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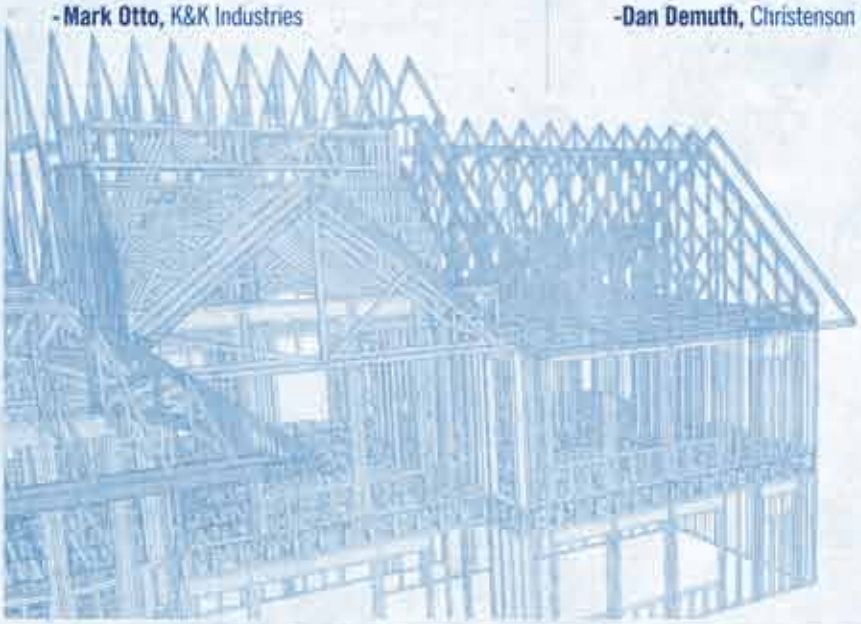

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STRUCTURAL BUILDING COMPONENTS™
THE FUTURE OF FRAMING

Jan/Feb 2012

www.sbcmag.info

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# editor's message

by Steve Stroder

## Safety – The Proof Is in the Numbers

**If you measure safety, improvement will follow.**

How do you know if you're running a safe business? Is it like art—you know it when you see it? Painting and sculpture can be subjective, but in our line of work, we need safety to be objective, something real that can be measured and proven. Our industry has a powerful tool to gauge and improve safety, as well as protect our business. SBCA's SCORE program (Structural Component Operations Reaching for Excellence) promotes safety and gives component manufacturers a way to translate a hunch that they're doing things right into certainty that they're taking the appropriate steps to protect their employees, their customers, and their company.

My company started participating in SCORE in late 2007 and attained Elite status in our first plant (Mooresville, IN) on January 4, 2008. We rolled out the program to all of our plants in June of 2008, with all plants becoming certified SCORE Elite in less than a year. This program has certainly given us ways to better quantify safety, along with other steps to manage risk.

Here's an example from just one of our plants. This plant had 16 accidents the year prior to starting SCORE. We fully implemented the Operation Safety component of SCORE, and the following year, that plant only had four accidents with over 143,000 man-hours worked that year. That's a 75 percent decrease in injuries at that facility! We have seen great results in safety improvement in each of our 31 manufacturing facilities since becoming SCORE Elite company-wide. SCORE doesn't just put your plant through the motions; the program gives you the metrics so you can track and improve performance in a very real and substantial way. This not only affects your bottom line through a decrease in time lost and workers' comp claims, it gives you a real number. This number can mean a lot to people, whether it's your management and staff tracking their progress toward continued improvement, your insurance agent determining your premium, or potential customers considering your company for a job. The proof is in the numbers. Like so many things in business, if you measure safety, improvement will follow.

The same holds true for other parts of the SCORE program like Truss Technician Training (TTT), the industry's training program that teaches design and engineering fundamentals for metal plate connected wood trusses. You can tell a potential customer that you have good technicians, but that boils down to a situation where either the customer believes you or they don't. There's much more credibility to that statement when you can back it up by saying that your facility is a certified member of the SCORE program, and at least 80 percent of your truss technicians have achieved TTT Level I certification, 50 percent have reached Level II and no less than 10 percent of your technicians are certified at Level III. This brings another level of safety as well as risk management to your business, and it's not a bad selling point either.

In addition to its focus on safety, SCORE also includes critical risk management for component manufacturers. The program requires that a SBCA JOBSITE PACKAGE go out with every job. Now this doesn't give you a metric like tracking accidents at the plant, but it is something tangible that shows your company's dedication to safety. Along with providing valuable handling, installing and bracing information

Continued on page 8

### at a glance

- ❑ President Steve Stroder gives an example of how SCORE helped reduce accidents at one of his company's facilities.
- ❑ Collectively, the industry can raise the bar on safety through the SCORE program.
- ❑ The goal of SCORE is to provide industry best practices and generate data to help CMs track and manage their facility, following the belief that, if you measure something, improvement will follow.

## Editor's Message

Continued from page 7

to installers, the JOBSITE PACKAGE can be priceless from a risk management standpoint. This packet will give your framer/customer the vital information he needs to do the job right. If a truss job collapses due to inadequate bracing on a project, your company can prove it supplied industry best practice information on temporary and permanent bracing, fulfilling your duty to educate and warn.

Companies that attain SCORE Elite certification are also required to have their key people go through the *O*Risk program. *O*Risk teaches your managers and those who process contracts for your company the fundamentals of risk management on important issues like bidding and successfully negotiating a contract. Along with providing essential training to your staff, this program shows your insurance agent that your employees have a good foundation of how to avoid risk.

When it comes to safety at the plant, the jobsite and from a risk management standpoint, SBCA's SCORE program ties together the key industry best practices to protect your people, your customers and your business. To learn more about the program, visit sbcindustry.com/score.php. Think about implementing SCORE at your facility for 2012 and let's raise the bar on safety in our industry together. SBC

*SBC Magazine encourages the participation of its readers in developing content for future issues. Do you have an article idea for a future issue or a topic that you would like to see covered? Email your thoughts and ideas to editor@sbcmag.info.*

# New Rule for Drivers Using Cell Phones

A final rule specifically prohibiting commercial truck and bus drivers from using hand-held cell phones while operating their vehicles has been enacted by the Federal Motor Carrier Safety Administration (FMCSA) and the Pipeline and Hazardous Materials Safety Administration (PHMSA). Drivers can use a hands-free phone provided that the device is:

- Configured for hands-free operation prior to a trip (before the vehicle is in motion).
- Easily within reach for the driver when sitting in the driver's seat with the seat belt fastened.
- Set up so a call can be placed, answered or terminated with the touch of just one button.

This rule also applies to the use of GPS systems. Devices that don't meet these requirements can be used when a vehicle is not in motion, such as when a driver safely pulls off the road.

Drivers who violate the restriction will face federal civil penalties of up to $2,750 for each offense and disqualification from operating a commercial motor vehicle for multiple offenses. Additionally, states will suspend a driver's commercial driver's license after two or more serious traffic violations. Commercial truck and bus companies that allow their drivers to use hand-held cell phones while driving will face a maximum penalty of $11,000.

To assist component manufacturers, SBCA has drafted a template policy to help companies ensure they comply with the new rule. To learn more, visit sbcindustry.com/materialhandling.php. SBC


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by SBC Staff

# Guidelines for Truss Collapse Investigations

**Time is of the essence when gathering information about a truss collapse.**

It's the call no component manufacturer wants to get—the call telling you there's been a collapse at a project where you provided trusses. Component manufacturers can do their due diligence by building a quality product and supplying framers with installation and bracing information, such as SBCA's JOBSITE PACKAGE, but what should you do when you're informed of a collapse where you weren't even present? Much like a car accident or house fire, a truss collapse is something you hope never happens, but to be realistic and responsible, you have to plan for the worst.

## Question

*As a component manufacturer, what should I do if I'm notified of a truss collapse?*

The best time to develop a plan for dealing with a truss collapse is before an accident.

## Answer

A truss collapse and any resulting property damage, loss claims or legal action can be stressful. Here are some steps to help navigate the truss collapse investigation process and protect your company.

**Be Prepared:** The best approach is to have a plan long before you need it. Be proactive and strategize how you might deal with a truss collapse and the subsequent investigation. Talk to your insurance company and walk through a hypothetical situation to see how they process a truss collapse. Integrate their approach into your strategy for protecting the best interests of your company. Also keep in mind that the insurance company has one goal and one goal only—to reduce its claims expenses—because the greater the expense, the less profit it will make. Never delegate the responsibility of protecting your company's best interests to the insurance company. Only you can do this most effectively, as the insurance company will be focused on protecting its own best interests. The ***SBC*** article, "Protect Yourself Before the Accident Happens" by Steve Cabler, provides good background information on developing a response plan. See the box at the bottom of page 11 for more information on this article and other resources.

**Establish a Contact Person:** When dealing with the person who informed your company of the collapse (contractor, builder, etc.), it's recommended to have one employee or department serve as the point of contact. This helps maintain consistent communication and avoid misunderstandings. The last thing you want is for communication to become a game of "telephone" where the facts change as they are relayed from person to person. Your point of contact can provide updates to management and other staff, which also helps keep everyone at your company on the same page.

## at a glance

- ❑ Be proactive and develop a plan to strategize how you might deal with a truss collapse and the subsequent investigation.
- ❑ Information is critical; visit the site, take lots of photos and document as much as you can.
- ❑ Remember that the only company looking out for your company's best interests is your own. Take action with this in mind, and ultimately, it will save everyone money and time.

**Gather as Much Information as Possible:** Information and facts can be your friend (and savior), especially if legal action is brought against your company. Court cases often don't take place until long after a collapse has been cleared, so you want to get the facts as soon as possible and document as much as you can. While every detail may be crystal clear in the days following a collapse, as time passes, memories become hazy, which can be problematic if people are called to a deposition or have to provide testimony before a judge and jury.

If you get information early on, it should also be easier to confirm the facts. For instance, if a framer says he correctly installed the permanent bracing on a project, you can go to the jobsite to see for yourself, take photos (lots of photos), and establish, where possible, the facts regarding that and all statements. Years later, you will have everything you need in your file to help support the facts surrounding the incident and your point of view.

**Protect Your Best Interests:** When developing your truss collapse response plan, it's good to have the contact information for—or better yet, a working relationship with—the professionals listed below. During your hypothetical discussion with your insurance broker/insurance company, you should get them to agree, through a letter contract, to use and pay for your attorney and structural expert to manage any litigation that comes your way. This will more assuredly protect both your and the insurance broker/insurance company's best interests. Getting this expertise on the job early can be very useful to develop strategies, minimize the cost of any litigation and aggressively defend your company against possible claims.

- A lawyer with experience working with truss manufacturers and construction litigation can help you navigate through the investigation process and any resulting legal action.
- An independent engineer knowledgeable about trusses and wood frame construction can provide valuable perspective, along with the objectivity of being removed from your company, on the cause of a truss collapse.
- Your plate supplier can offer advice and guidance, and may also want to conduct its own investigation.

**Contact Your Insurance Company:** Once an event occurs, immediately contact your insurance company to inform them of the collapse. Remember that their goal will be to mitigate costs and often their next step will be to hire a low-cost attorney and expert with whom they already have a relationship.This generally results in poor representation for the truss manufacturer. Remind your insurance company of the letter of agreement you developed with them regarding the attorney and structural expert you both agreed to use for all situations like this. Then work together to assess the situation, plan and take appropriate action.



**Be Responsive:** The aftermath of a truss collapse can be tense, which also makes it a valuable opportunity to work through the issues positively with your customer, whose stress level is probably even higher than yours. Help your customer deal with the issues that you can in a proactive manner. This will certainly help reduce your customer's stress and put the situation in a more positive light with respect to your long-term customer/supplier relationship and with their decision to litigate. No matter what happens, word of how you dealt with the situation gets around, and positive words are always good for future business.

For more information on developing a plan for your company, visit sbcmag.info/tcchecklist.pdf. SBC

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

## more info:

SBCA has a number of resources to help draft a truss collapse response plan. Visit sbcindustry.com/tcchecklist for details on:

- Sample plan/checklist to use as a guide for pre-event-planning.
- *O*Risk—SBCA's online risk management training program, with topics including Insurance 101 and Risk Transfer Provisions.
- Articles on dealing with a truss collapse and managing risk, including the article by Steve Cabler referenced in this Technical Q&A.

# safety scene

by Molly E. Butz

## Resolved to be Safer

**Start out the new year with a renewed awareness of safety issues in your plant.**

Ah, it's January. A new year, a clean slate and, most likely, a laundry list of resolutions. Whether you're hoping to be more organized this year, or cinch your belt a notch or two tighter, it's time to re-evaluate the things that matter most and vow to fix the things that need fixin'. Speaking of fixing, how's your safety program looking these days? The new year is an excellent opportunity to review the safety practices in your component manufacturing facility and spruce them up where necessary.

**Not sure where to begin? We thought you'd never ask.**

Throughout the year, we get calls and emails from component manufacturers about various safety concerns. The questions run the gamut, but most often we get asked about the following three topics:

- Forklift safety and training
- Housekeeping for combustible dust
- Hearing conservation/protection

Here's a quick brush up...

### Forklift Safety & Training

The beginning of the year is a great time to ensure your forklift drivers are up-to-date on their training. Ensure each person authorized and certified to operate your various scissor lifts, forklifts and other powered industrial trucks is over the age of 18, has been through both the classroom and hands-on training and passed their evaluation. Re-evaluate each authorized operator every three years and provide refresher training when necessary. You'll also need to provide refresher training if an accident, near-miss or other unsafe operation occurs; a new type of equipment is introduced; or your workplace conditions change. Keep an updated list of your certified drivers; your records should include the certified driver's name, date of training, date of evaluation and the name of the person performing the training and evaluation.

Many forklifts weigh more than the average car. In addition, they steer using the back wheels. Rear steering allows for much sharper turns, a big plus in tight spaces and narrow aisles. Unfortunately, these sharp steering capabilities can also lead to several safety issues the average passenger car driver is not trained to handle. With more than 36,000 serious forklift accidents occurring every year, we can't emphasize enough how important it is to get and keep your forklift drivers certified.

### Housekeeping for Combustible Dust

This isn't the first time you've heard about the combustible dust issue from us, and we're pretty sure it won't be the last. For several years, OSHA has been pursuing more stringent regulations for the collection and disposal of "combustible dust," including sawdust. No rule has been finalized, but it's no secret that OSHA has been focused on combustible dust enforcement.

There's a LOT to know, but here are the five most critical things you need to know about combustible dust as it relates to your component manufacturing facility:

1. If you don't know how much sawdust you create and where it collects, make performing a a risk assessment a priority. OSHA will expect you to know this information.

### at a glance

- ❑ The beginning of the year is a great time to ensure your forklift drivers are up-to-date on their training.
- ❑ For several years, OSHA has been pursuing more stringent regulations for the collection and disposal of "combustible dust," including sawdust.
- ❑ Hearing conservation is a very serious concern, and one that can affect the component manufacturing industry.

2. If you've already performed the risk assessment but don't have a plan for appropriately collecting and disposing of the sawdust you create, make THAT the priority. An OSHA citation is no fun.
3. Train, train, train. Simply having a plan on paper won't cut it. Your employees need to know and understand how to safely and effectively execute your plan.
4. Re-evaluate the plan after the first three or six months. Revise and update your program accordingly, incorporating employee feedback where valuable.
5. Stay informed about updates to the current and proposed rules and adjust your housekeeping plan and training programs as necessary.

For further information on OSHA's combustible dust standard, and ways in which component manufacturers can address these five critical areas, go to wtcatko.com/dust.

## Hearing Conservation/Protection

Hearing conservation is a very serious concern, and one that can affect the component manufacturing industry. Exposure to high noise levels for an extended period of time can and will cause ear damage and hearing loss.

If you've already been through the formal testing process and implemented a hearing conservation program, remember to keep your OSHA Log of Work-Related Injuries and Illnesses up to date for the year. If you're unsure if there are hazardous noise levels present in your facility, here are some warning signs:

- Your employees need to raise their voices to hear each other.
- You can't hear someone standing less than two feet away without shouting.
- Your employees need to stand very close to each other to hear anything at all.

When in doubt, take the next step and have professional noise testing done. If the testing confirms dangerous noise exposure levels, start working on your hearing conservation program. Don't sweat it, an effective program consists of just two basic parts: annual hearing tests and providing personal protective equipment (and all of the necessary training associated with the personal protective equipment.)

These three hot topics are a simple reminder that safety doesn't have to be overwhelming. Look at your facility in bite-size pieces and focus on each safety concern individually; most safety issues have a simple solution. Take the opportunity this new year brings to revisit your safety program and communicate with your employees while providing them with the training they need to protect themselves. Happy New Year! And as always, safety first! SBC

# Corralling Your SOW

by Kent J. Pagel

*Kent Pagel is a Senior Shareholder for Pagel, Davis & Hill, a Professional Corporation. He and his firm have served as national counsel for SBCA since 1994. He can be reached via email at kpagel@pdhlaw.com.*

## at a glance

- Properly stating a SOW, describing products being sold and any work or services that are not included, is crucial for every component manufacturer.
- Not stating a SOW can also subject a CM to the prospect of increased claims and liability.
- A manufacturer should strongly consider developing a SOW template that can be used in its bids or proposals and as an addendum or attachment to the customer contracts it signs.

SOW is an acronym for Scope of Work. From my perspective, properly stating a SOW, describing products being sold and any work or services that are not included in your bid or contract, is crucial for every component manufacturer (CM). A properly worded SOW, for example, may determine if a CM gets fully paid. If not correctly stated, or if not stated at all, a SOW may also provide fertile ground for a back charge dispute or significantly increased liability in the event of a product-related accident or construction defect lawsuit.

To illustrate, I will walk you through a sample SOW provision, which if contained in whole or in part in a customer contract you choose to sign, should give you some real concern. Similarly, I will explain how not stating a SOW can also subject a CM to the prospect of increased claims and liability. Last, I will discuss alternative SOW provisions a manufacturer ought to consider. I am certainly not suggesting a manufacturer is restricted from expanding its scope of work or design responsibilities if it so chooses. The important thing is to know that doing so means added risk, and hopefully in return for this added risk the manufacturer can arrange to be compensated fairly for it.

SOW provisions contained in builder and contractor form contracts are generally not specific, may be quite long, and are routinely scattered throughout the agreement form and set out in schedule and exhibit attachments. Thus, to help you more easily understand the concepts, I will break out a sample SOW provision into sections. However, when reviewing an actual customer contract form, keep in mind that the builder or contractor will not make it so easy on the reviewer.

The first part of our sample customer contract form SOW provision reads:

Supplier shall assume all obligations existing under the Contract Documents including this Agreement and any exhibits or attachments; the general contract between the Contractor and Owner; and the drawings, plans, and specifications.

From this language, we know the customer, a general contractor, is working for a project owner. With this provision, the customer is attempting to take all the contract obligations it has to the owner, and pass them on to the CM. This "flow-through" or "conduit" provision can be quite dangerous in terms of the risks that may be assumed.

**DANGER:** This acceptance of responsibility exists regardless of whether or not the contractor provided the manufacturer with a contract or all of the relevant drawings and specifications.

Here is the second part of our SOW provision:

Supplier shall furnish and provide all engineered floor and roof trusses per plans and specifications; sealed engineering; all truss to beam and truss to truss connection designs; all other truss system requirements; field measuring; and all required truss repairs.

This provision greatly expands a manufacturer's typical scope of work or design responsibilities. For example, the following requirements are outside the manufacturer's typical scope of work: truss-to-beam connection designs, all truss system requirements, and field measuring. The following requirements also add confusion: sealed engineering, all other truss system requirements, and all required repair details.

The issue regarding sealed engineering is whether or not placement plans need to be sealed. From this language, the manufacturer should assume that the individual truss design drawings must be sealed. The statement "all other truss system requirements" is vague; no one can be sure of exactly what it means, which is an unsettling situation from a liability standpoint.

**DANGER:** Left unclarified, the phrase "all required truss repairs" might mean providing repair details for all required truss repairs, regardless of why a repair is needed. Even if a number of trusses were damaged by the customer or one of its subcontractors, the manufacturer would arguably be responsible for providing the repair details necessary to fix the trusses. Read literally, a manufacturer might further have responsibility for

physically undertaking the repairs at the project site.

Here is the next requirement from our sample SOW provision:

All trusses and truss designs shall require a grade stamp and grade of lumber at a minimum grade of #2 kiln dried Southern Pine or Western Lumber.

The requirement that trusses ought to be grade-stamped and truss designs should meet a minimum species and grade of lumber is also troubling. For example, the grade stamp may be cut off from the chord or web that is used in the trusses that are provided. And, some truss designs engineer out correctly even when they contain lumber of a grade or species other than what is stipulated in the provision.

Let's continue with the next part of our sample SOW provision:

Trusses shall be fabricated in accordance with a building code approved third party inspected quality control or assurance program.

This provision is only problematic if the manufacturer does not follow a building code-approved, third-party inspected quality control program. A quality control program, such as the **WTCA In-Plant QC** program would meet this requirement.

The next part of the SOW provision reads:

Supplier shall indicate all lateral and point loads generated by the truss systems and all specific requirements for installed permanent bracing.

This provision significantly expands the manufacturer's SOW from what is indicated in Chapter 2 of TPI-1, the *National Design Standard for Metal Plate Connected Wood Truss Construction*. TPI-1 states, with respect to permanent bracing, that the manufacturer is only responsible for depicting the approximate location for continuous lateral permanent bracing of truss members subject to buckling due to compression forces. **DANGER:** Having to specify other permanent bracing responsibilities can add significantly to the amount of work the CM must do, as well as increase their exposure to risk.

Here is the final part of the sample scope of work provision:

Upon the request of a project design professional, Supplier shall inspect completed installation with all permanent bracing installed and issue a letter of approval noting approval and/or deficiencies observed.

This provision ABSOLUTELY expands the manufacturer's standard SOW. **DANGER:** Agreeing to inspect installation and bracing can be a very high-risk proposition and, furthermore, mistakes made in this regard may not be covered by your commercial general liability insurance.

Based on the dangerous and vague language in our sample SOW provision, I would assign this provision as having a very high-risk rating. It is also important to note that similar types of risk could exist if no SOW provision is set out in the bid of a CM, if the bid becomes the contract with the customer, or in an executed customer contract. If a SOW doesn't exist in these initial documents, the customer and its paid consultants will likely seek to have the SOW and design responsibilities of the manufacturer be quite expansive.

A manufacturer should strongly consider developing a SOW template that can be used in its bids or proposals and as an addendum or attachment to the customer contracts it signs, making sure to clearly incorporate the SOW template as part of the signed contract. Chapter 2 of TPI-1 is an excellent resource to consult when drafting such a template. To read more about alternate SOW provisions and strategies to incorporate them into customer contracts, go to sbcindustry.com/pubs/ttbdresp-d. **SBC**

## a template SOW should cover:

**TO DO:** Describe in some detail the types of products (with dimensioning) being furnished, also list explicitly what products or services are not being provided.

**WHY:** The contractor's contract form will often be very vague about what is being sold, and may even state items the manufacturer does not intend to include. So, it is very important for the manufacturer to clearly state what products are being sold. To make this abundantly clear, sometimes it makes sense to also state what is not being sold.

**TO DO:** Clearly identify what provisions of the project Contract Documents, including plan notes and specifications, the manufacturer does not agree to comply with.

**WHY:** This statement is intended to overcome the "flow-through" provision referenced in the first sample SOW provision discussed.

**TO DO:** Clearly identify what design and engineering service and drawings are being provided.

**WHY:** It is important to clearly state that the only design work being done by the CM is with respect to the design of those products being fabricated. Setting forth which submittals will be required by the manufacturer, and which of the submittals are engineering documents, is also very important. For example, the manufacturer should consider stating the intended purpose of the truss placement diagram is to indicate the location of trusses assumed by the manufacturer and that such diagrams will not be sealed as they are not engineering documents.

**TO DO:** Clearly state what bracing responsibilities the manufacturer is assuming. This can be done with a provision that specifies the bracing design and bracing materials, if any, the manufacturer will provide.

**WHY:** This will eliminate confusion, which is especially important because inadequate or improperly installed bracing is a common reason for truss collapse and construction defect complaints directed at component manufacturers.

**TO DO:** Accurately describe the activities the manufacturer will perform at the jobsite. In addition, state the Contractor's responsibilities concerning the products the CM is designing, manufacturing and/or selling.

**WHY:** Accurately describing what, if any, activities the manufacturer will perform at the jobsite is also very important. This eliminates any doubt, for example, whether the manufacturer will or will not verify dimensions before trusses are installed, or inspect truss installation or bracing. Furthermore, it is important for the manufacturer to address what, if any, handling, storing, erecting or bracing guidelines the manufacturer will provide with the products delivered to the customer's jobsite.

by Sean D. Shields

# A Project of Ep

**30,000 leagues under the sea?**
Depth of monster squid.

**30,000 miles per hour?**
Speed of a meteorite.

**30,000 pounds?**
Weight of a new U.S. bunker-busting bomb.

**30,000 square feet?**
Size of a single-family home framed by Blenker Building Systems in central Wisconsin.

# ic Proportions


No, that's not a typo. The house is epic, and as you can see, it has an impressive footprint. However, the most impressive thing about this house is not its size, it's the process by which it was built. Jason Blenker, President of Blenker Building Systems (BBS), takes us on his company's journey through that process.

## Getting In the Door...

It's probably not a shock that the completion of this home is four years in the making. Blenker was invited to participate in the bid process for the project three years ago. "We actually knew the owner who wanted to build the house; he owns and operates a local business," said Blenker. "The owner asked the general contractor to request a bid from us."

The relationship with the owner was forged through their mutual participation in community charity events. BBS believes strongly in giving back to the communities where their employees live and where they build homes. "Our community involvement also helps us meet other business owners who have a like-minded dedication to service. In this case, it was nice to be recognized by someone else for what we do," said Blenker.

Continued on page 18

## A Project of Epic Proportions

Continued from page 17

Ultimately, Blenker believes they weren't chosen because of price (they didn't submit the lowest bid); they were chosen because of their reputation and their capabilities.

"This project was unusual in that, at the time of the bid, only about 30 percent of the drawings were done," explained Blenker. "It was a design-build project almost from the start." While with most of their residential projects the drawings are complete and they submit a hard bid, in this case, they found themselves working alongside the architect and building engineer to help them develop a budget.

"It was similar to some of the commercial jobs we have done in the past when we've been brought in by the contractor to help value-engineer the connections and ascertain the structural needs based on the architectural drawings," said Blenker. In some cases, they provided a range of options, either through different layouts or different building material solutions, and left it up to the contractor to decide how much they wanted to spend.

## ...Then, Figuring out Where the Door Goes

Blenker points out that while most homeowners are typically concerned with how the building looks once it's finished, in this case where the entire process was collaborative, the owner and contractor had the flexibility to decide what option they wanted to take. "If they found an option that did the job and saved them money, they could either choose to spend it somewhere else on the project or both enjoy the cost savings together," said Blenker.

Just by looking at the photos, it's evident there were several design challenges within this project. Blenker agreed, "Our designers had the opportunity to think outside the box on multiple occasions." BBS strongly believes that any plan can be pre-built using components. While Blenker admitted this was the most intricate project they

had ever been involved in, it was made easier because they were brought in during the design phase. "Ultimately, that saved us from a lot of trouble later on in the project," said Blenker. "We were able to work through the various challenging pieces in a collaborative way with the architect and building engineer."

One example, which Blenker pointed to as possibly the most difficult aspect of the house, was the front turret of the house (see photo on page 16). "Initially, the architect and engineer didn't know exactly how they were going to build it," shared Blenker. The plans called for a spiral staircase in the middle of [the turret], and there wasn't an obvious solution how to do it. "We put together a few proposals, participated in a lot of back and forth between us and them, and spent a lot of time communicating." In the end, the architect and the owner chose the option they wanted to take.

Unfortunately, there was only so much they could design for in the early stages. "There were so many things that weren't decided on at that point," said Blenker. "For example, we could figure out where the fireplaces were, but we couldn't design for them because we didn't know what materials they would be constructed out of, so we didn't know the load the floor would have to hold."

## Fitting the Pieces Together...

Having unfinished plans created an interesting puzzle. BBS runs a turn-key operation. Not only can they contribute to the design, they also build and install the entire structure, including floor, wall and roof components. Due to the size of the project, BBS had to start manufacturing and installing components long before they knew what the whole house would finally look like. Blenker said, "We received initial figures in September, and by October we were already manufacturing some of the components."

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## A Project of Epic Proportions

Continued from page 19

"One difficulty was having enough space for all the pieces inside our manufacturing facility, particularly the round pieces," he added. "With an intricate project like this, we build the rooms in our facility to make sure everything fits, and then dismantle it and take it to the jobsite." Of course, loading the components to fit on the truck trailers, and properly securing them for travel was another fun part of the puzzle to solve.

The single largest challenge was probably the build site itself. "Getting access to it was challenging because it was set in the woods," said Blenker. Being in Wisconsin didn't help things either. The threat of winter weather put pressure on everyone to enclose the building before the first big snow blizzard. "The middle portion of the house was the most complicated," said Blenker. "The design of that portion of the house took more time, so we had to start with the two wings." BBS had two crews and two cranes start at opposite ends of the house, and work toward the middle.

This approach was made a little easier by the fact the foundation was already poured. "It isn't typical to have so many unanswered questions and have the foundation completed," said Blenker. "However, it provided us a solid box to work in. With the foundation in place, we had the assurance there wouldn't be major changes to the building layout."

## ...and Completing the Puzzle

What was the best part of the project? Blenker said, "It was the uniqueness of the project and the opportunity it gave all of us to be creative." It's not every day a project comes along that gives both the design and production teams a chance to go beyond the conventional to find a solution to a problem. Ultimately, they were able to frame out and enclose the house before any major snow fell, and everyone on the project was happy.

For Blenker, having everyone happy started with good communication. "This project required a lot of patience, from everyone," said Blenker. "Someone would ask a question, but they had to realize the answer wasn't typically just sitting on someone's desk, it had to be figured out. That took time." Add to that the pressure to keep the project moving forward, combined with the fact the building design was a collaborative process, not simply a "here's the plans—go build it," and it was no wonder constant communication was essential.

So while it was their focus on community that initially got them the job, it was their focus on communication that ultimately ensured the job was a success. **SBC**

*Do you have an interesting or challenging project you want to share with SBC readers? Email editor@sbcmag.info to share your ideas.*

# OSHA Has New Residential Fall Protection Rules!

**Enforcement began September 16.**

## The Newly Revised B11 Summary Sheet:

**Provides guidance to framing crews on how to assess fall hazards**

**Stresses trusses are not designed to serve as fall protection anchorage**

**References OSHA requirements regarding fall protection equipment**

B11 Fall Protection & Trusses
*Protección de Caída y Trusses*

Regulations and information on fall protection and erection/installation of trusses in residential construction is contained in Standard 29 CFR 1926 Subpart M from the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). Section 1926.501(b)(13) of the OSHA Construction Standard states in part: "Each employee engaged in residential construction activities 6 feet or more above lower levels shall be protected by guardrail systems, scaffolding, a safety net system or a personal fall arrest system."

*Las regulaciones e información sobre protección para caídas y levantamiento/instalación de entramados en construcción residencial vienen contenidos en Standard 29 CFR 1926 Subparte M del Departamento de Empleo (U.S. Department of Labor), Administración de Seguridad e Higiene Ocupacional (Occupational Safety and Health Administration, OSHA). La Sección 1926.501(b)(13) de OSHA Construction Standard establece en parte: "Cada empleado que participa en actividades de construcción residencial a 6 pies o más por encima de niveles inferiores deberá estar protegido por sistemas de rampa de protección, andamiaje, un sistema de red de seguridad o un sistema de protección personal para detención de caídas."*

**TRUSS SYSTEMS – *SISTEMAS DE ENTRAMADO***

⚠ **DANGER** Inadequately braced and sheathed truss systems used as an anchorage point for any type of personal fall arrest system is dangerous and will increase the risk of serious injury or death.

*¡PELIGRO! Los sistemas de entramado apuntalados y forrados de forma inadecuada que se utilicen como punto de anclaje para cualquier tipo de sistema de protección personal para detención de caídas son peligrosos y aumentarán el riesgo de lesiones de gravedad o la muerte.*

▲ **WARNING** Trusses are not designed to resist lateral impact loads associated with falls. A falling worker attached to an inadequately braced and sheathed truss system could cause all the trusses in the system to collapse in a domino effect.

*¡ADVERTENCIA! Los entramados no están diseñados para resistir cargas de impacto laterales asociadas con caídas. Un trabajador que se caiga que está sujetado a un sistema de entramado apuntalado y forrado inadecuadamente podría provocar que todos los entramados en el sistema se colapsen con un efecto dominó.*

☑ Refer to BCSI-B1*** and BCSI-B2*** for recommendations on proper temporary restraint/bracing of trusses.

*Consulte las recomendaciones que vienen en BCSI-B1*** y BCSI-B2*** sobre restricción/apuntalamiento apropiado de entramados.*

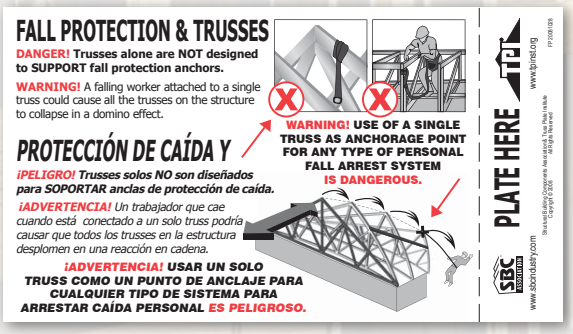
⚠ **DANGER** Do not walk on unbraced trusses.

*¡PELIGRO! No camine sobre entramados no apuntalados.*

BCSI-B11 SUMMARY SHEET

**The B11 is now part of the SBCA Jobsite Package.**

**Fall Protection truss tags are also available.**






# parting shots

Share your stories and photos with us! Send submissions to partingshots@sbcmag.info.

Most holiday trees have probably been taken down by now, but when we received these photos from Sun State Components, we just had to run them. A few years ago, a production manager at the Surprise, AZ, facility created these ingenious truss ornaments from balsa wood and silver gum wrappers. "We wanted to add something unique to our tree and customize it for the truss industry," said Davi-Ann Farmer, Engineering Department Manager at Sun State. She added that these ornaments are a favorite every year, and always receive comments from customers. With such great feedback, maybe there's demand for a new holiday "mini truss" line to revolutionize gingerbread house construction across the country. SBC

## SBC Online Photo Contest

The holiday ornaments on this page and the feature article on Blenker Building Systems both include excellent industry photos—and we want to see your photos, too! In fact, we covered both of these stories as a result of members sending in photos. Take part in ***SBC's*** Online Photo Contest and show off your company, whether it's an interesting build site, a piece of industry history, or something else that puts a distinctive stamp on the structural building components industry.

Email your photos* (high resolution, 300 dpi, preferred) along with a brief description to epatterson@sbcmag.info. Top photos will be posted on the new ***SBC*** website, where you can vote on your favorite shots. Winning photos will appear in the Parting Shots section of upcoming issues.

Photos submitted by: Pioneer Industries, LLC (above), Richco Structures (below, left) and M-Truss & Components, LLC (below, right)

*Photos submitted may be used in ***SBC Magazine*** or other SBCA materials.

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