MOVING UP
Renovated APA Lab Will Accommodate Taller Assemblies
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Annual Survey Shows Members Hopeful for Continued Recovery
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OSU DOUBLES DOWN
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PAGE 24
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About the Cover:
The APA Tacoma Research Center at APA’s headquarters is getting its first major renovation since it was built in 1969. The $4.5 million project will offer more space for testing of full-scale assemblies. Story on page 12.
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In this issue...

Over the years, APA has published hundreds of technical reports and publications that guide designers and contractors toward the most cost-efficient, structurally sound and aesthetically pleasing ways to execute a project. These publications discuss various types and behaviors of sheathing and exterior siding, the strength of an engineered wood product needed for a project, the shear strength of structural glulam beams, and dozens of other engineered wood-related construction issues.

But have you ever wondered where this detailed data comes from? Most of these robust studies – many of them the result of multiple years of research – are performed at APAs research laboratory in Tacoma, Wash. The facility at APAs headquarters campus has been evaluating the performance of wood structural panels, glulam, I-joists, structural composite lumber and, more recently, cross-laminated timber, since it opened in 1969. After nearly 50 years of such activities, the lab is receiving a substantial makeover.

The APA Board of Trustees approved a $4.5 million expansion that will address the demand to evaluate full-scale structural assemblies and testing. Currently, because space is tight and the height of the lab is limited, shearwalls over 10 ft tall often have to be tested horizontally instead of vertically. The renovation will solve that problem by bumping the ceiling height in the renovated portion of the lab to 40 ft, allowing for vertical testing of walls up to 35 ft tall. The project will also include the purchase of new equipment.

Aside from a 5,000 sq ft addition built adjacent to the lab in 2006, the overhaul will be the first time the lab’s physical structure will be altered. Read more about the project, which kicks off this summer, on page 12.

Industry Outlook

The Journal checks in with members each year with its annual Business Outlook Survey. Members weigh in on employment, business projections and overall optimism. See what they have to say about the wood products industry – and compare responses to previous years – starting on page 20.

Also check out photos from last fall’s APA Annual Meeting and EWTA Info Fair in Huntington Beach, Calif., and mark your calendar for this year’s event in San Antonio, Texas, Oct. 27-29.

Sheila Cain
Editor, The Engineered Wood Journal
scain@engineeredwood.org
APA Past President Receives Bronson J. Lewis Award

Past APA President Dennis Hardman was the 2017 recipient of the Bronson J. Lewis Award at APA’s Annual Meeting in Huntington Beach, Calif., Oct. 28-30. The award recognizes individuals for their leadership and outstanding contribution to the engineered wood industry. It is dedicated to the late Bronson Lewis, who served for 24 years as secretary and then executive vice president of APA.

Hardman is recognized for his many contributions to the industry and his leadership of APA. His long career with APA began in 1981 as advertising and public relations manager, soon followed by his appointment to director of the association’s Information Services Division (now Marketing Communications) in 1984 and vice president of marketing in 1992. From 2005 until his retirement in 2013, he served as president and worked with the Board of Trustees, making difficult decisions that would ultimately allow the association to survive and rebound from the crushing recession. Hardman spent the first 13 years of his career in advertising and sales promotion with Weyerhaeuser Company. He holds a journalism degree from the University of Oregon.

APA Chairman of the Board Jim Baskerville congratulates Dennis Hardman (with wife Kathy) for winning the Bronson J. Lewis Award at the APA Annual Meeting last October.
APA Publishes New Energy Guide
A new guide published by APA describes how builders can cost-effectively meet energy code requirements by value-engineering energy efficiency for a whole-home system. Viewing the home as a system means getting more bang for the buck by allocating construction dollars for value, trading out higher-cost energy-efficiency assemblies where they are not necessary.

The guide helps builders identify the energy impacts of certain assemblies and systems so they can engage with their energy rater to get the greatest return for their dollar as they seek to cost-effectively increase energy efficiency. Alternative methods, or “paths,” for energy code compliance are identified in the guide, Performance Path to Energy Code Compliance, Form R505A. The guide is available for free download from the APA website. Visit www.apawood.org and click on the Energy Efficiency link under the Design & Build tab.

American Wood Council Elects Ford as Chairman
The American Wood Council recently announced the election of Allyn Ford, CEO of APA member company Roseburg Forest Products, as the council’s chairman for a one-year term. Ford retired from the APA Board of Trustees in 2016 after 10 years of service. Danny White, a director of T.R. Miller Company, was elected first vice-chair and Neil Sherman, executive vice-president of siding at LP, was elected second vice-chairman.

LP Acquires International Barrier Technology
Louisiana-Pacific Corp. announced recently that it will acquire Watkins, Minn.-based International Barrier Technology Inc. for $22 million. Barrier manufactures the fire-retardant coating used in LP FlameBlock fire rated products.

APA Welcomes New Staff To Field Services Division
APA recently welcomed two new representatives to its Field Services Division.

In Memoriam
Thomas R. Flint
Thomas R. Flint, former APA vice-president for standards and regulations, died Oct. 6, 2017, at the age of 86.

Mr. Flint spent 36 years at APA before retiring in 1994. He joined APAs Technical Services Division in 1958 and was named assistant director for building codes and standards in 1962. He was promoted to director of the Technical Services Division in 1965 and was promoted again by the Board of Trustees to the level of vice president. Mr. Flint assumed the title of vice president for standards and regulations in 1992.

Mr. Flint held a bachelor’s degree in civil engineering from the University of Colorado and a master’s degree in structural engineering from the University of Washington. He was active in a number of professional organizations throughout his career, including the American Society of Testing and Materials, American Association for Laboratory Accreditation, the U.S./Canadian Binational Committee, and others. He also played a role over the years in helping to obtain more favorable terms of entry for U.S. structural panels and other engineered wood products in Japan.

A native of Pocatello, Idaho, Mr. Flint spent much of his retirement in Ketchum, Idaho, skiing on Bald Mountain. He is survived by his wife, Sally, three daughters, four grandchildren, and three great-grandchildren.

John Blackburn
John Blackburn, 62, Quality Control Coordinator at the Potlatch plywood mill in St. Maries, Idaho, died at his home on December 13, 2017.

Mr. Blackburn started working for Potlatch after graduating from high school and was with the company for 44 years. He obtained a bachelor’s degree in accounting from the University of Idaho. Mr. Blackburn served on APAs Quality Advisory Committee and was a member of the PS 1 Standing Committee, which oversees the Voluntary Product Standard for Structural Plywood.

A Celebration of Life gathering was held January 20 in St. Maries.

Daniel Brown
Daniel Brown, 90, died November 15, 2017 in Tacoma, Wash. He was a senior engineer in APAs Technical Services Division, with a career spanning from 1956 to his retirement in 1987.

Ron Nuttall is a new engineered wood specialist in the Denver Field Services territory. Nuttall studied marketing at Texas Tech University before beginning his wood products career working in wholesale distribution in Houston. Prior to relocating to Denver in 1996, he held sales positions in the plywood industry. Since that time, he has promoted the use of I-joists and engineered wood products to builders and designers in the Colorado market. Nuttall has provided initial support for the APA Fire Task Group’s work in Colorado. In addition to Denver, he also covers Kansas City and the Twin Cities.

Stephanie Thomas-Rees joined APAs Field Services Division in December and will cover the Florida territory. Thomas-Rees has a Bachelor’s degree in Architectural Design from Clemson University and a Master’s degree in Energy Efficient Building from Oxford Brookes University. She has worked as a designer, an energy professional, and an adjunct professor teaching sustainable design and building materials. She brings technical knowledge, industry contacts, and public speaking skills to her new position with APA.
TWO FOR ONE
FPS Convention Held with Renewable Materials Conference

The Forest Products Society has announced the plenary speakers for its 72nd Annual International Convention held June 11-14 in Madison, Wis. The meeting will be co-located with the 2018 International Conference on Nanotechnology for Renewable Materials.

The joint keynote speaker is Alper Kiziltis, research scientist in sustainable biomaterials and plastics with Ford Motor. He will address how the auto industry is developing natural fiber reinforced plastics and polymer resins made from renewable feed stocks to replace petroleum-based components.

Additional plenary speakers will address the housing market and current dynamics of the forest bioeconomy. Matthew Rooney, director, economic growth at the George W. Bush Institute, will discuss “NAFTA: The Stakes for Globalization and American Leadership.”

As a bonus, all attendees at the convention can take in any of the technical sessions at the renewable materials conference, which will offer more than 140 presentations on production characterization, applications and functionalization of renewable nanomaterials. There will also be joint receptions, a trade fair and a poster session.

For those interested in the basics of wood science, FPS is also offering a one-day Introduction to Wood Science Short Course on Monday, June 11, at the USDA Forest Products Laboratory in Madison. It includes a tour of the lab and transportation to the convention center to hear the keynote speaker.

The Forest Products Society is a not-for-profit technical association founded in 1947 to provide an information network for all segments of the forest products industry. For more information on the FPS convention, visit the event webpage at ic.forestprod.org. For more information on the renewable materials event, visit conference.tappinano.org.
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Since it opened in 1969, the APA Tacoma Research Center has been home to a wide range of testing that is used to evaluate the performance of wood structural panels, glulam, I-joists, structural composite lumber, and more recently, cross-laminated timber, in a variety of applications and assemblies.

Aside from a 5,000-sq-ft addition in 2006 to accommodate installation of full-scale house and diaphragm performance test equipment, the physical structure of the laboratory has not changed. Until now.

Last October, the APA Board of Trustees approved a $4.5 million lab expansion project that will address the demand to evaluate full-scale structural assemblies and testing. Interior renovation work is already underway, with demolition of the existing lab space to begin in April and continue for three months. Construction of the new space is expected to begin in July and finish up by year’s end.

“While our lab has been well maintained and updated over the years, we need to make significant structural renovations to address the demand to evaluate full-scale structural assemblies and testing,” said APA President Ed Elias.

Enhanced Testing Capabilities
The ceiling height of the existing laboratory is insufficient to test single-story tall walls (which are 10 ft in height), or stacked shearwalls (such as two-story assemblies or a single-story assembly over a crawl space). Additionally, the laboratory areas available for lateral load tests are limited to approximately 10 percent of the current laboratory area, making the area size-constrained and, in most cases,
inadequate for imposing the required high loads.

The $4.5 million estimated project cost includes structural modifications to 25 percent (5,250 sq ft) of the current floor area to create a 70-ft by 75-ft. “strong floor.” The roof will be raised as well, raising the building height directly above the expanded floor space to 40 ft. The cost estimate also includes the purchase of new equipment.

New testing capabilities will address tall wall assemblies, dynamic load paths for single-family and multifamily structures, larger gravity loads for buildings of four stories or more, and expanded wood I-joist and engineered wood diaphragm evaluation (see side story, “A Closer Look” for more detailed capabilities of the expanded lab). The strong floor will include a new reinforced concrete slab four feet in thickness with anchors embedded two feet on center to accommodate multiple locations of the new testing apparatus.

A Closer Look

APA’s $4.5 million laboratory renovation project will address marketplace opportunities and research needs by allowing the association to:

- Evaluate shearwall capacities for taller walls (10-12 ft in height) in single-family construction
- Analyze dynamic load paths through multiple stories of both single-family and multifamily buildings
- Evaluate combined lateral shear and wind lift in perforated shearwalls in single- and multifamily construction (current design procedures address only lateral loads)
- Account for larger gravity loads imposed on wood structures four stories or taller
- Research design of interior shearwalls to accommodate cantilevered diaphragms in buildings four stories or taller
- Explore wood I-joist/EWP diaphragm evaluations beyond conventional 24-ft by 24-ft configurations (expanded configurations and aspect ratios are more realistic for design within multifamily housing)
- Test dynamic (two-directional versus one-directional) loading on large-scale wood diaphragms
- Test hybrid construction of portal frames with engineered wood and steel components for multi-story nonresidential buildings
- Develop structural members for use within innovative floor and roof assemblies, including balloon frame construction or high-load shearwall assemblies
- Evaluate shearwall capacities for fundamental design tables applicable to both shearwalls and diaphragms using cross-laminated timber
- Design and test heavy timber cross-braced (glulam and SCL) assemblies to resist lateral loads across large spans in nonresidential construction
Current Constraints

APA researchers have long had to make do with the space they had available, says Yeh. While APA’s testing of assemblies and configurations is accurate, the methods are not always ideal. For example, because the height of the lab is limited, shearwalls over 10 ft tall often have to be tested horizontally instead of vertically. Now, the 40-ft-tall space will allow for vertical testing of walls up to 35 ft tall.

Alternatives to conducting tests at APA have included borrowing or leasing space in labs at universities in British Columbia, Wisconsin, Oregon or eastern Washington, or contracting with outside testing labs. APA staff and board members considered this when exploring options, but concluded that using space elsewhere would prove costly and delay testing by months or even years, since availability is scarce. The lab expansion team also explored building or renting a warehouse nearby to fulfill the need for more space, but that didn’t pencil out either. Remodeling the existing structure in Tacoma proved to be the most viable option.

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<table>
<thead>
<tr>
<th>APA Physical Laboratory and Equipment Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical and Equipment Limitation</td>
</tr>
<tr>
<td>Ceiling Height (ft)</td>
</tr>
<tr>
<td>Strong Wall Height (ft)</td>
</tr>
<tr>
<td>Strong Floor Area (sq ft)</td>
</tr>
<tr>
<td>Tie Down Capacity (lb)</td>
</tr>
<tr>
<td>Load Actuator (thousand lbs)</td>
</tr>
<tr>
<td>Hydraulic Stroke (in)</td>
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<tr>
<td>Pump Capacity (gal/min)</td>
</tr>
</tbody>
</table>

Once the renovation to APA’s lab is complete, shearwalls taller than 10 ft will be able to be tested at full height, like the specimen in this photo taken at Simpson Strong Tie in Stockton, Calif.

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Financing the project will be addressed in three ways: spending down $2.5 million in APA reserves (within the limits of the association's current policy), securing a $2 million loan, and assessing a temporary membership dues payment. The APA finance committee and board of trustees reviewed the financial plan in detail before voting to approve the project last October.

Sporer is enthused to be working at APA, where so many materials testing methods in use today were developed from research performed at its lab. As the industry has changed and building assemblies have gotten larger, research labs like APA have been faced with the need for more space and more sophisticated equipment to keep up with testing requirements. APA's renovation will offer a larger floor area and taller ceilings, allowing for full-scale testing of wall assemblies. That's something Sporer finds enticing.

“After awhile, you run up against the limit of what your equipment can do,” says Sporer. “Having these new capabilities is exciting. It will be interesting to see how (assemblies) behave in full scale and not cut-down specimens.”

Sheila Cain (scain@engineeredwood.org) is communications director of the Engineered Wood Technology Association and editor of its Engineered Wood Journal.
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Engineered Wood Technology Association members seem to be settling into a groove, as the responses to the association’s most recent Business Outlook Survey indicate steadily optimistic business projections.

Responses to the annual member survey revealed very little change in sentiment from those that were received last year at this time, but the shifts that did appear show that members, for the most part, are expecting a relatively comfortable year ahead.

The survey was sent out to members in January 2018 to capture member perceptions of growth, their companies’ employment levels and other business related issues.

Responses are reflected in the charts on this and the following pages, which also track survey responses from the past five years. While sentiment isn’t nearly as rosy as it was back in 2013 and 2014, it’s nowhere near the lows of 2012 and earlier.

Perhaps the most marked change from the previous year came in the responses to the question, “What is your business projection for the new year?” Seventy-nine percent of respondents felt business would improve, compared to 71 percent the previous year. This was the second year member optimism rose. In 2016, just over 60 percent of members felt their business was improving. Eighteen percent of respondents thought business in 2018 would stay the same as it was last year.

How important are the following for recovery:

<table>
<thead>
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<th>How important are the following for recovery:</th>
<th>Very Important</th>
<th>Important</th>
<th>Unimportant</th>
</tr>
</thead>
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<td>State of the U.S. housing market</td>
<td>64%</td>
<td>36%</td>
<td>0%</td>
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<tr>
<td>Government regulation</td>
<td>55%</td>
<td>39%</td>
<td>6%</td>
</tr>
<tr>
<td>Government economic policy</td>
<td>35%</td>
<td>65%</td>
<td>0%</td>
</tr>
<tr>
<td>Marketplace competition</td>
<td>39%</td>
<td>55%</td>
<td>6%</td>
</tr>
<tr>
<td>Raw material prices or supply</td>
<td>37.5%</td>
<td>37.5%</td>
<td>25%</td>
</tr>
<tr>
<td>Transportation costs</td>
<td>16%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>International exchange rates/trade policies</td>
<td>30%</td>
<td>33%</td>
<td>37%</td>
</tr>
<tr>
<td>Labor issues</td>
<td>22%</td>
<td>47%</td>
<td>31%</td>
</tr>
<tr>
<td>Economic uncertainty</td>
<td>60%</td>
<td>32%</td>
<td>8%</td>
</tr>
</tbody>
</table>
year, compared to 27 percent who felt this way last year. Only three percent felt business would worsen this year.

In response to a question that asked members to reflect on the previous year, 70 percent of members felt that their business had improved this year over last, similar to responses from the previous year (71 percent). In answer to the question, "Did business improve, worsen or stay the same this past year?", 27 percent of respondents felt that business stayed the same in 2017, compared to 22 percent who answered the question the previous year.

When it comes to employment levels, fewer responding members were as optimistic as they were the previous year. In the 2018 survey, 39 percent answering the question, "What is your employment projection for the new year?" thought that employment levels would improve this year, compared to 49 percent in 2017. While more people thought that employment levels would stay the same this year compared to last (58 percent compared to 49 percent), few thought they would decrease (3 percent for 2018; 2 percent for 2017).

Perhaps members are sensing unease due to reports of looming worker shortages in the wood products field. Two reports released in the past few years (one from The Manufacturing Institute and the other from Deloitte) show that the United States faces a need for more than 3.5 million manufacturing jobs over the next decade, with 2 million of those jobs going unfilled due to the "skills gap" between retiring Baby Boomers and the smaller number of young people who see the manufacturing industry as a career destination.

Overall, members’ optimism for their businesses is high: 70 percent who answered the question, “How optimistic are you about your wood-related business this year versus last year?” said they felt more optimistic about their wood-related business than they did last year. It’s varied little from the previous year (68 percent) but wildly from 2016, when just a little more than 40 percent of responding members felt more optimistic about the year ahead.

Members have stayed nimble in an economy that, while presently relatively stable, could change at any moment. When asked, “What has your company
done, if anything, to adapt to economic conditions or seize opportunities?” many emphasized the importance of customer service. “(We’re) adding people to better service the industry,” said one member. “We have…tried to increase contact with our customers and potential customers,” said another. One member said their company is investing in more offices: “(We’re) starting to open satellite offices to be closer to our customers. Hopefully this will cut down on their travel costs and our travel expenses.”

Some members saw the value in investing in new equipment. One comment: “We have aggressively reinvested in plant and equipment and will be testing the viability of newly sourced equipment which will allow for expansion of volumes and the top line (and bottom line) numbers.” And another: “(We’re) working with industry producers to develop new automated equipment, or update antiquated equipment/processes.”

Sheila Cain (scain@engineeredwood.org) is communications director of the Engineered Wood Technology Association and editor of its Engineered Wood Journal.
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By the time classes start this fall, Oregon State University College of Forestry students will have two new programs to consider. The college will offer the opportunity to major in Renewable Materials with an option in Advanced Wood Manufacturing. In addition, the college’s TallWood Design Institute will be offering a certificate program in mass timber manufacturing and construction, targeting manufacturers and building contractors. By mid-2019, both programs will benefit from the opening of a new advanced wood products laboratory and education center.

The offerings follow several years of change at the university’s College of Forestry. In 2010, The Department of Wood Science and Engineering conducted a major overhaul of its undergraduate program, including rebranding as Renewable Materials. At its heart, its degree program is focused on the study of wood products and creating employees for the forest products industry. However, the school has recently diversified by creating a degree option in Art & Design. This option produces a graduate that will likely be more suitable for value-added industries as well as the design side of the industry.

These new programs come at a time when interest in traditional wood-product programs is waning, and colleges are looking for ways to create programs that better-address the high-tech nature of today’s industry. OSU’s new offerings reflect two trends: the ever-growing importance of digital technologies in the manufacturing sector, as well as the tremendous interest in mass timber construction throughout the U.S. The latter has resulted in innovative new wood buildings appearing in several cities, including the T3 office building in Minneapolis, Minn. and the eight-story Carbon 12 building in Portland, Ore. Oregon has become the de facto hub for mass timber construction in the U.S., and researchers from OSU have played a central role in
the development of the state’s two mass timber manufacturers, DR Johnson and Freres Lumber Company.

Students are required to obtain six months of real-world experience during their college career. Based on the skills they develop at OSU as well as internship experience, demand is very high for OSU’s graduates. To meet this demand, the school is in an active growth mode with a goal of doubling undergraduate enrollment in the next four years. Graduates typically have multiple job offers and obtain starting salaries in the $50,000-per-year range.

**Advanced Wood Manufacturing**

Most recently, the college has added a new option in Advanced Wood Manufacturing and graduates from this option will be an especially good fit for APA members. Students pursuing this option will have course work from industrial engineering to compliment multiple digital manufacturing (3D computer-aided-design (CAD), computer aided manufacturing (CAM) and computer numerical control (CNC) classes now offered within Wood Science and Engineering. Funds were recently invested in a digital fabrication lab that includes CNC machining, 3D printing, and laser cutting/engraving to support these courses. During the next year, the program plans to hire a new faculty member in Advanced Manufacturing that can expose students to the role of big data, the internet of things, systems simulation, and robotics in the forest industry. The new Emmerson Advanced Wood Processing Laboratory will be a critical teaching space for this new faculty member and will add a new dimension of skills to graduates from the program.

**Partnering with Industry**

To meet the college’s goal of doubling enrollment, leaders are actively partnering with forest industry companies through a program called “Friends of Renewable Materials.” These “friends” partners are increasing their presence on campus, thus getting to know and supporting students throughout their college career. They are helping program leaders recruit by getting the word out in their local communities. And, they are making significant investments in scholarships. These scholarships target top students and, for freshmen, are “guaranteed” for four years, as long as the student maintains a certain GPA. The guaranteed nature of the scholarships make them a key recruiting tool, along with the program’s connection to industry, stellar record of job placement, and high starting salaries.

Former Masters of Science student Kyle Sullivan discusses his cross-laminated timber research.

*Image courtesy of OSU College of Forestry*
The TallWood Design Institute (TDI) is a relatively new partnership between Oregon State University’s Colleges of Forestry and Engineering and the University of Oregon’s College of Design. Created in 2015 but adopting its formal name just last year, TDI’s mandate is to grow the manufacturing base for mass timber products – engineered products such as cross-laminated timber, nail laminated timber and others – while also eliminating barriers to greater use of structural wood products in multifamily housing and nonresidential buildings. To do that, the institute carries out industry-focused applied research, offers various training and education programs, and works with industry to provide testing and product development services. Wherever possible, researchers and educators from the wood science, engineering and architecture fields work together on these initiatives in a holistic, interdisciplinary manner.

One of the first training initiatives that TDI has taken on is a new certificate program in mass timber manufacturing. The program will teach skills that might be missing in wood products manufacturing firms that have traditionally focused on volume-based commodity products. When serving mass timber markets, a high proportion of products supplied – as high as 90 percent in Europe – are custom-fabricated to the specifications of a particular building project. This means that workers will require skills such as advanced 3D CAD, CAM, and CNC manufacturing. The program will teach these skills, as well as quality control and mass timber construction, in a flexible way that will maximize access to the training for workplace learners who cannot be away from their production facilities for extended lengths of time. Some elements of the program will be taught by e-learning, while others will be offered at regional community colleges so that learners don’t need to travel too far.
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far to attend. The culmination of the program will be an intensive design-fabricate-build course which, as the name suggests, will take learners through the process of designing a mass timber structure in a CAD environment, bringing the design information digitally into the CAM environment, then using a large-format CNC machine to cut all of the elements required for the structure. The group will then erect the structure. This kind of simulation of a real-life project has been shown to provide very valuable lessons in troubleshooting and project management, and will allow learners to employ all of the skills they have learned throughout earlier parts of the certificate program.

Campus Construction
Participants in the design-build program will travel to the Oregon State University campus for this final course, and will use the advanced equipment that will be housed in TDI’s new A.A. “Red” Emmerson Advanced Wood Products Laboratory. The 15,000-sq-ft lab – which will be located in the $79.5 million Oregon Forest Science Complex currently under construction – will include office and meeting space, a manufacturing bay and a structural testing area. The manufacturing bay will house a CLT press, a large CNC, an industrial robotic cell and various supporting equipment. The structural testing area will be centered around a 100-ft-long reaction wall and strong floor which will triple TDI’s capacity to conduct structural testing on advanced wood products. In addition to conducting research, the manufacturing bay of the lab will be a venue for training, technology demonstration events and practical workshops.

Also under the Oregon Forest Science Complex roof will be the new 80,000-sq-ft George W. Peavy Forest Science Center, home to the College of Forestry and its programs.

Throughout these facilities, visitors will notice innovative uses of advanced wood products as the facility highlights cross-laminated timber made in Oregon.
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The look and atmosphere of the complex will reinforce Oregon State's international status as a premier forestry, natural resources and wood science institution devoted to improving our forest landscapes and ecosystems.

Construction of the complex is scheduled for completion by Spring of 2019.

Iain MacDonald is the associate director of the TallWood Design Institute, a partnership between Oregon State University's Colleges of Forestry and Engineering and the University of Oregon's College of Design. He can be reached at iain.macdonald@oregonstate.edu. Eric Hansen is the department head of Oregon State University College of Forestry's Department of Wood Science and Engineering. He can be reached at eric.hansen@oregonstate.edu

The TallWood Design Institute’s new 15,000-sq-ft A.A. “Red” Emmerson Advanced Wood Products Laboratory will be housed with the George W. Peavy Forest Science Center in the $79.5 million Oregon Forest Science Complex currently under construction. The complex is expected to be open in the spring of 2019.
The Engineered Wood Technology Association’s Info Fair supplier exhibition – held in conjunction with APA’s annual meeting – provides face-to-face connection with leading engineered wood products industry decision-makers.

REGISTRATION OPENS April 6
Early Bird Registration Ends August 24
Info Fair: October 27-29, 2018
La Cantera Resort & Spa, Hill Country in San Antonio, Texas

For more information:
Melinda Lilley: mlilley@engineeredwood.org

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The Engineered Wood Technology Association (EWTA), the related nonprofit supplier organization of APA – The Engineered Wood Association, serves as a networking and information transfer vehicle between North America’s engineered wood product manufacturers and their product, equipment and service providers.

This membership directory, updated for 2018, includes company descriptions and contact information for all EWTA members. It’s just one of many tools designed to help members connect with each other and the industry.

Membership Benefits

*The benefits of EWTA membership are many. Among them:*

- Direct business-to-business links with your customers in the engineered wood products industry through such vehicles and events as Info Fair, an annual supplier show held in conjunction with the APA annual meeting; industry forums and seminars; APA annual meeting events; company news and advertising in the *Engineered Wood Journal*; and dissemination of your company news and technology innovations via the EWTA website and Connections e-newsletter.

- Free access to the APA monthly housing starts and quarterly production reports, and discounts on other APA publications and reports.

- Discounts on APA events and *Engineered Wood Journal* advertising.

- Free company listing and profile in the annual meeting issue of the *Engineered Wood Journal* for EWTA Info Fair exhibitors.

- Member products and services directory.

- Annual meeting and other event sponsorship opportunities.

- Supplier award program participation.

- Opportunities to exchange information with other EWTA members, APA members and APA staff via an EWTA advisory and subcommittee structure.

- Opportunities to support, participate in and receive the results of important industry technical and market research projects.

The annual cost of EWTA membership is just $1,200. For more information about the benefits of membership or for a membership application, contact Terry Kerwood, Managing Director, terryk@engineeredwood.org or 253-620-7237, or visit the EWTA website at www.engineeredwood.org.
Adwest Technologies, Inc.,
A CECO Environmental Company
Adwest Technologies provides high efficiency Regenerative Thermal & Catalytic Oxidizers (RTOs & RCOs) for engineered wood, OSB, MDF, laminating, veneer drying & Resin VOC abatement. Adwest can provide compact 2 chamber RETOX RTOs as well as multi chamber RTOS & RCOs to meet your needs for the production of customized engineered wood products. Our HEE-Duali sister Division provides Bioreaction brand Biofilter and scrubber systems while our FKI Division provides cyclone prefilter. We also service, rebuild and relocate RTOS, RCOs, Biofilters and scrubbers for the wood products markets including Smith, Pro-Environmental and all other brands. Contact: Jeff Yerkes - Key Account Manager Phone: 714-632-9801 4222 East La Palma Avenue Anaheim, CA 92807 jyerkes@onececo.com www.cecenviro.com

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AkzoNobel Wood Adhesives is one of the leading global producers of adhesives used in the woodworking industry. Our goal is to significantly improve our customers’ productivity, environmental impact and production process by partnering with the industry and focusing on advanced research and development. Contact: Alan Grainger - Sales Manager Phone: 336-801-0888 PO Box 2103 High Point, NC 27260 alan.grainger@akzonobel.com www.akzonobel.com/cascoadhesives

Albany International Fabrics
Albany International is a global advanced textiles and materials processing company founded in 1895. We are headquartered in Rochester, New Hampshire and employ approximately 5,000 people worldwide. Our 26 manufacturing operations are strategically located in 13 countries to serve our global customers. Albany International’s core business is production of custom-designed engineered fabrics and process belts, used to manufacture all grades of paper from lightweight technical paper to heavyweight container board. In its family of emerging businesses, Albany applies paper machine clothing technologies to develop unique materials and structures for a variety of other industries, including engineered wood products. Contact: Tom Israel - Global Product Manager Phone: 920-521-4618 3601 Electric City Blvd. Kaukauna, WI 54130 tom.israel@albint.com www.albint.com

ALTEC Integrated Solutions, Ltd.
Altec designs and manufactures precision machinery and advanced controls equipment. We create innovative solutions to solve the toughest application demands in the veneer and plywood manufacturing industry and amusement park industry. With our facilities in Coquitlam, BC, and Diboll, Texas, we continue to expand our products and services, setting new benchmarks for innovation and integration. Contact: Chris Bartlett - Vice President Phone: 604-529-1991 #120 – 185 Golden Drive Coquitlam, BC V3K 6T1 Canada cbartlett@alteconline.com www.alteconline.com

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Argos Solutions AS
Argos offers a full range of optical inspection and process control systems that replaces manual grading and patching of wood products. With more than 25 years of experience, and installations in more than 30 countries, Argos provide the latest technology of vision-based scanning systems for plywood, composite and the furniture industry. Argos is a single source supplier for inspection and grading after the press, sander, cut-to-size, including edge inspection systems, and automatic patching systems for plywood and parquet panels. Contact: Tor Gustavsen - Managing Director Phone: +47 9166 9414 Dyrmygata 35 NO_3611 Kongsberg, Norway tor.argossolutions.no www.argossolutions.no

Ashland Specialty Ingredients
ISOSET® adhesives from Ashland have been specially designed for veneer, finger joint beams and structural finger jointing wood applications. They cure fast, clean up easy and offer excellent resistance to moisture, elevated temperature and creep making them an ideal choice for engineered wood products. Ashland Inc. (NYSE:ASH) is a Fortune 500 specialty chemical company providing products, services and customer solutions throughout the world. Contact: Mark Vlaisavich - Account Manager, Structural Assembly Adhesives Phone: 708-205-1586 5200 Blazer Parkway Dublin, OH 43017 mvlaisavich@ashland.com www.ashland.com
**ATCO Wood Products Ltd.**

Located in British Columbia, ATCO Wood Products is a forest management company and a producer of softwood veneer. ATCO specializes in producing custom softwood veneer for plywood and engineered wood products customers in both Canada and the United States.

Contact: Mark Semeniuk - Chief Operating Officer
Phone: 250-367-9441
2073 Humnorn Drive
Fruitvale, BC, V0G 1L0 Canada
mark.semeniuk@atcowoodproducts.com
www.atcowoodproducts.com

**Axalta Coating Systems**

With a wide range of products and technologies, Axalta Coating Systems is the leader in the Wood Coatings Industry for the Building Products market.

Contact: Craig Lyerly - Market Segment Manager, Building Products
Phone: 336-802-4746
1717 English Road
High Point, NC 27262
craig.lyerly@axaltacs.com
www.axaltacoatingsystems.com

**Babcock & Wilcox MEGTEC**

Babcock & Wilcox MEGTEC offers multi-pollutant clean-air solutions to the engineered wood products industry that meet stringent emissions regulations: wet scrubbers and wet electrostatic precipitators for high-efficiency particulate, blue haze and condensed salts removal for dryers and press vents; dry electrostatic precipitators for particulate removal from energy sources; and ultra-high-efficiency RTO/RCO systems for VOC abatement. We also offer pulse jet fabric filters (baghouses), SNCR systems for NOx control, and Multiclone® dust collectors. The B&W MEGTEC aftermarket group also provides upgrades, parts, and service for every make of air pollution control equipment for the engineered wood products industry.

Contact: John Giesfeldt - Marketing Manager
Phone: 920-337-5715
5975 Shiloh Road, Suite 109
Alpharetta, GA 30005
rve@bruks.com
www.bruks.com

**Baumer Inspection GmbH**

Baumer Inspection GmbH specializes in optical surface inspection systems. In over 35 years of quality service, we have installed more than 500 systems worldwide and are a leader in scanners for fully automatic inspection and process control. Baumer Inspection offers inspection systems for plywood, MDF, MDP, paper, film and foils, flooring and surfaces of furniture panels. Our highly skilled and motivated team always pushes the limit of what is possible to bring you the newest innovations in vision technology.

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Phone: +49 173 289 9494
Lohnerhofstrasse 6
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tbattke@baumercom
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**Bruks Rockwood**

Bruks is a specialty Materials Handling company with a 120-year history in engineering and manufacturing innovative equipment for Wood Chipping and Hogging, receipt at the Mill through Truck Dumps and Pits, Storage & Recovery, Material Drying, Log Handling, Butt Flare Reducing, Conveyor systems, Screening Hogs and Hammermills. Bruks Drum Chippers, especially, have been marketed and installed in North America since the 1970's with over 10,000 units operating worldwide.

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Specializing in wood processing machinery and material handling systems for the Forestry and Biomass industries: CBI Grizzly Mill, Biosizer®, Chippers for Pulp-chips or Micro-Chips, Electric Log Sweeps, Log Decks, Log Singulators, Rotary Debarkers, Vibrating Conveyors. Custom engineered solutions to take control of your fiber supply and get more from your mill.

Contact: Kirk Forbes - President
Phone: 604-522-3977
8717 - 132nd Street
Surrey, BC V3W 4P1 Canada
kirk@brunettemc.com
www.brunettemc.com

**Casey Industrial, Inc.**

Casey Industrial has provided process installation services for over 60 years to the Forest Products sector. We self-perform all major trades, work nationwide and have experience with all major technology providers supporting APA members.

Contact: Tom Lepak - VP, Business Development
Phone: 720-974-2659
400 West 122nd Avenue, Suite 200
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tlepak@caseyind.com
www.caseyind.com

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PO Box 860
Howell, MI 48844-0860
gprzekop@chemtrend.com
www.chemtrend.com

**Clarke Veneers and Plywood**

Clarke Veneers and Plywood is an international trading company of wood products, specializing in imports, exports and domestically traded veneers - including hardwood and softwood species for structural panels, in MDO, HDO and other applications requiring clear, sound faces.

Contact: Stuart Clarke - President
Phone: 601-366-0331
PO Box 4676
Jackson, MS 39296-4876
info@clarkeveeners.com
www.clarkeveeners.com

**CMA engineering Inc.**

CMA engineering Inc. has accomplished a number of projects in the manufacturing end of the forest products industry, including the conceptual design, budget preparation, process engineering, detail engineering (mechanical, electrical, civil and structural), equipment procurement, project management, construction management, PLC/HMI programming and start-up of board plants (OSB, Particleboard and MDF), plywood and veneer mills, bioenergy plants, engineered wood product plants and sawmills.

Contact: Claude Malete - P. Eng.
Phone: 705-360-5525
PO Box 2428
Eugene, OR 97402
andy@cmainc.com
www.cmainc.com

**Baumer Inspection GmbH**

Baumer Inspection GmbH specializes in optical surface inspection systems. In over 35 years of quality service, we have installed more than 500 systems worldwide and are a leader in scanners for fully automatic inspection and process control. Baumer Inspection offers inspection systems for plywood, MDF, MDP, paper, film and foils, flooring and surfaces of furniture panels. Our highly skilled and motivated team always pushes the limit of what is possible to bring you the newest innovations in vision technology.

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Sales & Engineering
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**Bruks Rockwood**

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Specializing in wood processing machinery and material handling systems for the Forestry and Biomass industries: CBI Grizzly Mill, Biosizer®, Chippers for Pulp-chips or Micro-Chips, Electric Log Sweeps, Log Decks, Log Singulators, Rotary Debarkers, Vibrating Conveyors. Custom engineered solutions to take control of your fiber supply and get more from your mill.

Contact: Kirk Forbes - President
Phone: 604-522-3977
8717 - 132nd Street
Surrey, BC V3W 4P1 Canada
kirk@brunettemc.com
www.brunettemc.com

**Casey Industrial, Inc.**

Casey Industrial has provided process installation services for over 60 years to the Forest Products sector. We self-perform all major trades, work nationwide and have experience with all major technology providers supporting APA members.

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Phone: 250-754-7776 ext. 115
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dpaauze@coastlandwood.com
www.coastlandwood.com

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Contact: Brian Shams - President
Phone: 604-207-8880
Suite 300 – 13775 Commerce Parkway
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www.coilmanufacturing.com

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Phone: 604-882-1602
27474 Gloucester Way
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www.connexusindustries.com

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Phone: 541-672-5506
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Panel Industry
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eric.johnston@costasanders.com
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Contact: Cole Martin - Sales Manager, Capital Sales and Modernizations
Phone: 678-325-5762
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Alpharetta, GA 30004
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www.do2.ca
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Contact: Darrell Cloudt - President
Phone: 877-434-4363
6600 North Highway 6
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dcloudt@esotx.com
www.esotx.com

**EcoSynthetix**

EcoSynthetix is a renewable chemicals company specializing in bio-based materials that are used as inputs in a wide range of end products. Our commercial products are cost-competitive and exhibit similar performance characteristics compared to the non-renewable products they replace. Our sustainable products allow customers to reduce their use of harmful materials, such as formaldehyde and styrene-based chemicals. Our two flagship products are EcoSphere® biolatex® and DuraBind™ biopolymers. EcoSphere is in commercial use around the world in the paper and paperboard packaging industries. DuraBind™ biopolymers are a no-added formaldehyde binder system used in the production of wood composite panels.

Contact: Scott Good - RVP Sales Americas
Phone: 587-899-2621
3365 Mainway Drive
Burlington, ON L7M 1A6 Canada
sport@ecosynthetix.com

**Electronic Wood Systems, N.A.**

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Contact: Steven Mays - Partner
Phone: 503-643-6305
3720 SW 141st Avenue, Suite #206
Beaverton, OR 97005-2349
steve@ews-usa.com
www.ews-usa.com

**ESOT**

ESOT began operation in 2005 in the Central Texas area. As a result of customer referrals we are now bringing LED retrofits, new installation lighting and hazardous lighting solutions to commercial, retail, institutional and industrial facilities around the country. ESOT is the South Central U.S. distributor for SonicAire fans (www.iesclean.com) that provide continual and safety compliant cleaning of fugitive combustible dust and lint. ESOT offers facility audits and turn-key installation services for all projects and is a member of GNet and VPPPA. Let ESOT design the right engineered solution for your next project.

Contact: Darrell Cloudt - President
Phone: 877-434-4363
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dcloudt@esotx.com
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**Evertree**

Evertree plant-based chemical solutions offering a revolution in industrial solutions and materials with cost competitive, plant-based chemicals that offer the same or better performance than petroleum-based chemicals. Our first product family SynerXiD™ offers a 20 to 40% reduction of formaldehyde and petroleum based resins used in wood based panels with a significant raw material cost reduction while achieving the same panel properties.

Contact: Clancy Redmond - Director, Business Development
Phone: 917-224-5794
727 Norristown Road
Ambler, PA 19002
clancy.redmond@evertree-technologies.com
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Contact: Alexander Root
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648-A Griffith Road
Charlotte, NC 28217
sales@grecon.us
www.grecon.us

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Contact: Maclin Ferrell - Vice President
Phone: 804-733-7628
2050 Puddledock Road
Petersburg, VA 23803
maclinferrell@dominionchemical.com
www.dominionchemical.com

**EcoSynthetix**

EcoSynthetix is a renewable chemicals company specializing in bio-based materials that are used as inputs in a wide range of end products. Our commercial products are cost-competitive and exhibit similar performance characteristics compared to the non-renewable products they replace. Our sustainable products allow customers to reduce their use of harmful materials, such as formaldehyde and styrene-based chemicals. Our two flagship products are EcoSphere® biolatex® and DuraBind™ biopolymers. EcoSphere is in commercial use around the world in the paper and paperboard packaging industries. DuraBind™ biopolymers are a no-added formaldehyde binder system used in the production of wood composite panels.

Contact: Scott Good - RVP Sales Americas
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3365 Mainway Drive
Burlington, ON L7M 1A6 Canada
sport@ecosynthetix.com

**Electronic Wood Systems, N.A.**

EWS North America was founded in 1993. We are a leading supplier of quality control measuring systems for the wood composite panel board industry, including: Thickness Gauges, Blow Detection, Press Protection Devices, Spark Detection & Extinguishing Systems, Mass (WPUA) Measuring, non-contact Weigh Scales and Density Profile Measuring Systems.

Contact: Steven Mays - Partner
Phone: 503-643-6305
3720 SW 141st Avenue, Suite #206
Beaverton, OR 97005-2349
steve@ews-usa.com
www.ews-usa.com

**ESOT**

ESOT began operation in 2005 in the Central Texas area. As a result of customer referrals we are now bringing LED retrofits, new installation lighting and hazardous lighting solutions to commercial, retail, institutional and industrial facilities around the country. ESOT is the South Central U.S. distributor for SonicAire fans (www.iesclean.com) that provide continual and safety compliant cleaning of fugitive combustible dust and lint. ESOT offers facility audits and turn-key installation services for all projects and is a member of GNet and VPPPA. Let ESOT design the right engineered solution for your next project.

Contact: Darrell Cloudt - President
Phone: 877-434-4363
6600 North Highway 6
Waco, TX 76712
dcloudt@esotx.com
www.esotx.com

**Evertree**

Evertree plant-based chemical solutions offering a revolution in industrial solutions and materials with cost competitive, plant-based chemicals that offer the same or better performance than petroleum-based chemicals. Our first product family SynerXiD™ offers a 20 to 40% reduction of formaldehyde and petroleum based resins used in wood based panels with a significant raw material cost reduction while achieving the same panel properties.

Contact: Clancy Redmond - Director, Business Development
Phone: 917-224-5794
727 Norristown Road
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clancy.redmond@evertree-technologies.com
www.evertree-technologies.com

**Fagus GreCon**

GreCon – Since 1911, Innovation is Our Tradition.

MEASURING SYSTEMS: Improves your bottom line. Check out the full range of in-line measuring systems: thickness gauges, blow & delamination detector, moisture meters, raw density profile. Weight per unit area across the whole production width at the mat former and after the press. Detect surface defects on décor panels and flooring. SPARK DETECTION & EXTINGUISHING SYSTEMS: Provides safety for your production. Detect sparks and extinguish them before the filter. Detect heat buildup in silos, bag houses and storage bins. Outlined in NFPA 69, 654 and 664 standards. Factory Mutual Approved.

Contact: Alexander Root
Phone: 704-912-0000
648-A Griffith Road
Charlotte, NC 28217
sales@grecon.us
www.grecon.us
Flamex, Inc.
Flamex Inc. is a leading supplier of customized industrial process fire prevention and protection equipment. We specialize in the protection of facilities that handle combustible dusts that utilize pneumatic dust collection and air filtration systems. To address the process fire hazard inherent in various industrial applications, our company pioneered the utilization of a new technology in North America by introducing the FLAMEX Spark Detection and Extinguishing System in 1977 and the MINIFOG PressProtect System in 1997 for the protection of Industrial Presses. The flexibility of these systems allows their use in other hazardous areas such as Thermal and Hydraulic oil rooms where AFFF Foam Fire Fighting systems can be utilized for further protection.
Contact: Ed Pridgen - Minifog Product Manager
Phone: 336-299-2933
4365 Federal Drive
Greensboro, NC 27410-8116
epridgen@sparkdetection.com
www.sparkdetection.com

Franklin Adhesives & Polymers
Franklin Adhesives & Polymers, a division of Franklin International, manufactures adhesives for the domestic and global wood furniture, millwork and engineered-lamination markets. We have led the way in the innovation of wood adhesives and various types of wood bonds and have developed adhesive solutions for many applications in the wood product manufacturing plant. Under the trusted brand names Titebond, Multibond, ReacTITE and Advantage, our products provide superior performance in wood assembly, solid edge and face gluing, engineered product lamination and finger jointing.
Contact: Joshua Bartlett - Business Development Manager
Phone: 800-877-4583
2020 Bruck Street
Columbus, OH 43207
joshbartlett@franklininternational.com
www.franklinadhesivesandpolymers.com

Fusoni U.S.
Fusoni develops and manufactures release agents and additives for panel board manufacturing, and also for paper impregnation processes. For more than 30 years we have been serving clients in Europe, Asia and the Americas. Our chemicals expertise extends to other industries, such as release applications in bakery and polyurethane systems. We add value through chemistry, and work closely with our customers, helping them improve the properties of their products and reducing production cost through excellent release and additive performance. We look forward to working with you to make your products better and your business more profitable.
Contact: Adrian Yovanovich - Manager, North America
Phone: 210-712-7803
Fusoni U.S.
955 Lightstone Drive
San Antonio, TX 78258
Fusoni Componentes, S.L.
Polígono Industrial de Argame – C/ Mostayal parcela D4 33163 Argame, Asturias, Spain
ayovanovich@fusoni.us
www.fusoni.net

Georgia-Pacific Wood Adhesives
Georgia-Pacific Chemicals offers a portfolio of thermostetting resins for plywood, oriented strand board and laminated veneer lumber applications as well as custom-formulated solutions to meet our customer’s specific needs. Our innovative RESI-BOOST® adhesive technology, when used in combination with RESI-BOND® and RESI-MIX® adhesives, has demonstrated increased press times as much as 10-20% without sacrificing bond quality nor increasing temperatures. It can lower glue usage as much as 3-10%. RESI-BOND® and RESI-MIX® dry adhesive technology joins our other quality products- WOODWELD® spray dried powders; RESI-MIX® Ultra ready-to-use mixed adhesives and additives for panel board manufacturing, and also for paper impregnation processes. For more than 30 years we have been serving clients in Europe, Asia and the Americas. Our chemicals expertise extends to other industries, such as release applications in bakery and polyurethane systems. We add value through chemistry, and work closely with our customers, helping them improve the properties of their products and reducing production cost through excellent release and additive performance. We look forward to working with you to make your products better and your business more profitable.
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Fusoni Componentes, S.L.
Polígono Industrial de Argame – C/ Mostayal parcela D4 33163 Argame, Asturias, Spain
ayovanovich@fusoni.us
www.fusoni.net

Globe Machine Manufacturing Company
Globe Machine offers single machine centers along with complete systems to the following industries: OSB, MDF, particleboard, plywood, strawboard, moulded door skins, membrane presses, siding, LVL, laminate flooring and sheet plastics. Globe Machine is the leader in the supply of automated I-joist assembly systems and has achieved a leadership role in the cement fiberboard industry and moulded door skin lines. For 100 years Globe Machine has served the forest products industry.
Contact: Mike Tart - Sales Manager
Phone: 253-383-2584
PO Box 2274
Tacoma, WA 98401
sales@globemachine.com
www.globemachine.com

Grenzebach Corporation
We are a leading global manufacturer and supplier of drying systems to the veneer and building materials industries with over 40 dryer installations worldwide. Grenzebach’s new Wood Fiber Insulation Board line produces materials in densities of 3 to 10 lbs per cubic foot. Our veneer line includes dryer infeed and outfeed systems, jet and longitudinal dryers, and color veneer grading and stacking systems. Grenzebach has completed extensive rebuilds on all makes and models of veneer and gypsum dryers. Complete parts and service support is also available.
Contact: Charles Shurtliff - Sales Manager - Building Materials Division
Phone: 678-488-8369
10 Herrin Road
Newnan, GA 30265
charles.shurtliff@grenzebach.com
www.grenzebach.com

Guardian Chemicals Inc.
Providing solutions, results and meaningful service has earned Guardian Chemicals Inc. the enviable industry reputation as the “go to” people for chemical technology and services. Our extensive research and development group, in house ISO 14001 certified manufacturing and products like our revolutionary patented PRESSGUARD series release agent technology for MDF resins in continuous and multi-opening presses, keep us at the forefront of the engineered wood industry. From W.E.S.P. and Scrubber treatment technology, process chemicals and defoamers to maintenance chemicals, odor control and corrosion prevention, Guardian’s wood group provides our partner clients with a complete package along with the flexibility to adapt products to the specific needs of each individual application and customer.
Contact: Greg Pecharsky - Vice President
Phone: 780-998-3771
155-55202 SH 825
Sturgeon Industrial Park
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gepecharsky@guardianchem.ca
www.guardianchem.ca

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**H.B. Fuller**
H.B. Fuller Plywood Adhesive Coated Solutions has specialists for all your compositing needs. Gain improved wood recovery and reduced unit costs at theComposer through a package of specialized tapes and strings, patented adhesive application equipment, process improvement tools and expert service for both green and dry veneer process.

Contact: Daniel Gonzalez - Senior Technical Sales Manager  
Phone: 318-349-4081  
417 NW 136th Street  
Vancouver, WA 98685  
daniel.gonzalez@hbfuller.com  
www.hbfuller.com

**HexArmor**
HexArmor is a global PPE (personal protective equipment) manufacturer that uses innovative technologies to build high performing hand protection, arm/body protection, and eyewear. At HexArmor, we understand the daily challenges faced by safety teams in the wood products industry – working to meet growth and operational expectations while keeping employees safe on the job can be a tough balancing act. Injuries are costly. Down time and lost productivity damage company reputations and slow growth. Let HexArmor help you build a PPE program that keeps you operationally efficient while giving your employees the best opportunity to go home safely to their families.

Contact: Patrick Beadling - Director of Account Services  
Phone: 616-459-4144  
2000 Oak Industrial Drive  
Grand Rapids, MI 49505  
patrick@hexarmor.com  
www.hexarmor.com

**Hexion Inc.**
Hexion Inc. is a leading global source for adhesives, resins, formaldehyde, melamine and derivatives serving a broad range of markets including the forest products, foundry, automotive, construction, composites, electronics and oilfield industries, operating more than 50 manufacturing plants in North America, Latin America, Europe and Asia/Pacific. The Forest Products division of Hexion Inc. is the global leader in supplying resins, adhesives, wax emulsions and ancillary products to the forest products industry. Customers use our materials to manufacture a wide range of composite and engineered wood products including plywood, particleboard, oriented strandboard, medium density fiberboard, structural beams, furniture, moldings and millwork.

Contact: Dale Leeper - PF Technology Manager  
Phone: 936-829-8054  
100 West Borden Drive  
Diboll, TX 75941  
dale.leeper@hexion.com  
www.hexion.com

**Hunt Guillot & Associates LLC**
Hunt, Guillot & Associates, LLC (HGA) is a multi-disciplined project management and engineering design firm. HGA has been serving the forest products industry since the firm’s founding in 1997. HGA continues to provide expertise to the Engineered Wood Products, LVL, I-Joist, OSB, Plywood, Particleboard, Glue Lam and Lumber industries. Services provided include project management, feasibility studies, preliminary engineering, detailed design engineering and on-site technical support services.

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Ruston, LA 71273  
jmcintosh@hga-llc.com  
www.hga-llc.com

**Huntsman Polyurethanes**
For approximately 30 years, Huntsman has been a global leader in the production of the MDI-based resin binders for particleboard, medium-density fiberboard and oriented strand board. Our dedicated Composite Wood Products teams are committed to helping our customers reach their goals in all market conditions. There is no added formaldehyde (NAF) with Huntsman’s RUBINATE® resins, and they are considered “exempt” under requirements of the California Air Resources Board (CARB) standards.

Contact: Sheila Patel - Industry Manager  
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The Woodlands, TX 77381  
shelia_patel@huntsman.com  
www.huntsman.com

**IBC, International Bar Coding Systems & Consulting Inc.**
IBC, International Bar Coding Systems & Consulting Inc. - An integrated manufacturer of individual piece wood product specific printer applicators. Complete solutions for finished or in process packs we offer Automated Package labelers (AutoLabeler) for Veneer, OSB, MDF, Plywood, Lumber and EWP. We manufacture tags and labels for any labeling system and are a single source provider for turnkey systems. We offer Vendor Managed Inventory of consumables and integrated data collection systems across North America. We provide full design, build, onsite service, preventative maintenance, training and consulting on a system wide or mill by mill basis.

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1940 Barnes Street  
Penticton, BC V2A 4C3  
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chrispedersen@IBCworld.net  
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**The HT Group**
The HT Group provides nationwide recruiting and staffing services providing access to the nation’s premier technical, professional, management, and executive talent. We work extensively in building products, forest products, and consumer goods.

Contact: Craig Patterson - Managing Partner  
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www.thehtgroup.com
IMAL - PAL GROUP
Established in the 1970's, the Group is a world leader in the manufacture and supply of equipment and systems. It's extensive production program is able to supply complete turnkey plants for the treatment and processing of fresh and recycled wood, in both the wet and dry areas, for production and processing of particleboard, MDF, OSB, plywood, pellets, pallet blocks and pressed wood-based products in general. IMAL is a leading manufacturer of glue dosing and blending systems and supplies the most innovative on-line and laboratory quality control devices that are found in virtually all the production plants around the world.

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Stone Mountain, GA 30087
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www.imalpal.com

Intertape Polymer Group
Intertape Polymer Group (IPG) is the market leader in protective fabrics with over 25 years of experience in the wood industry. IPG is an integrated supplier and manufacturer of woven coated lumber wrap. IPG’s wrap offers the ability to advertise your corporate logo in up to four colors and increase brand awareness throughout the transportation process. Available in various weave strengths and colors to fit your needs.

Contact: Scott Maw - Sales Woven Packaging - IPG
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50 Abbey Avenue
Truro, Nova Scotia B2N 6W4 Canada
smaw@itape.com
www.itape.com

InterWrap/Owens Corning
InterWrap® is the largest supplier of coated woven wood wraps for the Engineered Wood Industry. Its custom-printed WeatherPro™ packaging products are designed to maintain product integrity throughout transportation, inspection and storage of sawn lumber, plywood, OSB, all types of beams, I-joists and composite wood products. InterWrap is a vertically integrated, global manufacturer of innovative coated woven wood products serving a wide variety of markets. Consistent product quality is achieved by using state-of-the-art equipment along with a strong commitment to partnership with our customers, employees, and suppliers. InterWrap’s global supply chain efficiency is achieved by our strategic manufacturing and distribution centers located throughout North America, Asia & Europe.

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North Charleston, SC 29406
mike.nielly@owenscorning.com
www.interwrap.com

Itipack Systems
Itipack Systems has been in business since 1970. We are a manufacturer of automated strapping systems.

Contact: Ken Stel - NA Sales Manager
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919 Zelco Drive
Burlington, ON L7L 4Y2 Canada
kstel@itipacksystems.com
www.itipacksystems.com

KADANT Carmanah Design
KADANT Carmanah provides leading edge technology and equipment to optimize fibre utilization for the production of wood-based panels. KADANT Carmanah’s products include SmartDISC Stranders, SmartRING Stranders, Rotary Debarkers and Conveying/Feeding equipment for the oriented strand board market. As a global leader in stranding technology, KADANT Carmanah holds an impressive 80% of this market share.

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info.carmanah@kadant.com
www.kadantcarmanah.com

Kimwood Corporation
World’s leading producer of new equipment and OEM parts for Kimwood Saw Sanders, Hogs and Handling Equipment, Stetson-Ross Planers and Moulders, Ferrari Resaws and Tri-State Equipment.

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Cottage Grove, OR 97424
msimmons@kimwood.com
www.kimwood.com

JAX, Inc.
JAX is a full-line lubricant manufacturer with expertise in compounding high-end synthetic and petroleum lubricants. With over 60 years of industry experience, JAX has earned its reputation as a leader in lubricant technology. JAX lubricants are compounded with the finest raw materials and additive chemistry in the industry. Formulation decisions are based upon performance and quality which ultimately lead to substantial, verifiable cost savings in terms of extended machine life, reduced downtime and increased production. Lubrication technology is a continually evolving science. Products that have worked in the past may not be sufficient to provide adequate lubrication in the future. In order to meet the evolving needs of our customers we are constantly analyzing the JAX product line for opportunities to improve value. JAX is a Manufacturer and Global supplier of the highest quality LUBRICANTS for machinery and process.

Contact: Ted Schultz - Director OEM & Engineered Wood
Phone: 800-782-0570 Ext. 307
W134 N5373 Campbell Drive
Menomonee Falls, WI 53051
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www.jax.com
Koch Knight, LLC
A domestic manufacturer and global leader of ceramic media for Regenerative Thermal Oxidizers (RTO). Our media is designed to work in normal to your most challenging application environments. A mixed bed of our FLEXERAMIC® structured media and LDL® random media offers optimal heat transfer and full bed utilization while our GR (Glazed Resistant Alumina) material is produced for OSB Dryer and other applications for the wood products industry. We manufacture our ceramic media domestically and stock over 100,000 cubic feet at our East Canton, Ohio facility at any given time to accommodate current and future customers for quick response and short lead times.
Contact: Matt Thayer - VP Sales and Marketing
Phone: 330-488-1651 Ext. 210
5385 Orchard View Drive SE
East Canton, OH 44730
matt.thayer@kocknigh.com
www.kochknight.com

LIMAB supplies non-contact laser measuring systems for composite panels and engineered wood products, including thickness and squareness measurements, and blow detections on panels.
Contact: Jens Svensson - President
Phone: 704-321-0760
9301-B Monroe Road
Charlotte, NC 28270
jens.svensson@limab.com
www.limab.com

Meinan Machinery Works, Inc.
Established in 1953 in Japan, Meinan develops and manufactures innovative machinery for veneer and plywood production, and holds hundreds of worldwide patents. Meinan's revolutionary “spindleless” lathe drives logs on their circumference with spiked discs instead of spindles, resulting in better veneer quality, higher yield, and extremely close thickness tolerances. The lathe is part of an automatic veneer peeling line featuring automatic stacking and green composing of random strips into full veneer sheets to save labor costs and increase dryer utilization. Meinan also manufactures scarf composites, grading systems, automatic layup lines, and sanders. Represented in USA by Merritt Machinery, LLC in Lockport, NY.
Contact: Jimmy Nakaya - Sales Director
U.S. Representative: Merritt Machinery, LLC
Contact: Anna McCann, President
Phone: 716-434-5558
10 Simonds Street
Lockport, NY 14094
amccann@merrittmachinery.com
www.merrittmachinery.com

Mereen-Johnson LLC
Mereen-Johnson has been setting the standard for the woodworking and engineered materials industries since 1905 and offers a complete line of Gang Rip Saws, Profiling Machines, Cross Cutting Equipment, Sizing Systems, I-Joint equipment, and related material handling designed for reliable, high speed production with minimal maintenance. Mereen-Johnson also offers a complete line of solid wood processing equipment such as fixed arbor and shifting blade straight line multiple Rip Saws, Rough Mill Optimizing and Material Handling, Moulders, Single and Double End Tenoners, CNC controlled Dowetailers, and Box Clamps.
Contact: Dave Olson - Corporate Sales Manager
Phone: 612-529-7791
579 Ninth Street SE, Suite 200
Minneapolis, MN 55414
info@mereen-johnson.com
www.mereen-johnson.com

McLube Division, McGee Industries, Inc.
McCee Industries/McLube Division has manufactured high-technology mold releases agents and industrial lubricants since 1954, including water/solvent-based release agents for the rubber, plastics, composite, wood fiber composite/panel press/ing, concrete and stone veneer andpolyurethane markets, antitack coatings for hundreds of industrial applications and a full line of Moly lubricants (Moly Lube),PTFE lubricants oils, greases and dry film aerosol and bulk containers lubricants. Lines includes antistick coatings, rubber lubricants, antisize compounds, cleaners and protective coatings. Through six decades of innovation, we’ve earned an international reputation for performance and worldwide industry recognition as expert problem solvers. Specialists in assessing complex processes, unusual conditions and developing working solutions.
Contacts: Evan Silo - Technical Representative
Glenn Dubisky – Sr. Technical Representative
Phone: 1-800-2-2McLube (800-262-5823)
PO Box 2425
Aston, PA 19014-0425
info@mclube.com
www.mclube.com

Matthews Marking Systems, established in 1850, is a leading supplier of marking and coding equipment for the engineered wood and building products industries. Mathews supplies ink jet printing solutions for applications including grade marking, nail patterns, traceability and large format logo printing. We also offer a variety of inks, specific to the wood industry, including water based, fast dry and VOC free.
Contact: Donna Meade - Strategic Initiatives Manager
Phone: 800-775-7775
6515 Penn Avenue
Pittsburgh, PA 15206
info@matw.com
www.matthewsmarking.com

Lanza Wood Protection, Inc.
Lanza Wood Protection is a global leader in the development and supply of innovative technologies for the treatment of wood. Lanza’s technologies improve the performance of wood products, making them resistant to termites, fungi, fire, mold and moisture. Lanza manufactures and supplies many of the highest quality and well-known wood protection products, including its Wolman® line of preservatives, Silbor® borate treatments, Chemonite® ACZA industrial preservatives, Oricon® fire retardants, FrameGuard® and Wolman® non-pressure mold inhibition and preservative products and the Diacon Mycostat® and Antiblu® antisapstain lines. Together with its New Zealand-based affiliate, Zelam Ltd, Lanza offers formulations specifically designed for the treatment of engineered wood. With global operations and an expansive offering of services and expertise, Lanza is dedicated to the success of its customers.
Contact: Steve Nielsen - Regional Sales Manager
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360 Interstate North Parkway, Suite 450
Atlanta, GA 30339
steve.nielsen@lonza.com
www.wolmanizedwood.com

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Metriguard Technologies Inc.
High-speed Metriguard veneer graders operate in LVL and structural plywood mills worldwide. Laboratories depend on Metriguard Panel Bending & Performance Testers to evaluate structural panels. The new Model 840 test CEO used as I-joint web stock. For MSR/MEL lumber producers, Metriguard offers the Model 7200 for longitudinal installations and the Sonic Lumber Grader for transverse installation – both are compatible with scanners. The Model 312 Bending Proof Testar is a standard in MSR QC labs. With over 40 years in the engineered wood products business, Metriguard has the knowledge and equipment for grading and testing structural veneer, panels and lumber.
Contact: Dan Uskoski - VP Sales
Phone: 509-332-7526
2465 NE Hopkins Ct.
Pullman, WA 99163
duskoski@metriguard.com
www.metriguard.com

NESTEC, Inc.
NESTEC, Inc. is a turnkey provider of thermal oxidation systems for the wood products industry including regenerative thermal oxidizers (RTO) including on line bake out, regenerative catalytic oxidizers (RCO), process scrubbers, Wet Electrostatic Precipitators (WESP), duct design, secondary heat recovery, system upgrades, energy audits, inspections and parts. Our key staff of engineers has over 300 years of experience in the field of thermal oxidation and has participated in solving air emissions problems for the wood products industry since the early 1990’s. Whether you need a new air pollution control system or require upgrades and improvements to an existing RTO-WESP system, NESTEC, Inc. is your best resource to ensure a successful project.
Contact: James L. Nester - President
Phone: 610-323-7670
222 East Main Street
Pen Argyl, PA 18072
jnester@nestecinc.com
www.nestecinc.com

Nicholson Manufacturing Ltd.
Industry Leader in ring debarking technology since 1948.
Contact: Russell Huband - NCVS Manager
Phone: 250-654-2235
PO Box 2128
Sidney, BC V8L 3S6 Canada
forestsales@mseco.com
www.debarking.com

Nondestructive Inspection Service
Nondestructive Inspection Service (N.I.S.) was incorporated in 1960. Since that time we have taken preventative maintenance to higher levels of predictive maintenance while saving our customers costly unpredictable down time, on all types of process equipment along the entire production line. We are the established leader in applying our knowledge of NDT and perfecting inspection procedures to exceed industry standards. In the case of wood processing and construction board plants we have developed, tested and implemented significant innovations on the standard inspection techniques to shrink costly inspection downtime and overcome the issues of inspecting difficult-to-reach parts of the equipment.
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Phone: 304-562-6835
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Engineered Wood Technology Association members met in Huntington Beach, Calif., Oct. 28-31 for the association’s annual supplier exhibition. Info Fair is an opportunity for members to share ideas and network with others in the engineered wood industry, and the event is held annually in conjunction with APA’s Annual Meeting. This year, 85 EWTA member companies from around the world exhibited at the event, which was held at the Hyatt Regency Resort and Spa.

In addition to Info Fair, the annual extended weekend also provides an opportunity for both EWTA and APA members to attend APA-sponsored workshops, participate in roundtable discussions and listen to presentations.

Continued page 51
EWTA members posed for the association’s annual group photo.

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Happy Anniversary!

Info Fair 2018 Celebrates 25 Years

It’s back to San Antonio, Texas, for the 2018 Info Fair event, where EWTA will be celebrating the supplier exhibition’s 25th anniversary. The event will be held Oct. 27-30 at the La Cantera Resort & Spa in San Antonio, Texas. Registration opens April 6. For information, visit www.engineeredwood.org and click on Events and Programs, or email coordinator Melinda Lilley at mlilley@engineeredwood.org.

Continued from page 48

about association activities. Members also took part in numerous receptions, luncheons and sporting competitions, including the annual golf tournament, cripple coot shoot and Ole Sorenson Memorial Tennis Tournament.

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Five EWTA member companies were honored during the Chairman’s Dinner at the APA Annual Meeting in Huntington Beach, Calif., Oct. 30 for excellence in the industry. The companies were winners in EWTA’s annual Supplier Awards program. The two-pronged program includes the Supplier of the Year Award (three categories) and the Innovation of the Year Award.

The Supplier of the Year Awards are based on the quality, service and delivery of EWTA member products and services to APA member companies. Supplier of the Year Awards are presented for each of EWTA’s membership categories: Equipment and Tooling, Materials and Supplies, and Consulting and Services. The Innovation of the Year Award recognizes a company providing a new technology, product or service that has been shown to reduce production costs, increase productivity, improve product quality, or in some other way provide a bottom line benefit to APA members.

The award winners are selected by votes of APA member representatives.
WINNERS OF THE 2017 SUPPLIER OF THE YEAR AWARDS ARE:

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**TWO COMPANIES TIED TO CLAIM THE INNOVATION OF THE YEAR AWARD:**

**Sweed Machinery: Vacuum Feeder Peel Cups**
Sweed’s new Vacuum Feeder Peel Cups use a patent-pending approach to grip and feed green veneer into high-speed dryers. This method reduces feeding multiple veneer sheets, known as “doubles.” Instead of using traditional vacuum cups that pick the veneer straight up while keeping the sheet flat, Sweed's Peel Cups lift the sheet from the outside edges first, then pull it into the dryer tipple feeder. This process mimics an operator's efforts to separate two sheets from one another if they become stuck.

**USNR: Cross Laminated Timber Press**
USNR's new modular press for the manufacture of cross laminated timber panels features the use of compressed air instead of hydraulics, which sets it apart from other CLT presses. Once the CLT panel is fed into the press, a set of pneumatic cylinders applies pressure from the sides to ensure minimal gaps between core materials within a given layer. Meanwhile, a set of channels carrying eight, large-diameter pneumatic hoses is lowered to rest atop the CLT panel. Once the panel is configured correctly, the hoses are brought to pressure. The method is a more cost-effective and environmentally friendly one than the hydraulic alternative.
The largest and most cyclical end-use market for wood-based building materials is new residential construction, so it clearly deserves considerable analytical and media attention. New construction, however, doesn't tell the whole story. There are roughly 120 million occupied units in the U.S. that need to be maintained and modernized on an ongoing basis, and it is important for those in the wood products industry to understand what repair and remodeling means for the use of their products.

The last time the U.S. residential repair and remodeling market was closely analyzed by APA – The Engineered Wood Association was in 2009. The focus year was 2006, when the country was right in the middle of a housing boom. In 2017, APA published an update of the 2009 report, which focused on activity in the year 2014. The conclusions generated from the update provide a better understanding of where APA member products are used, and how professional remodelers and do-it-yourselfers have become more comfortable using improved structural panels and engineered wood products.

When the 2009 report was published, there were only four years of data available from the Census Bureau. The report focused on the types of projects undertaken by homeowners based on the American Housing Survey (released every two years). Since these surveys were conducted in the boom years, the conclusion drawn at the time was that home repair and remodeling was a rapid growth market. A wide array of interested parties made large investments based on that conviction. It is 10 years later and there's now more data available that should allow us to better understand the cyclical nature of the projects homeowners undertake, especially those in which wood products are key inputs.

**Repair and remodeling on the rise**

Similar to new residential construction, repair and remodeling of the housing stock in the U.S. has been on an upward trend as part of the recovery from the Great Recession of 2007-2009. Sales at building material and garden equipment supply dealers have been on an upward path since 2013. Sales were up six percent in 2017 from 2016. Yet, they were still seven percent lower than the peak realized in 2005.

The data is dominated by the well-known big box stores, but wood products make up just a portion of their sales. The Census Bureau provides monthly estimates of the sales at these establishments, which can give us a qualitative feel for the trend in the repair and remodel mark, but the data is insufficient to help us understand the mix of projects undertaken where wood products are critical inputs. That is why the detail from the American Housing Survey is so important. The most recent data available was released in 2017 for the survey year 2015. The research staff at the Harvard Joint Center for Housing Studies compiles the data in a manner that allows us to create consistently defined time series estimates to better understand the trends in projects that tend to be most wood products-intense and estimate wood products use.

**Discretionary projects: timing is key**

Discretionary projects tend to be undertaken when homeowners are confident about their financial situation, credit is easily available, and they believe the project will add value to the home. Major repairs and replacements, on the other hand, usually require immediate attention and do not give the homeowner the luxury of time and extensive planning.

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**Sales at Building Materials and Garden Equipment Supplies Dealers**

(Billions of 2015 dollars)

![Graph showing sales at building materials and garden equipment supplies dealers from 2004 to 2016.](image-url)
The timing of discretionary projects closely follows the cycle in new home construction. Classic examples are bathroom and kitchen remodels. The number of remodels rose steadily from 2001 to 2007, in concert with rising home values and easy access to credit through home equity loans or withdrawing cash in a mortgage refinance to pay for the remodel. Remodels subsequently fell off as the economy went into recession, lending standards tightened and the drop in home values depleted equity that homeowners might have used to finance a remodel. The number of remodels bounced back in 2015 and exceeded the 2007 peak.

It should also be no surprise that average spending per remodel followed the same pattern as the number of remodels. Expenditures per kitchen remodel peaked in 2007 at $12,270, an increase of almost 50 percent from 2003. Expenditures per kitchen remodel bottomed in 2013 at $9,920, marking a drop of 19 percent from 2007. Expenditures per bathroom remodel averaged $6,200 in 2005 and 2007, and then fell back to roughly $5,000 for the years 2009 through 2013, and then rebounded to $5,880 in 2015.

Another example of a discretionary project is the addition of a room or rooms to an existing home, which expands the square footage of living space and requires framing and sheathing applications. The most common examples are bedroom and bathroom additions, which, in some cases, are done in tandem. The number of bedroom and bathroom additions peaked in the years 2005–2007, but, in contrast to the remodels, continued to trend lower in 2015. Answers to the question of why additions fell by roughly 50 percent from 2013 to 2015 are largely speculative. One plausible answer is that undertaking a room addition in most municipalities requires a permit, and with many permitting offices understaffed, some owners became frustrated with delayed approvals. Another possible answer is that as new homes have trended up in size and amenities over time, additional space in the form of new bedrooms and bathrooms is less necessary than it was 10 years ago.

Emergency repairs
Unlike remodels or room additions, there are certain projects that— as much as homeowners want to delay— just cannot be put off for too long. Due to the nature of the needed repairs or replacements, they are usually expensive and require a professional. In terms of the number of projects done in a year and expense per project, roofing leads the way. The number of roofing projects was essentially unchanged from 2005 to 2009 and that number can be said to have been on an upward trend through the first half of this decade. Expenditures per roofing project have essentially followed the same pattern as the number of roofing projects. From 2005 to 2009, expenditures per roofing project ran between $5,100 and $6,000. Since then, there has been an upward trend in expenditures to $6,750 in 2015, which may reflect more expensive materials. However, given that material improvements have been made that promote a longer-lived or less maintenance-intensive roof, the increased expense is being overstated.
Re-siding a major portion or the entire home also showed much less sensitivity to economic conditions. Again, this makes sense in that a homeowner cannot afford to put off undertaking such a project for too long without risking more damage to the home that would require an even bigger expense down the road.

**Summary of wood products intensive projects**

Adding up the expenditures incurred for the projects reviewed and, including other smaller do-it-yourself projects deemed to be wood products-intensive, the estimated total for 2015 was $133 billion, up 6.7 percent from 2013, but still 18 percent below the peak of 2007. The shortfall in the aggregate of the wood products-intensive projects relative to sales at building material and garden equipment supply dealers for the same years makes sense, as the economics of investing structurally in one’s home has not been as compelling as it was before the onset of the Great Recession.

Since it is so difficult and expensive to fully track where wood products are utilized on an annual basis, these high-level indicators can be used to develop reasonable estimates of product usage in the repair and remodel sector. For example, APA estimates that structural panel use in residential repair and remodeling increased by roughly seven percent from 5.9 billion sq ft in 2015 to 6.3 billion sq ft in 2017. Yet, the 2017 estimate is still 17 percent below the peak years of 2005 to 2007, when structural panel use in this market was estimated at 7.6 billion sq ft.

**Outlook for 2018 and beyond**

Favorable economic conditions driving healthy consumer confidence suggest repair and remodeling activity will grow three percent in 2018. That number could go even higher, driven by the need to repair homes and apartment buildings damaged by hurricanes Harvey and Irma. The timing of when the repairs take place is dependent on how soon the funds, either from private insurance or government aid, are made available. Given the extent of the damage incurred, some of the spending could spill over into 2019.

Housing units damaged from the severe fires in California will tend to be total rebuilds on existing foundations, so those expenditures will be captured in the housing starts data.

Beyond the next two years, the likely growth path for residential repair and remodeling is to track at or less than real income growth, meaning something on the order of one-and-a-half to two percent per year. It is unclear if the tax law changes will have a meaningful impact on the remodeling side. The notion that the tax law changes could negatively impact home prices at the high end suggests this could dissuade these people from investing as much in a remodel as prior to the change.

Joe Elling is the director of market research for APA – The Engineered Wood Association. He can be reached at joe.elling@apawood.org. He contributes frequently to the Engineered Wood Journal. His most recent article analyzed the use of plywood and OSB in upholstered furniture in the Spring 2017 issue.
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When the 2012 version of the International Energy Conservation Code (IECC) was released, homebuilders and wood product manufacturers took notice. Updated every three years, the IECC serves as a guide that addresses the design of energy efficient buildings. While the new code increased energy efficiency requirements, it unfortunately also included a number of new mandates that negatively impacted the wood industry. Foremost among them was a questionable wall insulation requirement that favored the use of foam wall sheathing over wood products and wood structural panel sheathing.

In reaction to the new energy code, APA coordinated a response supported by both member and non-member manufacturers and other wood product associations. The new coalition, the Coalition for Fair Energy Codes (CFEC) had a clear mission: to eliminate language in the code that favors certain building products over others and to level the energy code playing field, making sure that wood products continue to have fair and equal access to key markets.

Organized for Action
While foam sheathing can be an effective insulating material in residential construction, the IECC mandated that it be used in one of the code’s compliance paths. This mandate applied to the nation’s coldest climate zones, which includes many of the northern states. As such, it restricted the use of wood wall sheathing, which is used on 80 percent of the nation’s single-family wall area (according to the latest Builders Practices Survey by the Home Innovation Research Lab). The energy code also included wall...
insulation requirements in some warmer climate zones that were not cost-effective for the consumer and were not supported by the U.S. Department of Energy when they were included in the energy code. When foam is mandated, other building products – such as wood – lose out.

CFEC – the force behind the efforts to amend the code – is a collaborative effort between APA-The Engineered Wood Association and the American Wood Council, two trade groups that collectively represent the forest products industry. According to Tom Kositzky, CFEC executive director, the coalition’s goals are to ensure that state adoption of newer energy codes do not limit or prevent market access for wood products by mandating specific products, as well as to ensure that future energy code versions are developed in a way that provides flexibility for use of all performance qualified building products and materials.

**Push for Fairness in 2015, 2018 IECC**
The codes are updated on three-year cycles, so CFEC’s initial efforts targeted the 2015 IECC. With successes at both state and federal levels, the coalition next built on its momentum and turned to the 2018 IECC. CFEC was successful on 13 of 20 IECC proposal positions during the process that concluded in January 2017. The group also conducted an information campaign to encourage online governmental voters to support proposals that made the energy code more flexible and to oppose proposals that would reduce flexibility and negatively impact the wood industry. The Engineered Wood Technology Association contributed monetarily in support of these efforts.

An appealing aspect of the 2018 version of the code – and something that CFEC aggressively championed – is the increased flexibility that it provides builders. The added flexibility comes through two successful code change proposals that provide enough flexibility to permit wood wall sheathing use in all U.S. Climate Zones. These proposals do not diminish the stringency of the energy code, rather they recognize that builders who installed specific “above code” systems receive a credit for the increased energy savings. That credit can then be applied to offset more expensive prescriptive insulation requirements elsewhere in the house. For example, if insulated ductwork in attics is also buried under the attic insulation, an energy savings credit is earned that can be used to offset a less efficient system, like exterior walls that do not use prescriptively mandated foam sheathing.

**APA’s Support of Energy Efficient Design**
As a strong champion of the wood products sector, APA has made considerable efforts to promote the use of wood as an important part of an energy efficient home.

**EDUCATION:**
APA has reached out to builders, designers and Home Energy Raters in an effort to educate them on the added flexibility the 2018 IECC allows for the use of structural panel wall sheathing. APA’s The Performance Path to Energy Code Compliance brochure (search “Form R505” at apawood.org) offers an introduction to two of the most cost-effective ways to comply with the IECC.

**PROMOTION:**
APA is actively promoting wood structural panel wall systems that contribute to a home’s energy efficiency. Examples include advanced framing, raised heel trusses, and air barrier systems. Each of these systems incorporates wood structural panels and gives builders affordable options to reduce energy loss in homes and meet the new, more stringent energy codes. APA offers publications and educational resources on each of these building systems.

**RESEARCH:**
Moisture research is being conducted by APA to help determine the most durable wall assemblies that incorporate a layer of continuous insulation (foam sheathing, etc.) over continuous wood structural panel sheathing. (See “Test Results” story on page 62)
Not impacting the wood products industry directly but still worthy of note: the 2018 IECC also requires improvements in window performance and lighting, resulting in an energy code that is slightly more efficient than previous versions.

State Successes
CFEC’s efforts have also included working with individual states as they consider adopting energy codes (see map above). CFEC has been successful in amending the energy codes in all cold climate zone states where the mandate for foam wall sheathing applies. Amendments also have been made in many warmer climate zone states (Climate Zone 3) where code-required wall insulation has been set at a level that is not cost-effective for the consumer.

As part of the code amendment process, CFEC serves as a resource to state code councils that are involved in making decisions on how to amend their adoptions of the IECC. This also involves networking with home builders and energy efficiency advocates and local building code officials.

CFEC has already begun discussions to develop proposals for the 2021 IECC, which are due in early 2019. The coalition also continues to work with states that are updating their energy codes, especially those in the coldest climate zones where the code still includes a prescriptive restriction on the use of wood wall sheathing. CFEC is actively involved in Idaho and Minnesota, both of which have started the process of adopting the 2018 IECC. In addition to building code officials and state energy department staff, meeting participants seeking to influence state code amendments include members of homebuilder associations, environmental and energy efficiency groups, as well as insulation industry consultants. CFEC is there too, in support of updated energy codes that provide compliance flexibility and choices for builders and consumers.

Sheila Cain (scain@engineeredwood.org) is communications director of the Engineered Wood Technology Association and editor of its Engineered Wood Journal.
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APA Study Recommends Energy Efficient Wall Configurations

by Kingston Chow

In an effort to determine how foam sheathing and other insulated sheathing products can safely work together with wood structural panel wall sheathing, APA’s hygrothermal research program has been exploring the moisture performance of various types of split-insulated wood-framed wall assemblies.

Back in 2011, APA – The Engineered Wood Association partnered with the USDA Forest Products Laboratory and Washington State University to investigate the potential combination of wood structural panel sheathing and rigid foam plastic insulation as a solution for structural and energy conservation code requirements. To further validate the findings, APA built a test hut at its headquarters in Tacoma, Wash., in 2015 to find out how various types of wall assemblies respond to real-world conditions. The test hut included eight different wall configurations, each built to expose one side to the natural outdoor environment and the other to a controlled indoor environment. The walls were oriented facing both the north and south directions (16 exposures in total) to evaluate the effects of sunlight and shade exposure. The walls were insulated with a number of different common exterior insulation products, including extruded polystyrene, expanded polystyrene and mineral wool insulation.

In 2017, the walls were subjected to additional simulated water leaks and were monitored carefully for temperature, humidity and wood moisture content as part of Phase II of the study. (Monetary support from the Engineered Wood Technology Association helped fund this portion of the study.) When the data was analyzed, researchers found that for the International Energy Conservation Code (IECC) Climate Zone 4-Marine environment (the climate in which the tests were conducted), an exterior split-insulated wood-framed wall, utilizing a vapor-open exterior insulation (such as mineral wool) and a high exterior-to-interior thermal resistance design ratio (such as 2x4 framing) is most beneficial in maximizing the drying potential and minimizing overall OSB moisture content levels while in service.

The findings of the test hut study will be used to establish guidelines for durable wall assembly design when insulated sheathing is used over wood structural panel wall sheathing. Because builders have a strong preference for the many benefits of wood structural panel wall sheathing, a case can be made to promote the combined use of wood structural sheathing and insulated sheathing through association education programs. However, before that can happen, it is important that APA understand the risks associated with reduced drying potential in wall assemblies that also incorporate various insulated sheathing products.

Future phases will also include the creation of a risk index with the USDA Forest Products Laboratory in conjunction with their hygrothermal data collected within an IECC Climate Zone 6 environment. Coupling with analytical model analyses, this risk index is intended to be a guide for designers and builders when designing exterior walls for different climate environments.
The detailed findings of Phase II of the hygrothermal study will be released in the form of a technical report available to APA and EWTA members, researchers, builders, and code officials in the near future.

Kingston Chow is a building scientist for APA - The Engineered Wood Association. Based in Tacoma, Wash., he is a graduate of the British Columbia Institute of Technology, where he studied civil engineering and building science. He can be reached at kingston.chow@apawood.org.

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EWTA Bids Farewell to Chairman Nyblad

Mary Jo Nyblad, chairman of the Engineered Wood Technology Association’s Advisory Committee, announced her retirement, effective March 31. Nyblad was chairman of the committee – and the first woman leader in EWTA’s history – from 2014-2018.

Nyblad’s resignation from the EWTA leadership role coincides with her retirement from Boise Cascade, where she held the role of vice president of commodity sales. She worked at Boise Cascade for 35 years, starting as a division buyer for the Building Materials Division and holding many positions through the years in sales and marketing.

Nyblad also served as the chairman of the APA Board of Trustees from 2011-2013 and held the distinction of being first female chairman in the association’s 84-year history. She had been a member of the APA board since 2005, and served as the Marketing Advisory Committee chairman and board vice-chairman.

EWTA Allocates $100,000 For APA Projects, Research

EWTA’s Advisory Committee, at its fall meeting in Huntington Beach, Calif., voted to recommend an allocation of $100,000 to fund five projects benefiting the engineered wood industry. The project proposals, presented by APA staff, included:

- $20,000 for a study on emerging technology for wall sheathing systems
- $26,000 for research on wood product usage in residential construction
- $10,000 towards production of the Build a Better Building commercial
- $20,000 to produce and post short educational videos
- $24,000 towards APA certification under the USDA BioPreferred program

The recommendation was forwarded to the APA Board of Trustees as part of the overall EWTA budget for 2018. Research contributions, made possible by EWTA member support, continue to trend in a positive direction with more than $340,000 invested since 2000.
APA, EWTA Members Speaking at PELICE
Several APA and EWTA members will be speaking at the biennial Panel & Engineered Lumber International Conference & Expo (PELICE) in Atlanta, Ga., April 13 and 14.

Roy O. Martin III, CEO, president and CFO of APA member company RoyO-Martin is one of the event’s keynote speakers and will be addressing the startup of the company’s new OSB plant in Corrigan, Texas, and the trends and economics of OSB and other wood products. Jim Salchenberg, director of engineering services with APA member company Roseburg Forest Products, is another keynote speaker. He will be discussing his company’s new LVL operation under construction in Chester, S.C.

The Suppliers Keynote Session will feature presentations by two EWTA members. Bernd Biefeldt, general manager of Dieffenbacher’s Business Unit-Wood, will discuss the effect of digitalization and automation on the North American woodworking industry. David Jones, global vice-president of Hexion Inc., will be speaking on accelerating global wood products’ growth.

In 2016, PELICE drew 450 representatives from three dozen wood products producer companies and 80 equipment exhibitors. The event is hosted by Panel World magazine and Georgia Research Institute.

EWTA Advisory Committee Recommends 2018 Budget
The EWTA Advisory Committee finalized the association’s 2018 budget during its fall meeting. The budget is for income of $475,600 and expenses of $503,700, resulting in a year-end net deficit of $28,100 and cash reserves of $159,930. The deficit is due to increased allocation of funds towards APA research projects in light of ample cash reserves.

The proposed budget was subsequently approved by the APA Board of Trustees.

Info Fair Breaks Record With Sponsorships, Booths
Support of Info Fair continues to grow, with 72 sponsorships and 85 members exhibiting at EWTA’s annual supplier exhibition last October.

This most recent event featured the highest number of paid sponsors and booth spaces in the history of the exhibition. The exhibition drew 85 exhibitors. Fourteen of these companies were Platinum sponsors: ALTEC Integrated Solutions Ltd., BRUKS Rockwood, Chem-Trend LP, CMA engineering Inc., COSTA Sanders LLC, Evertree, Huntsman Polyurethanes, Meinan Machinery Works Inc./Merritt Machinery LLC, Samuel Packaging Systems Group, Signode Packaging Systems, SparTek Industries, Sweed Machinery Inc., USNR, and Westmill Industries USA Corp.

Seventeen companies were Gold sponsors and 23 provided sponsorships at the Silver level.

Additional sponsorships included support for the Supplier Awards program, the golf tournament, the tennis tournament and the cripple coot shoot.

The next Info Fair supplier exhibition is Oct. 27-29 at the La Cantera Resort & Spa, Hill Country, in San Antonio, Texas.

EWTA Adds New Member To Advisory Committee
At its fall meeting in Huntington Beach, Calif., the EWTA Advisory Committee nominated Corey Farrens of member company SparTek to fill a vacant seat. The committee also extended the vice-chairman term of Tim Fisher through the spring 2018 meeting.
Two Companies Join EWTA as New Members

Two companies have joined EWTA as new members since the last Engineered Wood Journal was published.

- **Hansen-Rice Inc.**
  (www.hansen-rice.com) of Nampa, Idaho, is a solutions-driven organization providing value to construction projects through pre-construction, in-house 3D design, general contracting and self-performed steel and thermal work. Marketing representative Tami McIntyre can be reached at tmcintyre@hansen-rice.com.

- **The Sansin Corporation**
  (www.sansin.com), is located in Strathroy, Ontario, Canada. Sansin’s undercoats, sealers, stains, finishes and fire retardants provide wood protection for a variety of substrates and engineered wood products, including cross-laminated timber, siding, OSB, glulam, millwork and timbers. Executive Assistant Ann Van Dyk can be reached at ann@sansin.com.

GP Chemicals Names Dennis Easter as VP

Georgia-Pacific Chemicals has announced the promotion of Dennis Easter to vice president and general manager of thermosets. Formerly Business Manager - Wood Adhesives, Easter’s role will now expand to include managing GPC’s South American wood adhesive business, merchant formaldehyde sales and industrial resins business.

The industrial resins group includes products for composite, coatings, laminates, and insulation.

H.B. Fuller Announces New Company Purchase

H.B. Fuller Company recently announced that it has signed an agreement to purchase Royal Adhesives & Sealants, a manufacturer of high-value specialty adhesives and sealants headquartered in South Bend, Ind.

With this acquisition, H.B. Fuller will gain product technology and add people and skills that will result in a more capable and dynamic company for customers and employees, the company said in a press release.

**Wechsler Engineering Launches Equipment Company**

Company representatives at Wechsler Engineering recently launched an independent equipment company called Wechsler Technologies.

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**Globe Machine Celebrates 100th Year**
Tacoma, Wash.-based Globe Machine Manufacturing Company celebrated 100 years in business last September with a party at the Maritime Museum in Tacoma.

Globe was developed in 1917 as an engineering and manufacturing company supplying machinery for the door and plywood industry. As the composite wood panel industry developed in the 1960s and 1970s, Globe was involved in producing lines for some of the early particleboard, MDF and waferboard plants. Later, Globe was influential in the development of the North American OSB and engineered wood industry.

Globe’s history includes leading the development of process technology areas such as plywood manufacturing; wood I-joists and other engineered wood products; panel finishing and coating; and integrated automated storage and retrieval.

Globe Machine today employs 130 people.

**Axalta Acquires Valspar’s Wood Coating Business**
Axalta Coating Systems recently announced that it plans to acquire Valspar’s North American Industrial Wood Coatings business for $420 million.

Axalta will acquire the personnel, both dedicated manufacturing sites, R&D assets and the underlying intellectual property of Valspar’s North American Industrial Wood Coatings business.

**Hexion Completes R&D Facility Expansion**
Hexion Inc. recently completed an expansion of its technology center at its forest products complex in Edmonton, Alberta, Canada. The expanded research and development facility is focused on developing next generation resin chemistry for panel production that will complement the company’s existing EcoBind lower emitting resin technology and build on the inherent flame, smoke and toxicity retardant properties of the company’s current resin systems.

**AkzoNobel Appoints New CEO**
AkzoNobel announced that its chief executive officer, Ton Büchner, stepped down due to health reasons, and Thierry Vanlancker will serve as the company’s new CEO. Vanlancker joined the company in 2016 and was most recently head of specialty chemicals at AkzoNobel.

**Walker Industries Feted for Philanthropy**
Walker Industries was recently honored by the Association of Fundraising Professionals, Golden Horseshoe chapter (Ontario, Canada) for its active participation in the philanthropic community. Walker was named an “Outstanding Citizen” for its long history of giving back to the communities in which its employees work.

**HT Group Ranked as Top Firm by Business Journal**
HT Group recently announced that it has been named among the top firms in Austin by the *Austin Business Journal* in three separate categories: Temporary Staffing Firms, Contingency Search Firms and Retained Executive Search Firms. This is the 10th straight year The HT Group has been included as a top staffing and recruiting firm by the *Journal*.  

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**Correction**
Due to an error in the presentation slides at the APA Annual Meeting’s Monday night reception in Huntington Beach, Calif., last October, several EWTA Platinum-level sponsors were not recognized at the awards dinner. Those members inadvertently left off the list were:

- ALTEC Integrated Solutions Ltd. (www.alteconline.com)
- Evertree (www.evertree-technologies.com)
- Meinan Machinery Works Inc. (www.merrittmachinery.com)
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### Upcoming Events 2018

#### APRIL
- **11-12** Wood Bioenergy Conference & Expo, Atlanta, Ga., bioenergyshow.com
- **13-14** Panel and Engineered Lumber International Conference and Expo (PELICE), Atlanta, Ga., pelice-expo.com
- **22-24** American Wood Protection Association annual meeting, Seattle, Wash., www.awpa.com
- **22-25** Composite Panel Association Spring Meeting, Victoria, B.C., Canada, www.compositepanel.org

#### MAY
- **6-8** Hardwood Plywood and Veneer Association spring conference, Kiawah Island, S.C., www.hpva.org
- **8-12** Xylexpo 2018, Milan, Italy, www.xylexpo.com
- **9-10** Global Softwood Log and Lumber Conference, Vancouver, B.C., Canada, www.woodmarkets.com
- **10** Engineered Wood Technology Association's Spring Advisory Committee meeting, APA – The Engineered Wood Association headquarters, Tacoma, Wash. www.engineeredwood.org
- **18-19** Expo Richmond 2018 – 36th East Coast Logging and Equipment Exposition, Richmond, Va., www.exporichmond.com

#### JUNE
- **6-8** Canadian BioEconomy Conference and Exhibition, Prince George, B.C., Canada, bioeconomyconference.com
- **12-15** Forest Products Society 72nd International Convention, Madison, Wis., www.forestprod.org
- **21-23** American Institute of Architects Conference on Architecture 2018, New York City, N.Y., conferenceonarchitecture.com

#### AUGUST
- **22-25** International Woodworking Fair, Atlanta, Ga., www.iwfatlanta.com

#### SEPTEMBER
- **11-14** Furniture China 2018, Shanghai, China, www.furniture-china.cn
- **23-25** Composite Panel Association Fall Meeting, Nashville, Tenn., www.compositepanel.org
- **25-27** World Forestry Center’s “Who Will Own the Forest?” conference, Portland, Ore., www.wwotf.org

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