News of Interest for and from the Connecticut Association of Home Inspectors, Inc.

CAHI MONTHLY NEWS

June 2011 Volume 3, Issue 6

President's Corner

I would like to thank you for your cards, calls, emails, and kind words on the passing of my mother, my family and I appreciate your sentiments.

Connecticut License renewal applications have been received by everyone by now, if you have not gotten yours by all means call The Department of Consumer Protection at 860-713 -6100, you can verify your own license on line at www.ct.gov/dcp and go to verify license.

Annual membership dues for CAHI are also due by the end of June, a mailing to all Inspectors and Interns listed with the State will be in your mailbox shortly. There have been several members that have already renewed on line and at recent seminars, we appreciate having members that are ahead of us on this, it is a time consuming task to produce a mailing, and to follow up with reminders.

June is the last month that we will be at Connecticut Basement Systems, we will resume our normal education seminars at the Holiday Inn in North Haven in July, and as usual there will be no seminar in August.

All of the Energy seminars have been well attended, and productive. Our host and producer of the five part seminar has been most accommodating, providing us with great information at a comfortable facility, with good food and hospitality. Please remember to thank Larry and his staff for their dedication to our industry. The certification process will be at the upcoming seminar, all of the information has been recapped at the meetings, but if you missed any of the meetings there are copies of the presentation material from every seminar available at Dr. Energy.

We try to keep you informed by constantly checking and updating our information that we get from you. Before the last seminar there was a last minute change in location, from Dr Energy, to Connecticut Basement Systems, we sent out an email the day before with that change, and had someone at the Dr Energy location to direct people to the other facility. Some people did not get the information. If your email is not correct on the web site, let us know so we can correct it. It is your responsibility to check the information, we make mistakes, and so do you -- in your own information. Check the information on the web site often, anyone that is slightly familiar with computers and electronic data knows that "stuff" happens when it comes to electronics that you swear you didn't do. We want you to be informed, and we want you at the meetings, we use the tools that we have, and the best tool that we have to get the word out quickly is the web site.

Our July meeting will be back at the North Haven Holiday Inn. Prior to this, the board of directors will meet and as usual members are welcome to attend the board meeting. Later at the members meeting, the CAHI laminator will be operational. Members can bring new licenses to be laminated. In addition, the board is having more CAHI logo car stickers made. Distribution of these will be published when ready.

REMINDER: If you have a child in college or he or she will be attending in the fall, CAHI is offering a $1000. Scholarship again this year, the 2 page requirements and application are on the web site, on the home page, at the bottom of the page. The application must be postmarked no later than July 15th, so that we can review the applications, and notify the recipient by the end of July.

Pete Petrino

CAHI President

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Meeting Dates

June 22	Lighting, Saving Water, Windows & Doors Dinner 6-7PM Seminar: 7-9PM Dr. Energy Headquarters 28 Progress Ave, Seymour, CT 06483
July 27	Board Meeting 5:00PM Open to Members 7:00PM Monthly Meeting Topic TBD
Aug	No Meeting Vacations

Regular Meeting Location:
(otherwise noted)

Holiday Inn

201 Washington Ave.

North Haven, CT. (203) 239-6700

Building Safer Decks

The prescriptive building codes are moving in the right direction, but some confusion remains

by Glenn Mathewson

Decks have seen little attention from building codes over the years, despite the fact that they often bear the weight of parties and public gatherings. The catastrophic consequences of this oversight are easy to find: Just try Googling "deck collapse" and you'll find story after story of injuries and deaths resulting from poorly constructed decks.

This doesn't surprise me. As a building inspector who is also a former deck contractor, I've seen the realities of deck construction from both sides. The fact is, you can't build a safe deck straight from the IRC. That's partly because most of the code's structural provisions have to do with platform and balloon framing, both of which rely on braced wall panels (sheathing over studs) to resist loads; decks, which are built more like post-frame buildings, don't have those braced panels.

However, with the release of the 2009 IRC, decks have finally begun to be addressed. While we still don't have a pre-engineered, code-prescribed method for building decks, this new focus is a good start. In this article, I'll discuss these new deck requirements.

Ledger Bolting Schedule

Although the 2003 IRC finally prohibited the use of nails to secure deck ledgers, it lacked a prescriptive bolting schedule. That's why, 10 years ago as a deck builder, I could use one 1⁄2-inch lag screw every 16 inches no matter the joist span, without being questioned. That's changed under the 2009 code. Section R502.2.2.1 provides a simple way to determine the size and number of bolts or lags required and includes an easy-to-read table with footnotes (**see Figure 1**). The fastening schedule is based on joist length, which determines the load in pounds per linear foot that can be expected at the ledger. Longer spans or conditions other than those addressed by the table may require engineering. (If you look at the table, you'll see that the bolting schedule I used for the 1⁄2-inch lags mentioned above is adequate only for joist spans of 12 feet or less.)

TABLE R502.2.2.1
Fastener Spacing for a Southern Pine or Hem-Fir Deck Ledger and a 2-Inch Nominal Solid-Sawn Spruce-Pine-Fir Band Joist[c, f, g]
(Deck live load = 40 psf, Deck dead load = 10 psf)

Joist span	6' and less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
Connection details	On-center spacing of fasteners[d, e]						
1/2" diameter lag screw with 15/32" maximum sheathing[b]	30"	23"	18"	15"	13"	11"	10"
1/2" diameter bolt with 15/32" maximum sheathing	36"	36"	34"	29"	24"	21"	19"
1/2" diameter bolt with 15/32" maximum sheathing and 1/2" stacked washers[b, h]	36"	36"	29"	24"	21"	18"	16"

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479kPa.
a. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
b. The maximum gap between the face of the ledger board and face of the wall sheathing shall be 1/2".
c. Ledgers shall be flashed to prevent water from contacting the house band joist.
d. Lag screws and bolts shall be staggered in accordance with Section R502.2.2.1.1.
e. Deck ledger shall be minimum 2x8 pressure-preservative-treated No. 2 grade lumber, or other approved materials as established by standard engineering practice.
f. When solid-sawn pressure-preservative-treated deck ledgers are attached to a minimum 1 inch thick engineered wood product (structural composite lumber, laminated veneer lumber or wood structural panel band joist), the ledger attachment shall be designed in accordance with accepted engineering practice.
g. A minimum 1x9 1/2, Douglas fir laminated veneer lumber rimboard shall be permitted in lieu of the 2-inch nominal band joist.
h. Wood structural panel sheathing, gypsum board sheathing or foam sheathing not exceeding 1 inch in thickness shall be permitted. The maximum distance between the face of the ledger board and the face of the band joist shall be 1 inch.

Figure 1. *New in the 2009 IRC is a prescriptive table for lag-screwing and bolting ledgers to the house's band joist. A similar table first appeared in JLC in March 2004. Note the third line of the schedule, which allows for a 1⁄2-inch drainage space to be used behind the ledger.*

Though this table does provide a clear way to design ledger connections, make sure you take a good look at the footnotes and the specifics in all the subsections of R502.2.2. For instance, the bolting schedule is intended only for uniformly distributed loads. Joists that carry other loads to the ledger - like a doubled joist running from the headered opening for a stairway - create concentrated loads on the ledger and will require some thought from you and the code official (**Figure 2**). When you calculate the tributary load from that doubled joist, for example, you might find that you need to use a tighter fastening schedule for that section of the ledger or make some other accommodation for the load.

Figure 2. *Because a doubled joist that supports other joists transfers a concentrated load to the ledger, it will require support beyond the code's bolting schedule. Some inspectors will make an exception for a small stair landing, while others will prohibit all beams from loading at the ledger*

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Note also that you have to use a minimum 2x8 pressure-treated ledger. For builders who prefer to leave a drainage space behind the ledger, rather than flashing the siding over the ledger, the code allows for a 1⁄2-inch gap between the sheathing and the ledger - enough for a 1⁄2-inch stack of washers.

Height at Which Guard Railings Are Required

In the past, guardrails could be dispensed with on all decks no higher than 30 inches above grade. That rule hasn't changed, but

now the 30-inch height must extend at least 3 feet horizontally away from the deck.

Previous code editions referred to "grade" only as the height of finished ground level "adjoining the exterior walls." That could be interpreted as grade at the deck posts, even if the posts were a foot away from a cliff (**Figure 3**). This loophole has been closed in the 2009 IRC, in Section R312.1. Just as you need a 36-inch-deep landing in front of a door at the top of a stair, you need the same area at the edge of a deck if you wish to forgo the guards. That is, the height of a deck must be measured vertically at a point 36 inches horizontally from the edge of the deck.

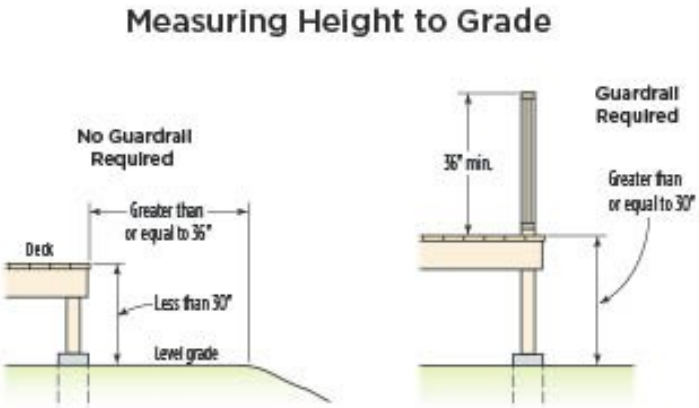


Figure 3. *In previous editions of the code, rails would not have been required on this deck (left) - even though there's an obvious fall hazard - because the grade directly next to the deck was less than 30 inches below the decking. The 2009 IRC closes this loophole, requiring that the "landing" area extend 36 inches from the edge of the deck (right).*

Guardrails at Built-In Benches

In the past, the required guard height was measured from the deck's walking surface, even if there was seating built into the guard. Under the 2009 code (Section R312.2), if the deck has built-in seating around the edge, the 36-inch guard height must be measured from the seat (**Figure 4**). This addresses the concern that children will climb on the seating and be at risk of falling. Many of the built-in benches I've seen have backs that are only about 18 to 24 inches high - perhaps not enough to prohibit one of those little ones from falling over.

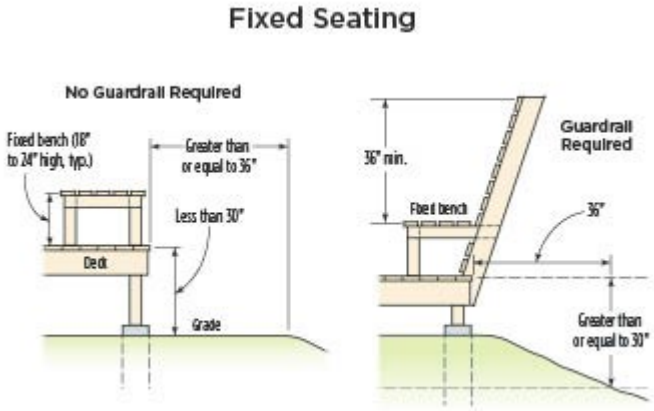


Figure 4. *When this deck (left) was built under the 2003 IRC, the slanted bench-back, which is 24 inches tall, was considered a compliant guard. Under the 2009 IRC, the back of this bench would have to rise 36 inches above the seat (see illustration, top). Although the bench seat at right is higher than 30 inches above grade, the deck's walking surface is not, so no guard is required.*

Interestingly, the new rule doesn't mean that the height of the seat as measured from the ground dictates when guards are required. So if the deck surface is 29 inches above grade - lower than the 30-inch guard cutoff - you can still have a bench at the edge of that deck, with or without a back, even though the seat will be well over 30 inches above grade.

As someone that loves built-in deck features, I can't say that I agree with this new provision. Children should certainly be protected, but it's hard to see the point in regulating fixed seating when there's so much movable seating on decks. It also seems that if 36-inch rails are adequate to protect adults, a lower height - for children - could be specified for bench backs.

Electrical Outlets

A tamper-resistant wet-use outlet is now required on all decks larger than 20 square feet. Based on NEC provisions, this rule is

intended to eliminate fire risk from extension cords that might be used to power grill rotisseries and other outdoor amenities. Section E3901.7 has been expanded from requiring a receptacle outlet at the front and back of a home to also requiring one on all decks, balconies, or porches that are accessible from the home and have more than 20 usable square feet. Regardless of deck size, only one outlet is required.

Composite Decking

In the past, wood-plastic composite decking was viewed as an "alternative" material, which could sometimes cause delays for builders. While the International Code Council Evaluation Service (ICC-ES) has long provided an "acceptance criteria" for testing composite decking, an ICC-ES report does not guarantee universal approval. It merely provides evidence for a code official to review in deciding whether a product is equivalent to what the code prescribes. The code official can then decide whether or not to accept the material. By contrast, where the IRC specifies a particular test for a product, a universal approval is provided; the product becomes "code."

Section R317.4 of the 2009 IRC now specifies such a test - ASTM D 7032 - for wood-plastic composite decking. It will take some time for manufacturers to get their products labeled with the new standard, but ultimately this will make approval of composite decking much easier for contractors.

New Hardware Suggested For Lateral Loads

I saved this item for last because it's quite controversial in the deck-building industry. In the past, lateral loads on decks were rarely addressed. But in the last decade, a number of incidents have occurred in which live loads generated by people on decks produced dynamic lateral loading that caused well-attached ledgers to pull the band joist of a home straight from the floor system. Most often, this happened when the band joist was cantilevered over the foundation wall. As a result of these accidents, some code-change proponents introduced a provision for addressing lateral loads toward the end of the 2006/2007 code-change cycle, when the ledger schedule was being discussed.

This provision, R502.2.2.3, has a number of problems. One is that it addresses lateral loads with a hardware detail adapted from

a FEMA document actually intended for seismic loads; it uses horizontal hold-downs and long-threaded bolts to bypass the band joist and connect the deck joists directly to the home's floor joists (**Figure 5**). Another problem is that it gives no consideration to the magnitude of the loads; it prescribes two hold-downs for any deck, regardless of whether it's 100 square feet or 2,000. There is also a required nailing schedule for the subfloor on the joist above the hold-downs that makes it difficult and expensive to retrofit in an existing home.

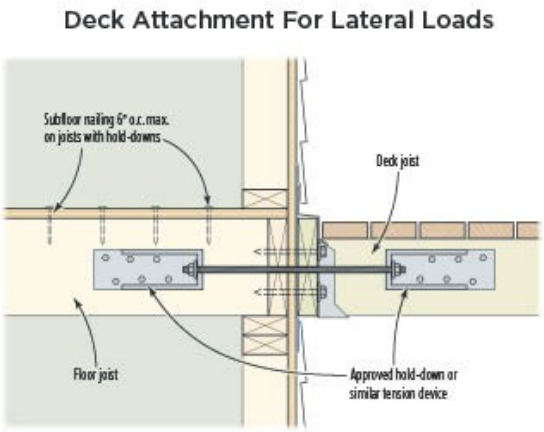


Figure 5. *A new controversial anchor detail is now "permitted" - though not explicitly required - under the 2009 IRC, and has raised inspectors' awareness of lateral loading issues. From a practical standpoint, installation may be difficult in existing homes because the tight subflooring nailing schedule would likely require ripping up the finish flooring.*

The code language states that the detail is merely "permitted," although inspectors in some areas are interpreting this as a minimum requirement. That's making a lot of builders unhappy, though no doubt it pleases the hardware manufacturers.

In my jurisdiction, we are not enforcing this requirement because we make sure that decks are properly built to withstand lateral loads without resorting to this troublesome detail. For example, a well-built low deck with its pressure-treated posts sunk into the concrete piers can resist lateral loads. Also, the American Forest & Paper Association's *DCA6 Prescriptive Residential Wood Deck Construction Guide* provides pre-engineered knee-bracing methods that will resist lateral loads, though they are not intended to be equivalent to the IRC anchor detail and would need approval by an inspector.

Despite its drawbacks, the presence of the lateral load connection detail in the code has put the question clearly in the face of all deck builders and code officials: "How are you resisting lateral loads if not by this detail?" If you don't provide an engineered design, the code official will likely take a hard look at how well the ledger is attached and what it's attached to.

.....Education Reminder

All licensed Connecticut Home inspectors must complete Connecticut State approved Continuing Education every two (2) years to keep their license in Connecticut current. A Three hour Law Seminar is mandatory during the license cycle.

All Connecticut State approved Home Inspection licenses are due to expire as of 06/30/2011.

This means that if you have a Home Inspection license in Connecticut, to maintain your license past June 2011, you must be sure your license education requirements are current.

CAHI keeps attendance records, we do not keep a tally on individual CEU's, this is your responsibility.

To check your records, the telephone number for the Connecticut State Department of Consumer Protection, Occupational / Professional Licensing Division: (860) 713-6145

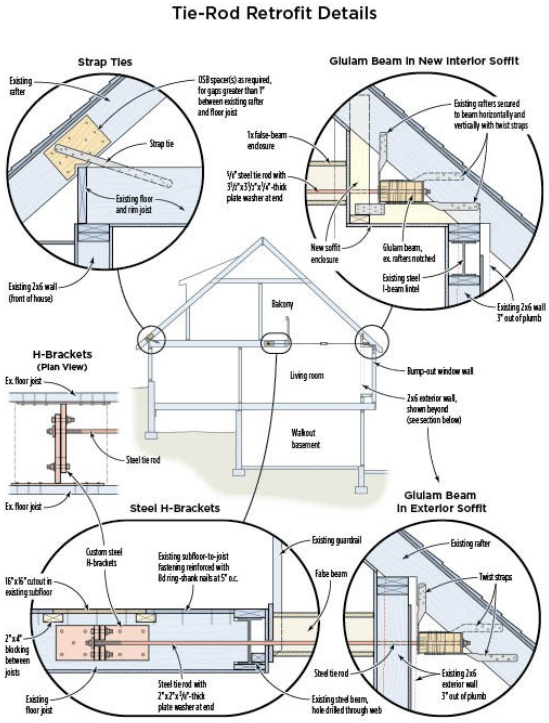
Please ask for Robert Kuzmich, R.A. (License and application Specialist.)

Rescuing a Spreading Roof

A horizontal beam and steel tie rods resist rafter thrust with little disruption to the rest of the structure

by Dennis Gehman

In late 2007 I got a call from clients who had recently bought a 50-year-old home in Southeastern Pennsylvania. After moving in, they became concerned when they noticed that one of the main exterior bearing walls was leaning outward - in fact, it was a full 3 inches out of plumb over 8 feet. The home was built into a hillside; it had a walkout basement and also featured a cathedral ceiling that ran the length of the house over the main living area. A balcony off the upstairs bedrooms overlooked the living room (**see illustration**). The leaning wall supported the rafters of the cathedral ceiling and also included a bump-out box bay along 20 feet of its length. Our task was to replumb and brace the wall with as little disruption to the home as possible.



The problem with the wall stemmed from a critical oversight on the part of the builder: Though the original plans had called for collar ties, for some reason they were never installed. The result was that the unrestrained cathedral ceiling rafters pushed out, causing the rear exterior wall to lean and the ridge to drop.

Budget constraints made some obvious choices for fixing the problem unacceptable. For instance, any attempt to lift and support the ridge would have required tearing up much of the interior, which the owners were living in at the time. And while installing collar ties on every rafter might have worked, this would have ruined the open effect of the cathedral ceiling, which the clients wanted to preserve. So our engineer, Dick Ludwig of Hatfield, Pa., came up with a creative plan that would do the job structurally while satisfying the owners' aesthetic requirements.

Instead of lumber collar ties, we would install steel tie rods every 7 feet, a total of six rods for the entire length of the house. To pick up the loads from all the rafters, the rods would be connected to a horizontal beam that ran through the soffit (where it would be out of sight) and through the box bay (where it would be enclosed). The beam would be attached to each rafter with metal connectors and, along with the rods, would keep the rafters from spreading any further.

Pulling this off would mean lifting the rafters off of the existing wall, installing the rods and beam, pulling the wall in, then dropping the rafters back onto the wall and fastening everything together. Each piece of the project presented some interesting and unique problems.

Lifting the Roof Edge

To start with, the weight of the roof would have to be lifted off of the exterior wall before we could pull the wall back into plumb. Again, we considered a number of options - including a temporary exterior wall - but Dick came up with a better idea: Lift and support the wall with a temporary aluminum I-beam supported by heavy-duty steel scaffolding (**Figure 1**).

Figure 1. *Heavy-duty pipe staging (top) equipped with steel cradles (bottom) supported a grid of aluminum I-beams used to lift the rafters off the wall. Shoring jacks at the base and adjustment screws at each cradle allowed the roof to be raised carefully and remain level.*

The important thing to understand about this technique is that you can't use a standard scaffold; instead, you need one that's specifically designed for jacking. We called a scaffold company, which sent someone out to evaluate the job and decide exactly what was needed. The scaffold's feet consisted of heavy-duty screw jacks - also called shoring jacks - that could be turned to raise the scaffold and lift the rafters. Cradles at the top of the scaffolding, which held short perpendicular I-beams, also had adjustment screws for fine-tuning the lifting process.

We had to place some of the scaffold's feet on a wood deck, which our engineer determined was plenty strong for the job. To keep the feet from marring the deck and to distribute the load across more than one deck joist, we set the feet on double 2x10s, laid on the flat.

After removing the vented aluminum soffit covering, we lifted the roof just enough to get a Sawzall blade between the rafters and the wall plate - about 1⁄4 to 1⁄2 inch - then cut the nails that held them together. We were now ready to install the horizontal beam.

Installing the Beam

The horizontal beam was a 3 1⁄2-inch-by-7 1⁄4-inch stock glulam. (A Parallam would also have been appropriate for this purpose, but would have necessitated a larger beam.) We supported the glulam on its side and secured it horizontally and vertically to every rafter with Simpson twist straps (**Figure 2**).

Figure 2. *Six steel tie rods connect the horizontal glulam beam at the exterior wall top plate to the floor diaphragm beneath the balcony (top left). The beam is attached with twist straps to AdvanTech gussets nailed to the sides of the rafters (top right). Part of the beam is in the exterior soffit and part of it is inside the 20-foot box bay (bottom).*

The beam was actually installed in three different sections, placed end-to-end and spliced together with 3⁄4-inch AdvanTech plywood gusset plates. (Our engineer was specific about using strong panel material for the various gussets and splices in this job and recommended against standard OSB, which bends more easily than plywood or AdvanTech.) While important for keeping the ends of the individual glulam members in alignment, the splices didn't weaken the structure because each of the three sections was designed to handle the rafter forces independently. Beam deflection was limited to L/600. As mentioned above, the plan called for a total of six tie rods, or two rods per glulam section.

Installing the beam required a bit of disassembly in and around the bump-out. We had to remove the windows along the sides of the bay to keep them from cracking when the wall was pulled in, and we had to remove some of the drywall ceiling so that we could attach the glulam beam to the rafters above the bump-out. Rather than replacing and finishing new drywall, however, we decided to enclose the beam in a soffit. That enclosure and the six steel rods, which would also be enclosed, were the only apparent changes to the home's architecture at the end of the job.

Tying Everything Together

This structural scheme depended on the tie rods and the beam doing the same job that would normally be done with collar ties or floor joists - that is, structurally connecting the rafters at the back of the house with those at the front, thus preventing the roof from spreading. The question was how to do this without tearing up the intervening walls and without having to install another horizontal beam at the front of the house.

Dick's solution was to have the 5/8-inch steel tie rods span the 14-foot distance from the exterior wall to the center of the house. To carry the load to the opposite rafters, the second-floor decking would need to be reinforced so that the entire floor acted as a structural plate, or diaphragm, transferring the forces to the rafters supported by the opposite wall.

To attach the rods to the beam, we bored horizontal holes through the beam, inserted the rods through these holes, and then fastened them in place with nuts and large washers. At the center of the house, along the balcony, we installed custom-made 1-inch-thick steel H-brackets between the floor joists, and fastened the ends of the rods to these brackets (**Figure 3**). Some of the joists were twisted or cupped, so in order to get a solid connection we had to shim between the brackets and the joists with thin metal plates. Turnbuckles in the middle of the span would allow us to make final adjustments.

Figure 3. *Heavy steel H-brackets installed between the second-story floor joists receive the interior ends of the tie rods (top). The two-part brackets have sliding adjustment slots to allow for variation in the width of the joist bays. Because the weight of the roof was being carried by scaffolding, nylon ratchet straps (bottom) hooked to the steel brackets were sufficient for pulling in the leaning wall.*

Beefing up the subflooring required a schedule of 8-penny ring-shank nails 5 inches on-center along every floor joist. This meant the carpet on the second floor would have to be pulled up, which the homeowners volunteered to do.

Pulling In the Leaning Wall

With the beam, ties, and hardware in place and the floor nailed off, it was time to pull the wall back into plumb. This proved quite easy with the weight of the roof off the wall: We used a couple of nylon ratchet straps, attaching them to the H-brackets at one end and wrapping them around the wall plate at the other. Once the wall was plumb, we turned the screw jacks on the scaffold to lower the rafters, used the turnbuckles at the center of the rods to make final adjustments to the tension, then fastened the rafters to the wall with hurricane clips.

We also used hurricane straps to secure the ceiling joists above the second-floor bedrooms to the rafters along the front wall of the house. Where necessary we added AdvanTech spacers to bring the rafter bottoms into better alignment with the floor joists (**Figure 4**). This completed the engineer's design, effectively tying opposing rafters to one another through the tie rods and the second-floor diaphragm.

Figure 4. *Hurricane clips tie the rafters to the floor joists at the front of the house; shown here is a section of the attic behind a knee wall (top). A new soffit hides the horizontal glulam beam where it runs through the cathedral bump-out (bottom); the tie rods were later hidden in false pine beams.*

Although we finished the structural work in about five weeks, the entire job took about two months, with the remainder of the time spent putting the soffits back together, finishing the bump-out, and trimming out the tie rods with false beams made of 1-by pine.

Backfill

The Screw: A Long Look Back

by Jon Vara

Many familiar carpentry tools and materials have ancient roots. As author Witold Rybczynski points out in his engaging *One Good Turn: A Natural History of the Screwdriver and the Screw* (Touchstone Books, 2000), squares, plumb lines, chalk lines, levels, and toothed saws were all well-known to the builders of the Egyptian pyramids. Chisels, axes, hammers, and nails date back at least to the Bronze Age. The Romans invented the plane and forged-iron nails, and relied on nuts and bolts to assemble the portable wooden A-frames used for lifting heavy objects.

Medieval armorers used multi-tool-like devices similar to the one shown here to adjust and repair plate armor worn by knights. That's a screwdriver blade at lower right.

Somehow, though, the Romans never developed the screw. The first known examples seem to date from the 15th century, when armorers and gunsmiths used them to fasten the metal mechanical parts of early firearms to their wooden stocks. Because screws were made by hand and were not commonplace, screwdrivers (or "turnscrews," as they were called until well into the 19th century) were evidently not taken very seriously. In describing one of the earliest known screwdrivers - which appeared on an armorer's combination tool that also included a hammer, wire cutter, and nail puller - Rybczynski notes sadly that it "resembles the kind of gimcrack household gadget that is sold by Hammacher Schlemmer."

Widespread use of screws for carpentry didn't become practical until after 1760, when two English brothers, Job and William Wyatt, patented the first screw-making machinery. The Wyatts' factory was bad news for a class of workers called "girders," who had previously worked in their cottages laboriously hand-filing threads onto screw blanks hammered out by local blacksmiths. But it meant more and better work for finish carpenters - especially in combination with the mass-produced butt hinge, another innovation that appeared at about the same time. Unlike the earlier strap hinges, which were roughly fastened with clinched nails, the newer butt hinges called for skillful fitting and had to be screwed in place.

Further innovations followed. Machine-made screws had blunt ends until 1859, when a Providence, R.I., mechanic named Cullen Whipple patented a method of producing pointed screws. Decades later, Canadian inventor Peter L. Robertson and American Henry L. Phillips separately improved the screw's other end, replacing the traditional slot with a square socket - still known as the Robertson head - and the familiar cross-shaped recess of the Phillips head. In the 1950s, Illinois fire-protection engineer Paul Quigg and a team of co-workers at the U.S. Gypsum Corp. perfected the drywall screw.

While arguably a more efficient design than the cross-shaped Phillips head, the square-drive Robertson head screw - shown here in a 1907 patent application - is much less common today. That's probably because inventor Peter Robertson opted not to license the design to other screw manufacturers, as Henry Phillips did.

Long story short, the screw has, over the past 600 years, made up for its late start. One is struck, when reading Rybczynski's book, by the painstakingly incremental nature of invention - even when the item being invented is as humble and seemingly simple as the common screw. It makes you wonder: What other obvious ideas for hardware are floating out there, as yet unconceived? Will future carpenters be joining pieces of lumber with some sort of fastener that's as far advanced beyond the screw as the screw is from the nail? - *Jon Vara*

NEWS from CPSC

U.S. Consumer Product Safety Commission

Office of Information and Public Affairs | Washington, DC 20207

FOR IMMEDIATE RELEASE
May 25, 2011

CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908

Fire It Up Safely: CPSC Recommends Safety Check Before Grilling This Summer

WASHINGTON, D.C. - Summer officially kicks off this weekend and millions of Americans will celebrate with a cookout. The U.S. Consumer Product Safety Commission (CPSC) urges consumers to check their grills and "fire it up safely" to prevent fires and carbon monoxide poisoning.

Before lighting the grill, do a safety check.

Has your grill been recalled? Check SaferProducts.gov. If the grill has been recalled, contact the manufacturer and stop using it until you get a repair or replacement.

- Visually inspect the hoses on a gas grill for cracking, brittleness, holes and leaks. Make sure there are no sharp bends in the hose or tubing and that all connections are secure. Replace if necessary.

- Check for propane gas leaks. Open the gas supply valve fully and apply a soapy solution with a brush at the connection point. If bubbles appear, there is a leak. Try tightening the tank connection. If that does not stop the leak, close the gas valve and have the grill repaired by a qualified professional.

Is the grill clean? Regularly cleaning the grill, as described in the owner's manual, and also cleaning the grease trap, will reduce the risk of flare-ups and grease fires.

Once the safety check is complete, make sure to operate the grill as safely as possible.

- Use grills **outside only** in a well-ventilated area. Never use a grill indoors or in a garage, breezeway, carport, porch or under a surface that will burn. Gas and charcoal grills present a risk of fire and/or carbon monoxide poisoning that could result in injury or death. An estimated 3,800 gas or charcoal grill-related injuries were treated in hospital emergency departments in 2010. While almost all of the injuries were burns, a few of the charcoal grill injuries were related to carbon monoxide. There were an estimated average of eight CO-related deaths per year between 2005 and 2007 associated with charcoal grills that were used indoors or in enclosed spaces.

- Never leave a grill unattended. If a flare-up occurs, adjust the controls on the gas grill or spread out the coals on a charcoal grill to lower the temperature. If a grease fire occurs, turn off the gas grill and use baking soda and or a kitchen fire extinguisher to put out the fire.

- Keep the grill hoses as far away as possible from hot surfaces and dripping hot grease.

Keep children away from the grill area. The outside surface of a grill can get hot and burn when touched.

See CPSC's Gas Grill Fact Sheet for additional safety tips for gas grills and Charcoal Grill Safety Tips for more information on charcoal grill safety.

The U.S. Consumer Product Safety Commission (CPSC) is charged with protecting the public from unreasonable risks of injury or death associated with the use of the thousands of consumer products under the agency's jurisdiction. Deaths, injuries, and property damage from consumer product incidents cost the nation more than $900 billion annually. CPSC is committed to protecting consumers and families from products that pose a fire, electrical, chemical, or mechanical hazard. CPSC's work to ensure the safety of consumer products - such as toys, cribs, power tools, cigarette lighters and household chemicals - contributed to a decline in the rate of deaths and injuries associated with consumer products over the past 30 years.

FOR IMMEDIATE RELEASE
June 14, 2011
Release #11-247

Firm's Recall Hotline: (866) 918-8771
CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908

General Electric, Sharp Recalls GE Air Conditioning and Heating Units Due to Fire Hazard

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed. It is illegal to resell or attempt to resell a recalled consumer product.

Name of Product: GE Zoneline Air Conditioners and Heaters

Units: About 90,600

Distributor: GE Appliances and Lighting, of Louisville, Ky.

Manufacturer: Sharp Corp., of Osaka, Japan

Hazard: An electrical component in the heating system can fail, posing a fire hazard to consumers.

Incidents/Injuries: General Electric and Sharp have received four reports of incidents involving smoke and/or fire with the air conditioning and heating units. In two of the reported incidents, fire extended beyond the air conditioning and heating unit, resulting in property damage. No injuries have been reported.

Description: This recall involves GE Packaged Terminal Air Conditioners (PTAC) and packaged terminal heat pumps manufactured between January 2010 and March 2011, and are most often used in apartment buildings and commercial space. The GE logo is affixed to the control panel door. Serial and model are printed on the rating plate. Consumers will need to remove the front panel to locate the model and serial information. The following models and serials are included in this recall:

Brand	Model Number (Begins with)	Serial Number (Begins with)
GE	AZ41, AZ61	AT, DT, FT, GT, HT, LT, MT, RT, ST, TT, VT and ZT AV, DV and FV

Sold by: General Electric authorized representatives and HVAC distributors nationwide from March 2010 through March 2011 for between $1,000 and $1,200.

Manufactured in: China

Remedy: Consumers should immediately stop using the air conditioning and heating units in the heat mode and contact General Electric to schedule a free repair.

Consumer Contact: For additional information, contact General Electric toll-free at (866) 918-8771 between 8 a.m. and 5 p.m. ET Monday through Friday, or visit the firm's website at www.geappliances.com/products/recall

The U.S. Consumer Product Safety Commission (CPSC) is still interested in receiving incident or injury reports that are either directly related to this product recall or involve a different hazard with the same product. Please tell us about your experience with the product on www.saferproducts.gov

FOR IMMEDIATE RELEASE
June 7, 2011
Release #11-240

Firm's Recall Hotline: (866) 441-4645
CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908

Venmar Ventilation Recalls Air Exchangers Due to Fire Hazard

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed. It is illegal to resell or attempt to resell a recalled consumer product.

Name of Product: Air Exchangers

Units: About 1,400 in the United States

Manufacturer: Venmar Ventilation Inc., of Quebec, Canada

Hazard: The motor in the air exchangers can overheat, posing a fire hazard to consumers.

Incidents/Injuries: The firm has received nine reports of overheating incidents resulting in fires and property damage outside of the United States. No incidents have been reported in the United States.

Description: This recall involves air exchangers sold under different brands that are used to circulate air in and out of the home. The metal air exchangers are painted blue or grey. Air exchangers included in the recall were manufactured from 1996 through 2001 and have brand and model information printed on the unit's rating plate or on the side of the unit. The following brand

Brand	Model
Venmar	EA 20XXX, 41005, Air Exchanger
Venmar AVS	4100X
vanEE	1601510
Flair	41XXX
Hush	1601510
Guardian by Broan	AE60

Sold by: Heating, plumbing and building supply distributors nationwide from January 1996 through December 2001 for between $350 and $850.

Manufactured in: Canada

Remedy: Consumers should immediately turn off and stop using their air exchangers. Consumers should contact Venmar Ventilation to request a free inspection and repair by a Venmar field technician.

Consumer Contact: For additional information, contact the Venmar Ventilation toll-free at (866) 441-4645 between 9 a.m. and 5 p.m. ET Monday through Friday, or visit the firm's website at www.venmar.ca

Contact CAHI c/o

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Articles published in CAHI Monthly are the sole opinion of the author. CAHI does not endorse or state a position for or against the content of said articles.

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The Licensing Board meetings are held at 9:30 am

Dept of Consumer Protection

165 Capitol Avenue. Hartford

The public is always welcome.

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