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FRIENDS, for all of us in the housing industry, it has been another long and trying year. And, throughout 2011 we have had the privilege of hearing many of your stories – stories of your trials, as well as your successes. Now, more than ever, we value our relationship with you and remain committed to your success in the year ahead. During this holiday season we wish for you meaningful, memorable time with your families and with your friends. Time spent celebrating the people who matter the most in your life.

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contents

Page 12



A Not So Tall Tale

by Sean D. Shields

Page 16

IF YOU MEASURE IT, THEY WILL COME

BCMC Sessions Focus on Doing Business Smarter

by Sean D. Shields

on the cover: Zeeland Truss & Components in Wyoming, MI Editor's Message Technical Q&A Parting Shots

The mission of *Structural Building Components Magazine (SBC)* is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing structural building components. Further, *SBC* strives to ensure growth, continuity and increased professionalism in our industry, and to be the information conduit by staying abreast of leading-edge issues. *SBC*'s editorial focus is geared loward the entire structural building component industry, which includes the membership of the Structural Building Components Association (SBCA). The opinions expressed in *SBC* are those of the authors and those quoted, and are not necessarily the opinions of Truss Publications or SBCA.

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"We purchased our first WizardPDS[®] drop-in ChannelS[®] System in 2008. And a second system in 2009."

"Faced with a dwindling housing industry and shrinking margins in tough economic times, Richco Structures needed to look for ways to reduce costs. This led us on a search for the best way to streamline our set up process. After carefully considering our options we purchased our first WizardPDS drop-in Channels system in 2008. And a second system in 2009.

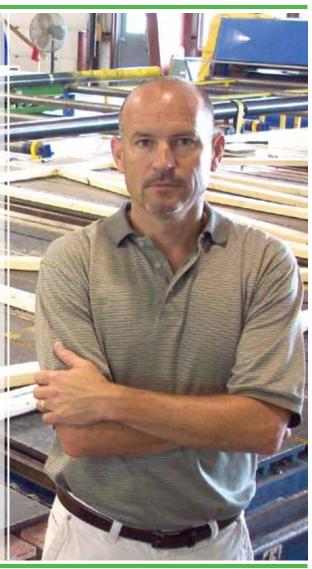
Because of the attention to detail by the Wizard Team prior to installation, the retrofit went in exceptionally well. And using the drop-in channel meant we could save money by using existing tables in lieu of purchasing an entirely new table layout.

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The Wizard systems integrated seamlessly with our design software and line operators quickly learned to appreciate the ease of use and accuracy. Probably most valued by the assembly crews is the elimination of 10–20 minutes per setup spent on the tables placing jig hardware.

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Rich Pearce Plant Manager Richco Structures – Haven, WI Division of Richardson Industries



WizardPDS[®] drop-in ChannelS[®] Your table, Automated.





by Steve Stroder

Working together, we can develop a thorough, well-thought-out and consensus-based recommendation for the SYP design value issue. tructural building component manufacturers transform raw lumber into highly sophisticated, technically feasible and architecturally creative products each and every day. It's what we do. In the last 50 years, we have transformed light-frame construction, conceiving architectural features that were impossible in the 1940s. Without the creativity, engineering excellence and software brilliance that component manufacturers and suppliers have brought to the market, light-frame construction as we know it would not exist. All of us that are part of this industry should be proud of what we do to provide affordable and unique structures to the fabric of America.

I think most component manufacturers would agree with the following statement: *The structural building component industry has been the lumber industry's greatest, yet most ignored, asset for the last 30 years.* For decades, we have encouraged our lumber suppliers to listen to their customers and communicate with us on industry issues, but we've had limited success. Most likely, this is due to our lack of a collective message. United we are strong, and with SBCA as our voice, we can state our message much more effectively than as a single company. This has never been more clearly demonstrated than over the last few months as we have been dealing with defeating poorly thought-out recommendations to reduce Southern Yellow Pine (SYP) visual grade lumber design values.

Concerns with SYP visual grades were brought to the forefront by SBCA nearly two years ago. SBCA members joined together to destructively test SYP visually graded lumber to ensure the proper design values were present. Lumber samples from member companies representing several mills were tested at the Structural Building Components Research Institute (SBCRI). Testing revealed some concerns around the amount of open grain (juvenile) lumber found in the samples, and the relatively low test values for this juvenile lumber.

SBCA contacted one of the major SYP lumber suppliers with these results. Concerned with the implications from the test data, this supplier contacted the Southern Pine Inspection Bureau (SPIB) and asked it to research the issue. SPIB then undertook a test program and made recommendations, summarized as follows:

- In 2010, SPIB and Timber Products Inspection worked collaboratively to perform bending and tension strength tests on a representative sample of No. 2 2x4 Southern Pine lumber.
- A sampling and testing plan was submitted to the American Lumber Standards Committee (ALSC) Board of Review. This plan focused on No. 2 2x4s, a widely produced size/grade, which is believed to be the most sensitive to changes.
- A sample of 360 pieces per cell (size-grade-property combination) was tested. Based on the results, SPIB proposed to adjust the design values for dimension sizes of visually graded Southern Pine lumber, reducing design values by as much as 30 percent.

To read more on SPIB's plan and input from affected parties, visit <u>sbcindustry.com/</u><u>lumber.php</u>.

Continued on page 8

at a glance

- SBCA brought concerns over SYP visual grades to the forefront nearly two years ago.
- ❑ SPIB conducted testing, without requesting input from SBCA and other interested parties, which resulted in a recommendation to reduce Southern Pine design values by as much as 30 percent. This could have a considerable negative impact on light-frame construction and the U.S. economy.
- The key to solving this issue is communication; SBCA is working with a strong coalition to develop a more reasonable solution.

Editor's Message

Continued from page 7

SPIB's recommendation was made public in late September 2011, and came without any collaborative effort to reach out to discuss its testing program or results with SBCA. Fortunately, SBCA was informed of the proposed recommendation by a member of the Southern Forest Products Association (SFPA) on September 21. SBCA immediately sprang into action, contacting ALSC to determine the facts and what the next steps were from ALSC's perspective. On October 4, SFPA arranged a teleconference, stating, "Because component manufacturers are an important Southern Pine customer, SFPA is hosting this conference call with the purpose of providing accurate information directly from SPIB and SFPA..."

Once it was clear through the SFPA teleconference what SPIB intended to do, SBCA shared its concerns over the proposed reduction in design values. SBCA raised these concerns with everyone in the marketplace including: its membership and entire database of **SBC Magazine** readers, the National Association of Homebuilders (NAHB), the Leading Builders of America, (LBA), the Associated Builders and Contractors (ABC), the National Lumber & Building Material Dealers Association (NLBMDA), and several independent lumber mills. SBCA also voiced concerns over SPIB's conclusions and its approach to implementing such significant changes. It was clear this recommendation, if approved, had the potential to create a very serious cost and engineering/design disruption to all Southern Pine construction, which is estimated to be approximately 40 percent of all ongoing construction in the U.S.

Leading up to an October 20 ALSC Board of Review meeting, where the SPIB proposal was scheduled to be heard, SBCA organized a series of conversations with its Lumber Task Group and found two lumber mills that were strongly aligned with SBCA's concerns. SBCA further presented its points of view at the ALSC meeting, principally arguing that alternatives existed to a proposed design value change (such as a change in the grading rules to cull out the open grain lumber). SBCA also stressed that immediately implementing a change in design values would be extremely disruptive to the entire supply chain of the construction market. A strong coalition made up of representatives from the Truss Plate Institute (TPI), Michigan State University, Mississippi State University (MSU), NAHB, NAHB's Building System Council, LBA, ABC and NLBMDA provided supporting testimony. Expanding on SBCA's primary arguments, these organizations thoroughly explained the negative and unforeseen impacts of an immediate implementation of a hastily-put-together recommendation.

ALSC has agreed to continue to accept written support positions up until December 26, and to take additional verbal testimony at its next hearing on January 5, 2012. In the interim, SBCA continues to lead a coalition of interested and aligned parties made up of leaders from SBCA, TPI, NAHB, LBA, NLBMDA and ABC, along with representatives from independent mills and representatives from MSU. This group is working on a solution in opposition to the SPIB proposal. We hope to put together a thorough, well-thought-out, and consensus-based recommendation, creating a visual grading process for open grain SYP material that would allow the existing design values for SYP to remain the same. If fully approved by all impacted parties, this approach would



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stabilize our country's SYP assets. Altering the proposed across-the-board devaluation of the species can prevent considerable economic impact on the light-frame construction industry as well as the U.S. economy overall.

We have always relied upon the forest products industry to provide accurate lumber properties we can trust. It is presumed by building and construction professionals, and is a pillar of the building code, that the grade stamp on grade-marked lumber defines a certain set of structural resistance design values that can be used to resist applied loads. Our collective success as component manufacturers and the customers we serve is predicated upon lumber suppliers providing reliable engineering properties, which allow light-frame construction to be safe, efficient and effective. This success can continue, using a visual grading process with good quality control to ensure the visual grade defines accurate lumber properties.

All logs are not created equal, but we believe our lumber suppliers have the intellect and the technology to provide the marketplace with accurate properties. The issues that have cropped up require the lumber manufacturing community to act in ways never seen before in terms of looking at their log resource. They must produce material that fits the needs of the industry, while meeting the values assigned to each grade. Component manufacturers will find ways to use all types of lumber, from open grain, lower design value lumber from younger forests to denser lumber from older forests. Our engineering expertise can create value from items that may not seem valuable on the surface, so long as we can rely on the properties assigned to each grade.

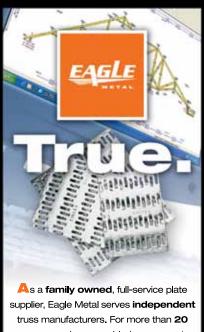
The key to solving issues like this is communication—lumber suppliers communicating with component manufacturers, or better yet, the coalition we have established. SBCA has been at the point of the spear on this SYP issue, championing the needs of our members, as well as our customers, the engineering community and all those who would be affected by SPIB's original proposed recommendation. Standing up for this industry is nothing new for SBCA, and the association does it well for us all. As I said in my November message, together we can turn the tide on this harsh economy and grow our industry exponentially using the tools we have available today. SBCA is one of the strongest tools we have at our disposal. Each member's voice is extremely valuable, so get engaged, and join us in the fight to lead our industry toward better days. **SBC**

correction:

Please note the following changes to the feature entitled "Braced Wall Revolution" from the November 2011 issue:

- The caption for Table 2 on page 18 stated that "SDPWS does not provide Structural 1 Sheathing Values." This statement was in error as the values were reported in Table 1.
- Footnotes were omitted from Table 5.

The corrected tables can be found in the online version of the article at <u>sbcmag.info/</u><u>article/2011/braced-wall-revolution</u>.

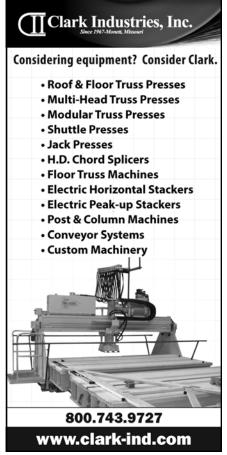


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Lumber for Scaffolding

A safe scaffold starts with the correct material.



Photo 1. While No. 2 lumber (left) and scaffoldgrade lumber (right) may look similar at first glance, scaffold lumber meets a number of particularly high standards, which most construction-grade lumber does not meet. caffolding is common on the jobsite, but it's especially on peoples' minds with OSHA's new fall protection regulations. The number one cause of scaffold accidents is the planking giving way. Training workers how to properly construct scaffolds (and use the correct material) is the key to avoiding these kinds of accidents.

by Ryan J. Dexter, P.E. & Larry Wainright

Question

For scaffolding, can 2x10s be used in lieu of scaffold-grade planks?

Answer

No, 2x10s and other lumber commonly used for trusses are not sufficient for scaffolding applications. Only scaffold-grade lumber should be used for erecting scaffolds. 29 CFR 1926 Subpart L is OSHA's standard for scaffolding, which is available at <u>osha.gov</u>. The standard defines a scaffold as, "any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both."

Lumber designated as scaffold-grade meets a number of particularly high standards, which most construction-grade lumber does not meet. For instance, construction lumber only has two-thirds the capacity of scaffold-grade lumber. Construction lumber is not intended to withstand the forces likely to occur in a scaffold assembly. In addition, construction lumber is also cut to nominal sizes, so a 2x10 isn't literally 2 in by 10 in. Table 1 compares the allowable spans for nominal and solid sawn wood planks.

Maximum Intended Load	Maximum Permissible Span Using Full Thickness Lumber (in feet)	Maximum Permissible Span Using Nominal Thickness Lumber (in feet)
25 lbs/sq ft	10	8
50 lbs/sq ft	8	6
75 lbs/sq ft	6	_

Table 1. Allowable spans for a given load, for 2x10 (nominal) or 2x9 (rough) solid sawn wood planks. Source: osha.gov

at a glance

- Only scaffold-grade lumber should be used for erecting scaffolds.
- Scaffold-grade lumber meets strength criteria determined by the grading rules set by a recognized lumber grading agency or independent lumber inspection agency and meet the minimum requirements of OSHA standard 29 CFR 1926.
- ➡ The characteristics required for scaffoldgrade lumber, such as number and size of knots, slope of grain and juvenile wood, are higher and more stringent than those for construction lumber.

Scaffold-grade lumber satisfies specific strength criteria determined by the grading rules for that particular species of lumber. These grading rules are set by a recognized lumber grading association or an independent lumber inspection agency and meet the minimum requirements set forth in OSHA standard 29 CFR 1926. As such, all scaffold-grade planks should be marked as scaffold lumber with the agency or association's grade stamp.

One question that could be asked is: What if the design calculations for a specific loading situation indicate that No. 2 2x10 could work for scaffolding? Beware—even if the numbers suggest No. 2 might work, there are still significant differences between a No. 2 grade of lumber and scaffold grade. The lumber characteristics required for scaffold grade are higher and more stringent than those for No. 2. For instance, scaffold grade lumber has a higher standard for number and size of knots permitted, as well as slope of grain. In addition, while a No. 2 grade allows for pith and juvenile wood, scaffold grade planks do not allow these characteristics because

they could weaken the lumber. Scaffold planks are also available using LVL material, which through its manufacturing process, eliminates many standard dimension lumber characteristics that could reduce strength.

Of course, the purpose of these strict scaffolding standards is safety. Using the correct material to properly construct scaffolding helps maintain a safe and efficient jobsite. OSHA further requires that employers train any employees who work on scaffolding to help them recognize and mitigate hazards.

Editor's Note: While there have been proposed changes by the Southern Pine Inspection Bureau (SPIB) for Southern Pine dimension lumber grading rules and design values, this article is based on the design values in place in the fall of 2011. These proposed SPIB changes also do not apply to scaffold grade Southern Pine given that the grading rules are different. It is interesting to note that scaffold grade lumber does not allow pith center or juvenile wood due to the impact on strength and safe performance. Regardless of any future changes, the concepts in this article also apply to other lumber grades, such as Douglas Fir-Larch No. 2. **SBC**

To pose a question for this column, call the SBCA technical department at 608/274-4849 or email technicalqa@sbcmag.info.

Step-by-Step Fall Protection Template

Residential builders and framers are adjusting to OSHA's new fall protection regulations and component manufacturers can be a valuable resource to help them comply. SBCA drafted an online step-by-step process for complying with OSHA's new fall protection standard, available at <u>sbcindustry.com/fp</u>.

These web pages outline the approach to installing, restraining, bracing and sheathing the initial group of trusses. The goal of this resource is to assist component manufacturers in helping their truss installing customers with OSHA fall protection compliance. It can be used to develop a project fall protection plan, which must be tailored to each specific jobsite's fall hazards.

This step-by-step process includes a customizable template that can be downloaded in MS Word, which truss installers can use to easily create a specific fall protection plan. Once the first sitespecific plan is created, the subsequent plan development should be much more straightforward. "Our hope is that this fall protection tool helps component manufacturers support their customers in a meaningful way and opens a path for great conversations regarding the value of using components in safe and reliable construction," said Kirk Grundahl, SBCA Executive Director.

To provide feedback on the draft, contact Sean Shields at sshields@qualtim.com. **SBC**

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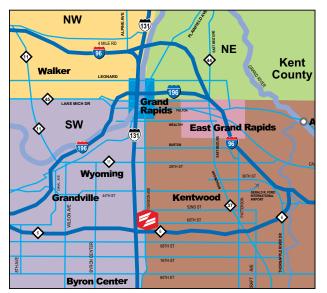
The story of how one Michigan truss plant is on track to realizing that elusive happily ever after.

A Not So Tall Tale

Clay Ave., Wyoming 49548

by Sean D. Shields

eeland Truss & Components' story is not a fairy tale. At least, it's not on the level of Cinderella folklore. However, on the surface, its story appears an improbable one. In January 2011, Zeeland Truss & Components began operations in Wyoming, Michigan (a suburb of Grand Rapids), and has prospered. Let's deconstruct that last sentence. A truss plant opened its doors in the current economy. In Michigan. It's succeeding. In fact, it's contemplating running a third shift! How can this be? First, we have to look at where it came from, then we can begin to look at how its business model is enhancing its success.



The building's physical location also is an asset as Zeeland has expanded its market reach beyond the western Michigan lakeshore area into northern Indiana, northern Michigan, and east into the greater Detroit area. The facility is located at an interchange of the two major highways that run through Grand Rapids, US 131 and M6, making it an ideal multi-modal hub.

Once Upon a Time, There Were Two Lumber Yards...

For close to 60 years, Zeeland Lumber & Supply Company and Hamilton Lumber were fierce competitors in the western Michigan market. Zeeland was started by John Vanden Bosch in 1947 as a pallet and box manufacturing company, and when his sons took over the business they expanded it into a building material distributor. An agricultural cooperative called the Hamilton Farm Bureau started Hamilton Lumber in a nearby town. In early 2009, these two former competitors merged into Zeeland Lumber Holdings, LLC.

Up to that point, Zeeland contracted with a collection of local manufacturers to have components built and delivered to fill customer orders. Hamilton had a small manufacturing facility with one truss line, a mothballed wall panel line and a few truss designers on staff. Zeeland immediately started filling truss orders through the Hamilton facility too, but quickly found it hard to keep up. "In 2010, we were running three full shifts," said General Manager Dean DeHoog. "We still had to purchase floor trusses, I-joists and wall panels, as well as some roof trusses, from other manufacturers in the area."

Fortunately, the Zeeland Board of Directors saw the truss business as a positive contributor to their overall business operations. DeHoog added, "The Board saw it as an opportunity for organic growth. Components represented a strong product to offer their existing customers and attract new ones." Expansion was inevitable then, but the hard question was how to go about doing it.

This Building Is Just Right...

As a lumber distributor, Zeeland was aware that one of its wholesalers, North Pacific, had recently filed for bankruptcy. After a little research, it found that one of North Pacific's distribution facilities in the Grand Rapids area was being auctioned off through the bankruptcy process.

In this case, the location could not have been more perfect. As a lumber distribution site, it had a well-maintained and active rail spur, which would help lower the cost of bringing in raw materials. Further, it already had an extensive lumber storage infrastructure, and the building itself was ideally set up for lumber throughput. "The first time I walked into the facility, I thought to myself it was a nearly perfect truss facility," said DeHoog.

The building's physical location also is an asset as Zeeland has expanded its market reach beyond the western Michigan lakeshore area into northern Indiana, northern Michigan, and east into the greater Detroit area. The facility is located at an interchange of the two major highways that run through Grand Rapids, US 131 and M6, making it an ideal multi-modal hub. "This building is perfectly situated to allow us to work with builder customers from Howell, Ann Arbor and Lansing to South Bend and all the way to Traverse City and Petoskey," said DeHoog.

I'll Huff & Puff & Visit Your Open House...

Zeeland took the keys to the new facility in November 2010, and purchased new equipment through auction in December. By February, the new equipment was installed successfully and the first trusses were produced. By April 2011, Zeeland Truss & Components was already running two shifts, 25 employees on the first and 12 on the second.

In May, Zeeland hosted an open house for its customers and all the Zeeland employees and their families. "It was a great opportunity to show everyone our high level of commitment to this industry and in helping our customers be successful," said Zeeland VP Sales & Marketing, Mark Vanden Bosch. "By bringing in our customers, we could showcase our manufacturing capabilities."

During the open house, there was at least one operator stationed at each piece of equipment to talk about its capabilities. Zeeland had purchased at the auction an automated jigging table, a linear saw and floor truss line. In addition, moved over from the Hamilton facility were a component saw and a 90-foot gantry line.



In May, Zeeland hosted an open house for its customers and all the Zeeland employees and their families.



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Continued on page 14

A Not So Tall Tale

Continued from page 13

"Everyone who walked through was impressed by the cutting-edge technology used in the newer equipment," added Vanden Bosch. "Between the automated jigs and lasers to the computer-aided assembly, our customers walked away knowing we were focused on quality control."

Zeeland was also able to promote the advantages of its design approach. "Our engineered wood, wall panel and truss designers all work in the same space," explained DeHoog. "They work as a team, which ensures good communication through every facet of a project."

Whistle While You Work...

During the busy months of June, July and August, Zeeland hired additional employees to run a third shift just to keep up with orders. "That will be our biggest challenge going forward," predicts DeHoog. "In 2012, we will have to run all three shifts and get creative with hours in order to meet demand. But in 2013, we are going to have to be ready to expand to an additional production line."

While setting up the current operation, they had the advantage of doing so during a soft market. Slightly used equipment was available for a bargain through auctions. In addition, several truss manufacturers had closed their doors in the western Michigan area in the recent past. That meant there were a



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number of experienced truss production workers available for hire as Zeeland put together its new production team.

"The real challenge will be timing our equipment purchases and hiring the next time around," admitted DeHoog. As housing starts begin to creep upward in Michigan, and elsewhere around the country, other facilities will undoubtedly come online. Equipment auctions will become even more competitive, and workers with truss experience will be recruited by new competitors.

"It's exciting to think about," said DeHoog. "To sit here today and be worrying about expansion and keeping up with orders. It definitely beats the alternative."

In a Land, Far, Farther Away...

"Probably the biggest challenge we faced was in the area of personnel," said DeHoog. "When we moved the truss operations 40 miles from Hamilton to the Grand Rapids area, not all of our original employees could make the move." They ended up keeping only six of the 20 production employees.

After they were able to find and hire new employees, they found it was difficult to train them to use the new automated jigging table. "We found the experienced truss guys wanted to create their own jigs and do most of the work the automated table would already do," explained DeHoog. "It was a little like trying to use a calculator like an abacus." In the end, they turned to the younger employees, who were more comfortable with the technology.

On the plus side, moving to the new location did make it easier to expand the market. The strategic location of the facility made it easier to transport materials to a larger geographic area, and the added capacity allowed the sales team to push component framing solutions to existing builder customers, as well as seek out new customers.

Getting to Happily Ever After...

The key to Zeeland's success appears to be one part good fortune, one part good timing, and one part good positioning. "In Michigan, the fall off of the housing economy is driving a change in the supply chain," explained DeHoog. "The middle-men are being squeezed out of the process." While truss companies used to sell components to lumber yards in Michigan, now lumber yards are simply operating their own manufacturing facilities.

This evolution allows the building material distributors to strengthen their core businesses, as well as solidify and even expand their customer bases. It certainly is working for Zeeland; the question is whether others will be able to follow suit. "The design aspect is certainly a barrier," agreeed DeHoog. "The production infrastructure is a challenge as well."

Whether others are able to imitate its road to success remains to be seen, but one thing in this tale is for certain: Zeeland is doing well at a time when many others are struggling. **SBC**

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IF YOU MEASURE IT, THEY WILL COME

by Sean D. Shields

BCMC Sessions Focus on Doing Business Smarter

ust like a movie out of Hollywood, as you walk through your vacant design office, your silent shop floor and your lumber storage area, you can hear them whispering, "if you measure it, they will come." Besides being a little spooked out, you'd probably be left wondering: "Measure what?" and "Who are they?"

This year's BCMC education sessions focused on answering those two questions. From looking at ways to implement lean manufacturing, to making good decisions when purchasing lumber, panel experts provided a lot of guidance to component manufacturers on what they should begin quantifying about their business. The "they" was the same in every case: cost savings.

What Is Lean Manufacturing in Today's Economy?

Bottom Line: Lean manufacturing can be applied to any and every department in the component manufacturing business, from design to production. The key is to create sound metrics to measure what's being done now and how much it costs.

"No matter how good you are, there is always room for improvement," says John Herring, CEO of A-1 Roof Trusses. "However, you can't really know your costs, or your production efficiency, until you measure it." Herring joined panelists Joshua Bellows, Operations Manager for Hundegger, USA, L.C.; Joe Hikel, Chief Operating Officer of Shelter Systems Limited; and, Dan Holland, President of Clearspan Components, Inc. to give a session sharing tips on how to identify and implement lean manufacturing concepts in component manufacturing.

Coming from companies both large and small, they shared their struggles and ultimate successes in identifying and employing lean manufacturing, and they all agreed it started with measuring the status quo. "The first step is creating a game plan," explained Herring. "That plan needs to quantify everything you do and measure how much every aspect of your business is costing you." Only then can a component manufacturer begin to identify areas where improvement can be implemented effectively.

One key aspect panelists discussed was the idea of identifying and minimizing the number of people who have to touch a particular area of the business. "While the general consensus is that the shop isn't the problem right now because it may not be running at capacity, you can still be losing points because your production process is inefficient," said Herring. Panelists warned that just because the job is getting done on time, it doesn't mean there weren't areas for improvement.



"There are going to be some constraints in what you can do in an existing building when looking at moving equipment around, but within those parameters you may be able to identify ways where you can improve the movement of materials and product through the production process." -Joe Hikel

"An example I shared was the difference between batch and linear production," said Holland. He pointed out that most component manufacturers currently use a batch approach in their production due to machine setups and personnel. However, a linear approach can have a significant advantage under the right circumstances. "In a linear approach, each production station completes one item and then passes it on. This limits down time at the other stations, reduces bottlenecks and can dramatically decrease the overall amount of time it takes to complete one unit of product."

Panelists also suggested evaluating the layout of the production facility. "Certainly, there are going to be some constraints in what you can do in an existing building when looking at moving equipment around," agreed Hikel. "But within those parameters you may be able to identify ways where you can improve the movement of materials and product through the production process."

"Everyone in business right now knows you have to be cost competitive," said Herring. "The only way you can do that and still make money is to minimize your overhead, ensure your raw materials are purchased at the right price, and make your team work as efficiently as possible." The cautionary tale there, panelists warned, is to make sure you're not asking too much from your employees, otherwise you could end up burning them out and losing efficiency through having to hire and train new employees.

"Another good question we had from session attendees was how do you measure and quantify your design department," said Hikel. He pointed out, "In the present economy, builders are asking more of component manufacturers, which can put a strain on capturing the true cost of a given job." That issue was partly addressed through another educational session at BCMC focused on design departments.

Best Practices for Design Departments

Bottom Line: One of the biggest areas of risk and reward for a component manufacturer is their design department. Regardless of whether it's one technician or 20. it is important to constantly evaluate and strive to improve the level of education and training of the entire design team. Continued on page 18

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If You Measure It...

Continued from page 17

"Companies take on a great deal of risk through their design departments; it's inherent to the structural component manufacturing business," explains Bob Dayhoff, Director of Technical Operations for Shelter Systems Limited and one of the panelists for this session. "That's why it's so important to ensure your designers take advantage of all their opportunities for training and education."

Dayhoff joined panelists Lecil Alexander, Professional Engineer at Universal Forest Products, Inc.; Amanda Metzger, Truss Designer at The Truss Shop; and, Kevin Riesberg, Director of Design for Plum Building Systems, LLC for a session discussing the ways in which component manufacturers can get the most out of their design departments.

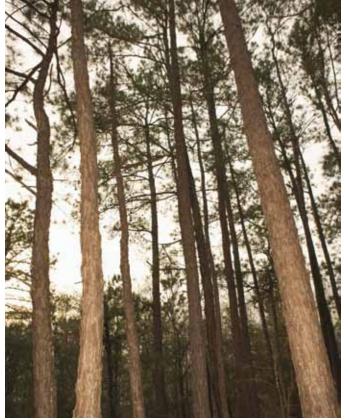
These panelists represented a diverse range of design departments, from very large to very small, but they all had one message in common: training is key. "There are such a wide variety of training resources available to truss designers," explained Dayhoff. "From code books to technical articles in **SBC Magazine**, SBCA online training to technical help from the truss design software suppliers, all of these sources can provide valuable information that can help a designer make more effective decisions."

The panelists agreed that effective decision-making is particularly important during the bid process. "You want your pricing to be competitive, but it has to first be based on accurate information," said Dayhoff. "During the bidding process you need your designers to avoid mistakes, because those mistakes are what can come back and make the job cost more than you expected."

One area the panelists identified that was of particular concern was keeping up to date on changes to the building code. Another area of concern was knowing the ins and outs of their truss design software. "The software technical support and engineering staff are a great resource," said Metzger. "They are more than eager to explain any aspect, from walking you through why a particular truss configuration isn't working, to how some of the advanced features in the software can make design faster and easier."

Metzger pointed out that it is hard to motivate designers to pursue all of the available avenues of training on their own. "The key is to create an environment that encourages continual growth in their development as a designer," explained Metzger. "Not everyone comes into truss design with an engineering background, so it can be a challenge to get them out of their comfort zone." However, panelists argued pushing development through continual training can pay dividends for the designer and the company.

"The more you know about the code and the software, the easier your job becomes," said Metzger. "As a designer, efficiency and accuracy should be your two most important goals, achieving these will allow you to do more work in the



same amount of time, without increasing errors."

Dayhoff added, "additional training costs money and time, but it's an expense that can keep you afloat in this economy, and set you up to thrive as things improve." An additional area where a higher up-front cost may end up saving significant money down the road is lumber purchasing, which was the subject of another BCMC seminar.

Making Informed Decisions About Lumber

Bottom Line: Several factors can impact the quality of wood, including species, region of origin, and mill. Component manufacturers should consider all of these factors, beyond just price, in evaluating the lumber they purchase because low wood quality can have significant hidden costs.

"Every component manufacturer can benefit by understanding where their lumber comes from, and the particular qualities of that lumber," said Steve Harms of Weyerhaeuser. "Ultimately, that knowledge can assist them in purchasing the right lumber for their particular needs."

Harms joined panelists Steve Hardy, Proprietor of Woodpro Consulting; Joe Castleberry, Sales Manager for Beadles Lumber Company; and, Jack Littfin, President & CEO, Littfin Lumber Co. to host this session. With more than 100 years of combined experience in the industry as component manufacturers, lumber suppliers and expert consultants, they focused on what component manufacturers need to be thinking about in order to make good lumber purchasing decisions over the years to come.

Littfin pointed out why component manufacturers like him are so concerned about quality: "It was getting to the point $$Continued\ on\ page\ 20$$

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"No matter how good you are, there is always room for improvement. However, you can't really know your costs, or your production efficiency, until you measure it." -John Herring

If You Measure It...

Continued from page 18

where I was removing 15-20 percent of the SPF I was purchasing because it was unusable." The problem, Littfin explained, was that most of the unusable lumber wasn't discovered until after it was cut and ready to be used in assembling a truss. As each piece had to be cut from a fresh stick of lumber, the rest of his production employees were left with nothing to do. "So much time was being wasted because of poor quality, which cost me a lot more in the long run than if I had paid for higher-quality lumber in the first place," explained Littfin.

Just as in the process of implementing lean manufacturing, the component manufacturer needs to be able to quantify what an improvement in lumber quality would be worth. "The lumber purchaser needs to make a conscious decision to weigh quality and price," agreed Castleberry. "If they end up with less waste and shorter cycle times, it may be worth the higher lumber cost."



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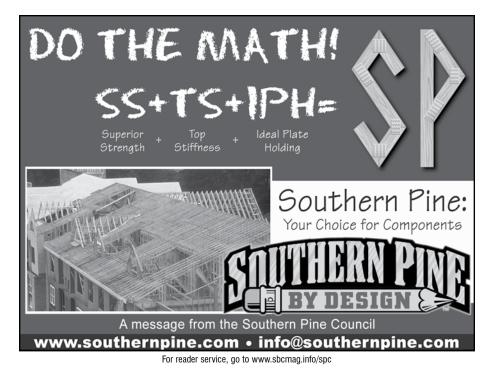
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Castleberry pointed out that service should also be a factor during periods of low production, "When things are slow, manufacturers can keep costs down by having less inventory on hand. But that means when a job comes in, you need the mill to deliver the lumber quickly." How much are you willing to pay for just-in-time service? All of the panelists agree that component manufacturers could reap significant benefits by doing the math and quantifying the potential cost savings.

Conclusion

While you have absolutely no control over a lot of factors in the current market, the topics covered in these BCMC seminars are all well within your ability to cause positive change. Listen to the whispers throughout your plant—measure and quantify your costs of doing business, and consider implementing some of the suggestions these panel experts had for component manufacturers. The cost savings will come. **SBC**



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Thanks to the hard work and dedication of everyone involved in the BCMC Build/Habitat for Humanity project, the two homes framed during the week of BCMC (Sept. 21-23) were completed in late October! Habitat for Humanity, Indianapolis held a dedication and blessing ceremony for the families on October 28. At the ceremony, Habitat officially handed over the house keys to the delighted and excited new homeowners, Debra Jones and Lorraine Berry, who both worked many hours to help finish building their houses and were grateful every step of the way for the many volunteers who helped make it all a reality. Congratulations to both Debra and Lorraine!

BCMC Build was so happy to be a part of this project and would like to thank all of the sponsors and volunteers for their efforts in making Debra and Lorraine's dreams of homeownership come true.

Check out the video of this year's build at <u>bcmcbuild.com</u>. SBC







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