Bay Area Wood Solutions Fair

JANUARY 27, 2015
OAKLAND MARRIOTT CITY CENTER
1001 Broadway
Oakland, CA  94607

Earn 6 AIA/CES LUs (HSW) or PDH credits free

Register at woodworks.org
# Bay Area Wood Solutions Fair Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Room 1</th>
<th>Room 2</th>
<th>Room 3</th>
<th>Room 4</th>
<th>Room 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 am</td>
<td>Registration Check-In – Exhibit Expo Opens</td>
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<tr>
<td>9:10 am – 9:45 am</td>
<td>Break – Exhibit Expo</td>
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<tr>
<td>9:45 am – 10:45 am</td>
<td>Urban Acoustics</td>
<td>Building as Teacher: Designing with Nature</td>
<td>The Application of Traditional and Modern Heavy Timber Connections</td>
<td>LEED v4 and Credits for Wood Use</td>
<td>California Building Code Height and Area Provisions</td>
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<tr>
<td>10:45 am – 11:00 am</td>
<td>Break – Exhibit Expo</td>
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<tr>
<td>11:00 am – Noon</td>
<td>The Evolution of Fire Life Safety in Building Codes</td>
<td>Forests and Forest Products</td>
<td>Significant Changes to AWC’s 2015 NDS® and the 2015 SDPWS</td>
<td>Getting to Yes: Code Alternate Materials and Means and Permit Streamlining</td>
<td>Sustainable Designs: Western Red Cedar</td>
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<tr>
<td>Noon – 1:20 pm</td>
<td>Lunch • Wood Design Awards</td>
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<td>2:20 pm – 2:50 pm</td>
<td>Break – Exhibit Expo</td>
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<td>3:50 pm – 4:00 pm</td>
<td>Break</td>
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<tr>
<td>4:00 pm – 5:00 pm</td>
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Photos: (cover) Drs. Julian and Raye Richardson Apartments, David Baker + Partners, photo Bruce Damonte; (interior L-R) photo Nordic Engineered Wood Products; David & Lucile Packard Foundation, EHDD, photo Jeremy Bittermann
Seminars and Speakers

ROOM 1

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM

Building Enclosure Design: Best Practices for Wood-Frame Buildings
Colin Shane, MEng, PEng, RDH Building Sciences, Inc.

Through a combination of building science fundamentals, case studies and current research, this presentation will explore best practices for designing durable, energy-efficient building enclosures for mid-rise buildings constructed using traditional light wood-frame construction. Differences in enclosure design associated with taller wood-frame buildings using mass timber products will also be discussed.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM

Urban Acoustics
Steve Thorburn, PE, LEED AP, CTS-I, CTS-D, Thorburn Associates

As with any issue of building performance, the acoustics of a mixed-use wood-frame structure can be designed to meet or far exceed minimal requirements. It is the responsibility of the design team to determine acoustical expectations for the project and meet them within the available budget. Through the use of case studies, this fast-paced, interactive session will explore how multi-story wood systems can be used to meet acoustical privacy goals. Discussion will focus on the detailing and construction of units, and how consideration of the construction process can help keep acoustical costs down. With the objective of providing implementable solutions, the session will include construction details and photos showing what has and hasn’t worked in actual buildings.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

The Evolution of Fire Life Safety in Building Codes
Peter Senez, MEng, PEng, Sereca

Over the last 80 years, prescriptive height and area limitations have remained relatively unchanged in North American building codes while technological advances and fire service capabilities have improved considerably. Through an examination of historical code development and identification of the risk factors on which codes are based, we can set the stage for a re-examination of public perception with regard to combustible construction. This presentation will cover techniques for mitigating fire damage and reducing fire spread while describing how an understanding of code intent can be used to argue equivalent fire performance when wood solutions lie outside typical code-approved applications.

ROOM 2

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM

Mass Timber Building Systems: Understanding the Options
Bernhard Gafner, PEng, MIStructE, CEng, Dipl. Ing., Fast + Epp

Mass timber represents an emerging and rapidly advancing technology that can be utilized as an alternative to steel and concrete to frame a variety of mid- and high-rise building types. This presentation will provide an overview of different mass timber systems available, with an emphasis on their advantages and unique design considerations. Topics will include connections and fasteners, which differ from those used in light-frame wood construction, including available options and code requirements. Cost estimating will also be discussed, as successful mass timber projects require a complete understanding of both the system itself and impact on other trades. A comparison of mass timber costs compared to steel and concrete based on a recent case study will also be presented.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM

Building as Teacher: Designing with Nature
Randall Walter, AIA, LEED AP, Bensonwood

Built and opened to students in 2012, Burr and Burton Academy’s Mountain Campus is an innovative model for place-based environmental education. From campus and building design and construction to curriculum design, topics will include concepts that helped the campus achieve “net zero” targets, biophilic wood-based design inspirations, student experiences monitoring the building’s energy performance, living in and caring for the space, and the ripple effects of student experiences during the first two years of operation.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

Forests and Forest Products
Kathryn Fernholz, Dovetail Partners, Inc.

This presentation will answer many questions about forests and forest products, such as: Where do our trees and forests grow? How have forests changed over time? What is the relationship between people and forests—now and in the past? How are forests managed—and are they being managed responsibly? Are our forests and forest products sustainable? Why is wood an environmental-friendly choice?
ROOM 3

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
Streamline with Factory-Built Multi-Family Housing
Regan Martin, AIA, LEED AP BD+C, Lowney Architecture
Taeko Takagi, ZETA Design+Build

While off-site modular construction has been around for decades at the lower end of the single-family housing market, changing economics, market conditions and advancements in design are combining to make it an attractive option for multi-family development. Although the choice to use on-site wood framing versus prefabrication depends on many factors, modular construction can offer a number of advantages, including faster construction, improved material efficiency and worker safety, enhanced quality assurance, and reduced material, labor and interest costs. This presentation will connect fabrication with architecture by showcasing recent projects at various stages with an emphasis on the benefits and challenges associated with their modular systems.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM
The Application of Traditional and Modern Heavy Timber Connections
R.L. "Ben" Brungraber, PhD, PE, Fire Tower Engineered Timber

The selection of heavy timber connections can be challenging, even for designers experienced with these types of building projects. This presentation will provide a thorough discussion of traditional and modern heavy timber connectors and connections, including their design and application. Topics will include some of the connection types and methods used to repair or reinforce existing heavy timber members, such as wooden pegs, wooden wedges, and fully-threaded screws. Discussion will also include a review of European connectors and their selection for specific design applications including cross laminated timber.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM
Significant Changes to AWC’s 2015 NDS© and the 2015 SDPWS
Michelle Kam-Biron, PE, SE, SECB, M. ASCE, American Wood Council (AWC)

AWC’s 2015 National Design Specification© (NDS©) for Wood Construction and Special Design Provisions for Wind and Seismic (SDPWS) standards are referenced in US building codes and used to design wood structures worldwide. The current editions, designated ANSI/AWC NDS-2015 and ANSI/AWC SDPWS-2015, were approved as ANSI American National Standards in 2014. This presentation will provide an overview of changes in the 2015 NDS and SDPWS relative to previous editions. Significant changes relate to the incorporation of cross laminated timber, open front diaphragms and cantilever diaphragms.

ROOM 4

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
Title 24: Energy Code Compliance in Modern Buildings
Andrew Klein, PE, CEM, A S Klein Engineering, PLLC

This presentation focuses on the challenges of meeting requirements of the 2013 California Building Energy Efficiency Standards (Title 24) in modern buildings, with an emphasis on wood-frame construction. Topics will include scope, content and significant changes since the previous edition. Compliance path options will also be discussed in the context of specific building systems and features as well as related design considerations. Requirements in the national model code, the International Energy Conservation Code (IECC), will also be briefly reviewed.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM
LEED v4 and Credits for Wood Use

This presentation examines changes in the latest version of LEED (LEED v4) and their implications for wood use. Particular attention is given to the Materials and Resources section of the standard, where the greatest changes have been made. Environmental Product Declarations (EPDs) and Health Product Declarations (HPDs)—both of which are prominent within LEED v4—are explained, and their use, as well as potential issues associated with their use, are discussed.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM
Getting to Yes: Code Alternate Materials and Means and Permit Streamlining
Michael F. Malinowski, AIA, Applied Architecture, Inc.

This session will cover principles and strategy for effective navigation of the building permit process when materials or designs don’t comfortably fit with conventional code application, as well as the use of permit streamlining for more effective and efficient processing. Alternate Materials and Means Requests (AMMR) can be used for various reasons including: use of innovative products and systems, new design concepts, complex geometries, code conundrums, political problem solving and the resolution of interpretation differences. Project examples will be used to demonstrate how to approach the AMMR process and demystify the concept of an alternate design. Permit streamlining concepts will also be discussed.
Seminars and Speakers (continued)

ROOM 5

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM

Seismic and Wind Design Considerations for Wood-Frame Shear Walls
Karyn Beebe, PE, LEED AP, APA

The overall strength of a building is a function of all of the components—roof, walls, floors, and foundation—working together as a unit. This session will provide a top-to-bottom overview of lateral design for wood-frame structures with a focus on shear walls. Topics will include lessons learned from natural disasters, load path continuity, and updates to the California Building Code (CBC) affecting structural design. Alternatives to segmented shear wall design will also be compared, including the perforated and force transfer around opening (FTAO) methods.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM

California Building Code Height and Area Provisions
Dennis Richardson, PE, CBO, CASp, AWC

This presentation will provide an overview of height and area provisions found in the 2013 CBC including State Fire Marshal (SFM) amendments. Intended for engineers, architects and building officials who want to better understand the opportunities for wood in a variety of building types, it will include an overview of the publication, Code Conforming Wood Design (CCWD). This document is published by AWC and used to quickly compute allowable heights and areas for B, F, S, and M occupancy group buildings. Discussion will also include a review of 2013 CBC SFM amendments and their effect on common occupancy groups, relevant changes to the 2015 International Building Code, and the process leading to the upcoming 2016 CBC.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

Sustainable Designs: Western Red Cedar
Paul Mackie, Western Red Cedar Lumber Association

This presentation will include some information basic to lumber and forest products while it features the nature of the Western Red Cedar lumber, the benefits unique to these products, and how they are appropriate for incorporation in any sustainable design. The presentation will also touch on information about western red cedar lumber grades, installation, and finishing. Forest certification will be discussed, as will reasons why using Western Red Cedar affords your clients the best environmental and sustainable products for their design requirements.

Who Should Attend?
With a full day of seminars and a trade exposition, the Bay Area Wood Solutions Fair will pack an informational punch for architects, engineers, developers, code officials and anyone else interested in wood’s exciting design possibilities. Register today if you’d like access to wood design experts for one-on-one support, informative seminars, technical information from manufacturers, engineering consultants and industry associations, and exhibits featuring a wide range of structural and finishing products.

How to Register
To register, visit woodworks.org and look under “Education” on the home page. As part of the registration process, you will be asked to choose which seminar you plan to attend in each time slot. Once your request has been processed, you will receive an email confirmation that your registration is complete. To help make your choices, speaker bios are available on the website.

Cost
There is no cost to attend and complimentary lunch will be provided.

Education Credits
Attendees can earn up to 6 AIA/CES LUs (HSW) or PDH credits (one per attended seminar). Visit woodworks.org for details and learning objectives. AIA/CES forms and professional development certificates will be available on site.

More Information
Visit woodworks.org

WoodWorks is an approved AIA provider.

Free design and engineering support for non-residential and multi-family wood buildings
For project assistance, email help@woodworks.org. For resources such as CAD/REVIT details, span tables, design examples and more, visit woodworks.org.