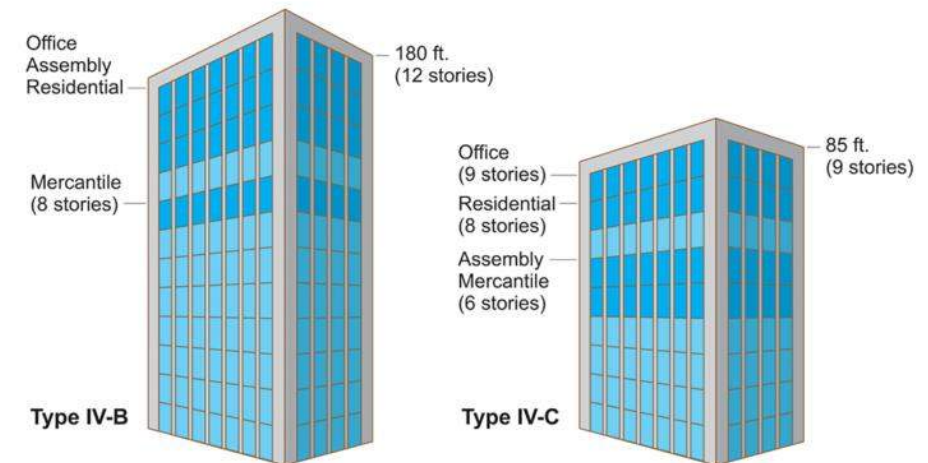
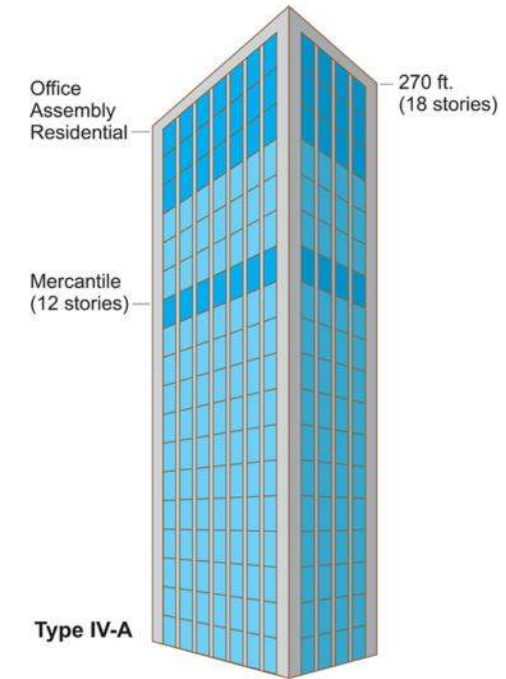
- Type (CLT, glulam, DLT), other materials (hybrid)
- Connection systems & fastening methods

•Construction Methods

- Modular/panelized approach
- Sequencing to minimize weather/fire exposure

•Site Logistics

- Fire dept. access & hydrants
- Distance to adjacent structures
- Storage location & protection plans



Source: WoodWorks

Approaching Insurers

Which house will command the best pricing? Consider the home example shown....



POSITIVE SUBMISSION CHARACTERISTICS

1. **3rd Party Certified Materials (e.g., PRG 320)**
 - CLT/MT from a **reputable manufacturer**
 - Full **certifications and fire testing results**
2. **Water & Fire Prevention Plans**
 - Comprehensive **Water Damage Prevention Plan**
 - Detailed **Fire Prevention Strategy & Hot Work Permits**
3. **Flood & Security Controls**
 - Site design reflects **floodplain risks**
 - Strong **site security**: fencing, lighting, intrusion prevention
4. **Material Handling Strategy**
 - Defined plan for **CLT storage, handling, and erection sequencing**
5. **Experienced Project Team**
 - Demonstrated experience from **GC, architect, SE, and erector**
6. **Risk Engineer Q&A Session**
 - Pre-submission dialogue with **GC, architect, SE, and developer**
7. **Tailored Risk Approach**
 - Clear evidence this is **not standard construction**
 - Customized SOPs and elevated attention to **non-conventional risk**



NEGATIVE SUBMISSION CHARACTERISTICS

- Starting the procurement process significantly later than it should have started
- Unique design or other components that would be challenging to replicate
- Nonspecific water damage prevention plan
- Many “unknowns” as to fulfillment and storage practices
- Lack of attention to the location specific risk factors
- Inexperience of project team (including AOR, EOR, GC, and Installer)
- Lack of transparency and answers to their questions
- An attempt to play down the insurer’s concerns or “educate” the insurer on why they are wrong. Insurers are looking for a project team that has identified, evaluated and addressed material and site-specific risks.



Risk Mitigation

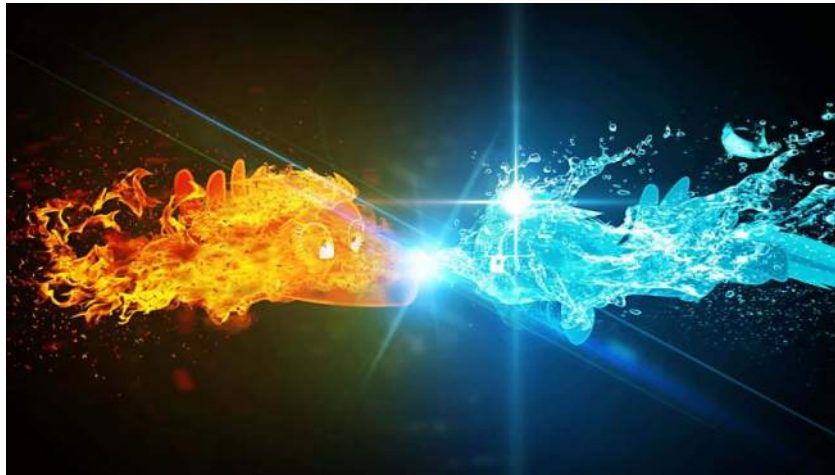
Fire & Water

🔥 Fire Risk Considerations

- Plan for encapsulation & compartmentation
- Early suppression system installation
- Documented hot work & fire watch protocols
- Fire department coordination
- Fire protection engineer involvement encouraged

💧 Water Risk Considerations

- Defined dry-in strategy
- Covered and elevated timber storage
- Moisture monitoring protocols
- Daily site inspections
- Water intrusion response plan



QUESTIONS?

This concludes The American
Institute of Architects Continuing
Education Systems Course

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