



Accommodating Shrinkage in Multi-Story Wood-Frame Structures

<https://research.thinkwood.com/en/permalink/catalogue712>

Author: McLain, Richard
Steimle, Doug

Organization: WoodWorks

Year of Publication: 2017

Country of Publication: United States

Format: Report

Material: Light Frame (Lumber+Panels)

Application: Wood Building Systems

Topic: Design and Systems
Moisture

Keywords: Shrinkage
Mid-Rise
Multi-Story
Moisture Content

Language: English

Research Status: Complete

Online Access: Free

Resource Link

https://www.woodworks.org/wp-content/uploads/wood_solution_paper-Accommodating-Shrinkage.pdf





Acoustically-Tested Mass Timber Assemblies

<https://research.thinkwood.com/en/permalink/catalogue2639>

Organization: WoodWorks
Year of Publication: 2020
Country of Publication: United States
Format: Report
Material: CLT (Cross-Laminated Timber)
NLT (Nail-Laminated Timber)
Glulam (Glue-Laminated Timber)
MPP (Mass Plywood Panel)
Application: Floors
Walls
Topic: Acoustics and Vibration
Keywords: Mass Timber
Sound Transmission Class
Impact Isolation Class
Assembly
Language: English
Research Status: Complete
Online Access: Free

Resource Link

<https://www.woodworks.org/wp-content/uploads/Acoustically-Tested-Mass-Timber-Assemblies-WoodWorks.pdf>



Acoustics: Sound Insulation in Mid-Rise Wood Buildings

<https://research.thinkwood.com/en/permalink/catalogue37>

Author: Schoenwald, Stefan
Zeitler, Berndt
King, Frances
Sabourin, Ivan

Organization: National Research Council of Canada

Year of Publication: 2014

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)
Light Frame (Lumber+Panels)

Application: Floors
Walls

Topic: Acoustics and Vibration

Keywords: Acoustics
Mid-Rise
Sound Insulation

Language: English

Research Status: Complete

Online Access: Free

Resource Link

<http://doi.org/10.4224/21274579>



Acoustics Summary: Sound Insulation in Mid-Rise Wood Building

<https://research.thinkwood.com/en/permalink/catalogue750>

Author: Schoenwald, Stefan
Zeitler, Berndt
King, Frances
Sabourin, Ivan

Organization: National Research Council of Canada

Year of Publication: 2014

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)
Light Frame (Lumber+Panels)

Application: Wood Building Systems

Topic: Acoustics and Vibration
Design and Systems

Keywords: Mid-Rise
Sound Insulation
Impact Sound Transmission
Airborne Sound Transmission

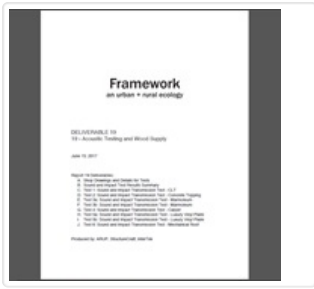
Language: English

Research Status: Complete

Online Access: Free

Resource Link

<http://doi.org/10.4224/21274554>



Acoustic Testing and Wood Supply for Framework Office Building in Portland, OR

<https://research.thinkwood.com/en/permalink/catalogue1830>

Organization: ARUP
StructureCraft
InterTek

Year of Publication: 2017

Country of Publication: United States

Format: Report

Material: CLT (Cross-Laminated Timber)

Application: Floors
Ceilings
Walls
Roofs
Wood Building Systems

Topic: Acoustics and Vibration

Keywords: Sound Transmission
Impact Noise Transmission
Concrete Topping

Language: English

Research Status: Complete

Series: Framework: An Urban + Rural Design

Summary:

- A. Shop Drawings and Details for Tests
- B. Sound and Impact Test Results Summary
- C. Test 1: Sound and Impact Transmission Test - CLT
- D. Test 2: Sound and Impact Transmission Test - Concrete Topping
- E. Test 3a: Sound and Impact Transmission Test - Marmoleum
- F. Test 3b: Sound and Impact Transmission Test - Marmoleum
- G. Test 4: Sound and Impact Transmission Test - Carpet
- H. Test 5a: Sound and Impact Transmission Test - Luxury Vinyl Plank
- I. Test 5b: Sound and Impact Transmission Test - Luxury Vinyl Plank
- J. Test 6: Sound and Impact Transmission Test - Mechanical Roof

Online Access: Free

Resource Link

<https://www.thinkwood.com/wp-content/uploads/2018/10/19-Framework-Acoustic-Testing-and-Wood-Supply.pdf>



Acoustic Testing of CLT and Glulam Floor Assemblies

<https://research.thinkwood.com/en/permalink/catalogue1863>

Author: Sabourin, Ivan
Organization: National Research Council of Canada
Publisher: Regupol America
Year of Publication: 2016
Country of Publication: Canada
Format: Report
Material: CLT (Cross-Laminated Timber)
Glulam (Glue-Laminated Timber)
Application: Floors
Topic: Acoustics and Vibration
Keywords: Transmission Loss
Impact Sound Transmission
Impact Sound Pressure Level
Language: English
Research Status: Complete
Series: Nordic Engineered Wood Report
Online Access: Free

Resource Link

<https://www.regupol.com/test-reports/pdfs/A1-008253.pdf>



Addendum to RR-335: Sound Transmission Through Nail-Laminated Timber (NLT) Assemblies

<https://research.thinkwood.com/en/permalink/catalogue1868>

Author: Mahn, Jeffrey
Quirt, David
Hoeller, Christoph
Mueller-Trapet, Markus

Organization: National Research Council of Canada

Publisher: National Research Council Canada. Construction

Year of Publication: 2018

Country of Publication: Canada

Format: Report

Material: NLT (Nail-Laminated Timber)

Application: Floors
Walls

Topic: Acoustics and Vibration

Keywords: Sound Insulation
Assembly
Sound Transmission Class

Language: English

Research Status: Complete

Online Access: Free

Resource Link

<https://nrc-publications.canada.ca/eng/view/object/?id=9e3b39be-e0ed-415b-9649-3e7ec228f52c>



Advanced Methods of Encapsulation

<https://research.thinkwood.com/en/permalink/catalogue41>

Author: Ranger, Lindsay
Roy-Poirier, Audrey

Organization: FPInnovations

Year of Publication: 2015

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)

Application: Floors

Topic: Fire

Keywords: Codes
Encapsulation
Type X Gypsum Board
National Building Code of Canada
Tall Wood

Language: English

Research Status: Complete

Summary:

This project aims to support the construction of tall wood buildings by identifying encapsulation methods that provide adequate protection of mass timber elements; the intention is that these methods could potentially be applied to mass timber elements so that the overall assembly could achieve a 2 h fire resistance rating.

Online Access: Free

Resource Link

<https://library.fpinnovations.ca/en/permalink/fpipub6091> ↗



Advanced Wood-Based Solutions for Mid-Rise and High-Rise Construction: Exit Fire Separations in Mid-Rise Wood Buildings

<https://research.thinkwood.com/en/permalink/catalogue1879>

Author: Ranger, Lindsay
Dagenais, Christian

Organization: FPInnovations

Year of Publication: 2018

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)
NLT (Nail-Laminated Timber)

Application: Shafts and Chases

Topic: Fire

Keywords: National Building Code of Canada
Combustible Material
Mid-Rise
Noncombustible Construction

Language: English

Research Status: Complete

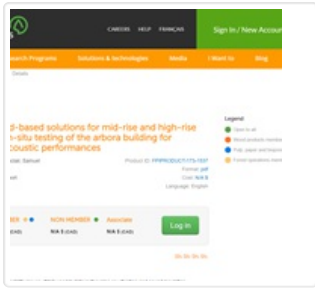
Summary:

FPInnovations initiated this project to demonstrate the ability of wood exit stairs in mid-rise buildings to perform adequately in a fire when NBCC requirements are followed, with the intent of changing perceptions of the fire safety of wood construction. The objective of this research is to investigate further the fire safety afforded by exit stair shafts of combustible construction, with the ultimate objective of better consistency between the provincial and national building codes with respect to fire requirements for exit stair shafts in mid-rise wood-frame construction.

Online Access: Free

Resource Link

<https://www.bcfii.ca/sites/default/files/report/fpi/16796.pdf> [↗](#)



Advanced Wood-Based Solutions for Mid-Rise and High-Rise Construction: In-Situ Testing of The Arbora Building for Vibration and Acoustic Performances

<https://research.thinkwood.com/en/permalink/catalogue1179>

Author: Hu, Lin
Cuerrier-Auclair, Samuel

Organization: FPInnovations

Year of Publication: 2018

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)
Glulam (Glue-Laminated Timber)

Application: Wood Building Systems

Topic: Acoustics and Vibration
Design and Systems

Keywords: Sound Insulation
Tall Wood
Vibration Performance
Mid-Rise

Language: English

Research Status: Complete

Summary:

This report addresses serviceability issues of tall wood buildings focusing on vibration and sound insulation performance. The sound insulation and vibration performance may not affect building's safety, but affects occupants' comfort and proper operation of the buildings and the function of sensitive equipment, consequently the acceptance of midrise and tall wood buildings in market place. Lack of data, knowledge and experience of sound and vibration performance of tall wood buildings is one of the issues related to design and construction of tall wood buildings.

Online Access: Free

Resource Link

<https://library.fpinnovations.ca/en/permalink/fpipub49836>