

CAHI MONTHLY NEWS

Presidents Corner

Fellowship,

As we begin to slowly move forward as an organization and begin to open up with meetings I believe it is being done with great anticipation and excitement. One of the things that has always appealed to me as a member of CAHI, and it became even more apparent as your president, is that as I took the initiative to reach out and speak with more of our members, that the vast majority of you seem to have chosen to be members to bond and share stories at our meetings. You are the social creatures of our industry.

We have maintained our social distancing for the past 6 months, not by choice, but due to necessity. This months in person meeting is our first step as an organization in moving forward and getting back to the fellowship we have all greatly missed.

As this may be my last Presidents corner I want to take the time to thank everyone for your support the over the past two years. I have been blessed to have gotten to know more of you personally and look forward to expanding my CAHI circle of friends moving forward in the months ahead.

I would also like to specifically thank Woody Dawson, our Vice President and my "sage" for his unwavering support and loyalty during my tenure as your President. Woody, as many and if not all of you know, is one of CAHI's originals and as such commits himself fully to our cause. He has assisted me whenever called upon and has always provided guidance and wisdom when asked. With Woody, there is no mystery, no back door politics, his answers and opinions are always well thought out and from the heart.

It has been a privilege to have been President of this organization.

Go easy,



Dan Kristiansen

MONTHLY MEETINGS – Details & Info

CAHI's regular monthly meetings are held at the Best Western located at 201 Washington Ave (RT 5), North Haven. Meetings are free to members.

Most meetings are on the fourth Wednesday of the month from 7-9pm. Guests are always welcome! Guests may attend 2 free monthly meetings to experience our presentations, meet our members, and receive a CE attendance certificate.

Joining CAHI may be done at anytime of the year through our Membership Page



September 2020 Volume 13, Issue 09

INSIDE THIS ISSUE

Presidents Corner	1
What Did You See This Summer....	2
8 Ways Your Taxes Will Differ.....	5
Beam - Line Replacement.....	8
Home Inspector Licensing Board Minutes - June 24 2020.....	14
Avoiding Drywall Callbacks.....	18
Rock-Solid Stair Posts.....	21
Recalls.....	25

Meeting Dates!

**Meetings have
been canceled
until further
notice
due to the
COVID-19
outbreak.**

What Did You See This Summer?

It has been a long time since we have gotten together. But there has been a very busy real estate market with plenty of opportunity to see things that are out of the ordinary.

Here are few pictures that I took, along with hundreds of others. Please send any good pictures you have for inclusion in future newsletters.



The road you should have never driven on?



Unknown yellow powder on steps under bulk head door.



Window adjacent to bulk head door.



**Squirrels and
ground hogs and
termites Oh My!!!**



.... And the house had a failed septic system.



I can't spell ugly but I know it when I see it.



The Throne Room

Nice and high so you can watch the peasants/neighbors walk by.



What's that! I don't know but sure glad I didn't step in it!

8 Ways Your Taxes Will Differ When You File in 2021

Whether you filed your 2019 taxes yet or not, believe it or not, you can begin thinking about start thinking about your 2020 return—due April 15, 2021.

The sooner you educate yourself about tax changes, the more time you will have to take advantage of them. (Remember, there are advantages to filing taxes early, too!)

Here are eight ways your taxes filed in 2021 will differ from your prior-year return:

1. Higher Health Savings Account (HSA) Limits

Contribution limits for health savings accounts (HSAs) typically increase year by year due to inflation. This is no different for your 2020 tax return. In fact, the contribution limits for HSA-eligible workers with high-deductible health insurance policies are:

- Self-only coverage: \$3,550 — (\$50 increase from the previous years' return)
- Family coverage: \$7,100 — (\$100 increase from the previous years' return)

2. Waived Required Minimum Distributions

The CARES Act waived required minimum distributions (RMDs) for 2020 tax returns. In a normal tax year, they are taxable income. This could mean that some retirees will have lower taxable incomes, thus owe less in federal income taxes in 2021.

3. Charitable Deduction Changes

To encourage U.S. citizens to contribute money to charity during the Coronavirus pandemic, the IRS is allowing you to deduct as much as \$300 in cash contributions made during 2020 — even if you go for the standard deduction. (This tax change is also a part of the CARES Act.)

Typically, taxpayers are allowed to write off tax-deductible charitable donations on their federal tax returns if they itemize deductions (as opposed to taking the standard deduction). If you itemize deductions on your 2020 tax return, you aren't subject to the \$300 limit for charitable contributions. In addition, you can elect to deduct cash contributions made in 2020 of up to 100% (increased from 60%) of your adjusted gross income (AGI).

4. Adoption Credit Changes

The tax credit for qualified adoption expenses increased \$220 from the previous tax year. The maximum allowable credit amount is \$14,300 for 2020 tax returns.

5. Higher Income Brackets

Tax brackets often change from tax year to tax year, again due to inflation. The tax rates didn't change for your 2020 tax return, however, the tax bracket amounts were adjusted to account for inflation.,.

For 2020, the income brackets for single filing status, according to the IRS, is:

- 37% tax rate: Applies to taxable income of more than \$518,400
- 35%: More than \$207,350 but not more than \$518,400
- 32%: More than \$163,300 but not more than \$207,350
- 24%: More than \$85,525 but not more than \$163,300
- 22%: More than \$40,125 but not more than \$85,525
- 12%: More than \$9,875 but not more than \$40,125
- 10%: Income of \$9,875 or less

For married filing jointly, there are the 2020 income tax rates:

- 37% tax rate: Applies to taxable income of more than \$622,050
- 35%: More than \$414,700 but not more than \$622,050
- 32%: More than \$326,600 but not more than \$414,700
- 24%: More than \$171,050 but not more than \$326,600
- 22%: More than \$80,250– but not more than\$171,050
- 12%: More than \$19,750– but not more than \$80,250
- 10%: Income of \$19.750 or less

View more related information about IRS withholding tax tables for 2020 tax returns.

6. New Standard Deduction Amounts

Standard deductions reduce your taxable income amount, and they typically increase each year due to inflation. For 2020 taxes due in 2021, the standard deduction amounts (based on tax filing status) are:

- Married filing jointly: \$24,800 — up \$400 from 2019 tax returns
- Married filing separately: \$12,400 — up \$200 from 2019 tax returns
- Head of household: \$18,650 — up \$300 from 2019 tax returns
- Single: \$12,400 — up \$200 from 2019 tax returns

7. Increased Contribution Limits For Limited Workplace Retirement Accounts

In addition to the many changes in the Secure Act, limits for workplace retirement accounts for 2020 returns have been adjusted for inflation. The base contribution limit for 401(k) plans is \$19,500, up \$500 from the previous tax year. The limit for catch-up contributions (anyone 50 and over can make these), is \$6,500, up \$500 from the previous tax year.

8. Higher Limits for the Saver's Credit

For 2020, the Saver's Credit has higher income limits. You're eligible for the Saver's Credit if your income is no more than...

- Married filing jointly: \$65,000 — up \$1,000 from the previous tax year
- Head of household: \$48,750 — up \$750 from the previous tax year
- All other tax-filing statuses: \$32,500 — up \$500 from the previous tax year

STRUCTURE



Beam-Line Replacement

A streamlined approach to a common structural renovation

BY JAKE LEWANDOWSKI

One of the most common structural repairs our company, Great Lakes Builders, is asked to complete is the replacement of a basement's center girder. We're based in Chicago, and in this part of the country, people commonly refer to this girder as the "beam line." Here, as in other parts of the country where basements are common, the first-floor floor joists break over the girder running down the center of the basement, and it's common to have bearing walls over this beam, as well, so it is supporting both the first and second floors. In older homes, this critical structural support is often in a poor and failing condition.

The causes for failure are many. Often, the posts supporting the beam were built on inadequate footings—sometimes just large, flat

stones, or brick and mortar that eventually deteriorated in the soil. Older homes often had dirt floors and elevated moisture levels that wicked into the posts, leading to rot of the post bottoms and settling of the beam. Termite infestation of these center girders and their support posts is also common in many parts of the country.

Almost always, the beams are undersized for the current loads. In our work in high-end vintage homes, we usually see alterations at some stage of the building's life: A new \$100,000 kitchen, a living-room floor that was leveled 20 years ago, and a master bath put in with exotic tile are a few examples. Often, the alterations add significant loads, but the challenge is not always purely structural; you also need to understand the expectations of the client. Some

Photos by Jake Lewandowski

BEAM-LINE REPLACEMENT

clients think a wavy floor adds character, but others are terrified of the plaster cracking or of tile breaking. We need to know we can meet, or even exceed, client expectations before signing a contract.

In the beam-line replacement covered in this article, the 100-year-old center beam not only supported first- and second-floor loads but also supported a chimney, which added an intense point load. A cluster of posts had been added at the midspan for support, but these proved insufficient over time for the underbuilt structure. To remediate these conditions, we followed an engineer's design to

replace the wood beam with three wide-flange steel beams, each 8 to 9 feet long, for a total beam length of about 25 $\frac{1}{2}$ feet. We added two more beams, each about 4 feet long, on each side of the center beam to help carry the chimney load. All these beam sections were supported on 3-inch, schedule-40 columns with 8x8x1 $\frac{1}{2}$ -inch base plates bolted into new 2x2x1-foot concrete footings. The photos that follow hit the high points of how we did it.

Jake Lewandowski is construction manager of Great Lakes Builders.



Here's the condition of the existing beam line we found when arriving at the job. This photo (1) shows the original wood posts clustered around the chimney location. Over time, steel "jack posts" (red), which should be considered temporary and do not meet code, had been added. The original posts, showing signs of deterioration from wicking ground moisture (2), were supported on brick footings, over which a thin "rat slab" had been poured at some point to cover the original dirt floor.



To temporarily support the load, we added two lines of heavy-duty shoring running parallel to the beam line (3). In this case, we were not jacking the floor, only supporting the floor at the existing elevation. Before installing the shoring, we measured where our new footings would be placed, keeping the shoring lines out of the way. Once the shoring was in place, I began to lay out the footing locations, using a laser to reference the centerline of the main beam (4).



With the beam line marked and the footing locations defined, the crew cut through the slab to place new footings (5). We cut through the existing slab, which varied in thickness from $\frac{3}{4}$ inch to $1\frac{1}{2}$ inches, with a small grinder outfitted with a vacuum shroud (6). Once the perimeter of each footing was cut, we broke the slab out and dug the footing holes to a depth of about 15 inches (7).

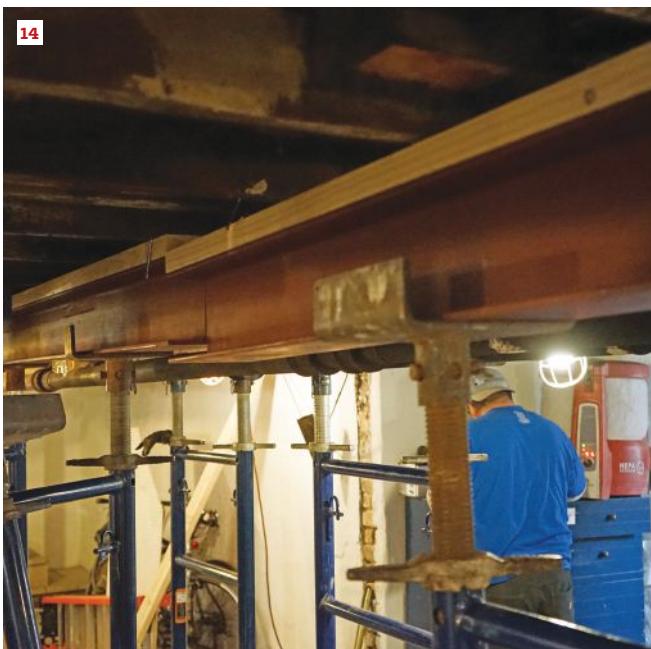


For each squared-off footing hole (8), we wired together a grid of #5 rebar (specified by the engineer), including rebar chairs (9) that held the grid 3 inches above the bottom of the hole. We poured each footing to a depth of 12 inches, well below the slab elevation (10), allowing us to finish out as shown on page 44. We used a "high early" Quikrete 5000 mix, which rapidly cured to 3,000 psi in a few days (11).

BEAM-LINE REPLACEMENT



While the footings were curing, we prepared the steel I-beams, pinning a wood plate (12) to the top of each beam section (13). This 2-by nailer allowed us to mechanically fasten the beam to the joists, which would keep the joists from rotating. It also allowed us to adjust the elevation of the beam by mortising the plate rather than by removing material from the existing joists.

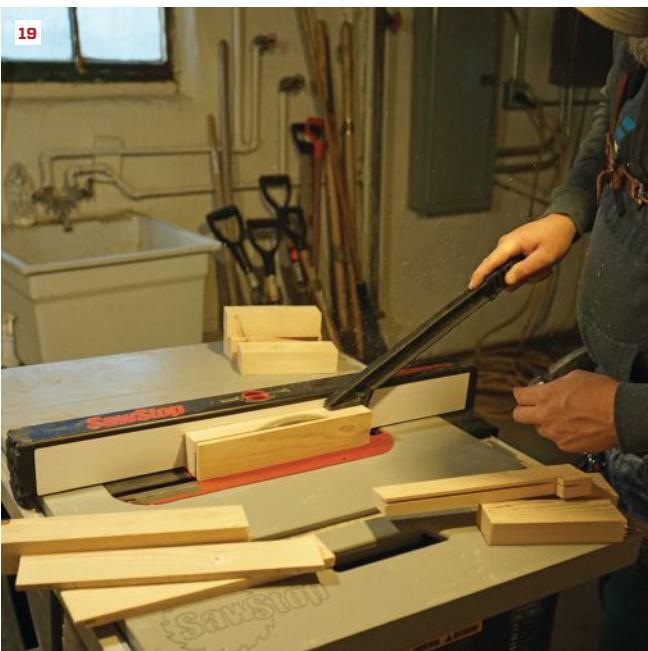


We rough-fit the beams (14) to mark the joist locations on the plate and measured the depth of the mortises we needed to cut. Each mortise was a different depth to accommodate the variation in the elevations of the joist bottoms (15, 16). On this job, the client did not want our work to cause any cosmetic damage to the finishes in the house above, so we were careful to support the floor at the existing elevation.





With the mortises cut, the variation in the bottom elevation of the joists was apparent (17). Such variation in joist size is common in older homes. When the house was framed, lumber dimensions varied more than we typically see today, and the carpenters were only concerned with having the tops of the joists at the same height. Once the mortises were cut, the beam sections aligned to within $\frac{1}{16}$ inch or so; they would be pulled into perfect alignment when the post was bolted in place (18).



The bottom of some joists would be higher than the 2-by plate. For those, we cut shims (19) that we pounded into place where needed for firm bearing (20). One end of the new beam had to be grouted into a pocket in the foundation (21). This required enlarging the original beam pocket for the new steel beam, including a 7x7x $\frac{1}{2}$ -inch setting plate specified by the engineer to spread the load at the foundation.



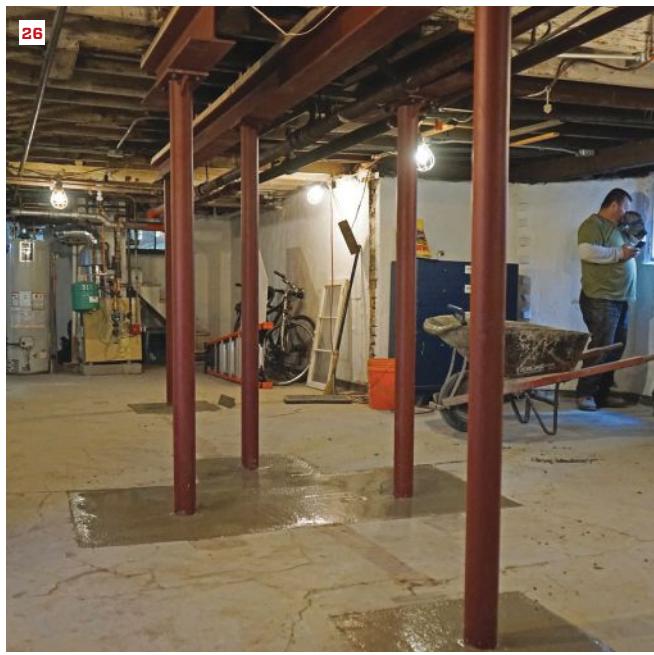
BEAM-LINE REPLACEMENT



With the post base plates bolted to the new footing, the crew focused on cutting away the slab (22, 23) in order to join the footing area of the three posts supporting the chimney and midspan. Once the old slab was removed, the footings were broomed clean in preparation for a new pour (24). The goal here was a clean fit and finish of the new work, with the post bases recessed below the surface of the existing slab.



The slab area around the two end posts was also widened, then all three areas were covered with a new, thicker (3-inch) slab. After the surface was finished (25), the result was clean—better than the existing slab (26). While the structural elements of our new work are of critical importance to us, in the end, what the customer will see is how clean it looks. And there is no doubt on this point here.



HOME INSPECTION LICENSING BOARD

JUNE 24, 2020

MINUTES

The Connecticut Home Inspection Licensing Board held a meeting on Wednesday, June 24, 2020 via ZOOM webinar.

Board Members Present: Lawrence R. Willette (Home Inspector)
William Stanley, Jr. (Home Inspector)

Board Members Not Present: Richard J. Kobylenski (Home Inspector)
Bruce D. Schaefer (Home Inspector)

Board Member Vacancies: Three (Public Members)
One (Home Inspector)

DCP Staff Present: Richard M. Hurlburt, Director, Occupational and Professional Licensing Division
Robert M. Kuzmich, R.A., License & Applications Specialist

Others Present: Pamela Brown, Director, Investigations Division

Note: The administrative functions of the Boards, Commissions and Councils are carried out by the Department of Consumer Protection, Occupational and Professional Licensing Division, Richard M. Hurlburt, Director.

Website: www.ct.gov/dcp. E-Mail: dcp.occupationalprofessional@ct.gov

1. CALL TO ORDER

Mr. William Stanley, Jr. called the meeting to order at 9:38 AM.

2. REVIEW OF MINUTES OF THE DECEMBER 13, 2019

The Board voted to approve the minutes as submitted.

3. COMMENTS OR CONCERNS OF ANY PERSON PRESENT TODAY

There were no comments or concerns of anyone present today.

4. DCP INVESTIGATION DIVISION COMPLAINT STATUS REPORT:

(A) Board to review quarterly report when provided.

Ms. Pamela Brown, Director of the Investigations Division, reviewed the Board report noting that most cases shown were dispute of facts except for one. She addressed the complaints statistic in general stating that the Department currently has seven complaints received year to date relative to the approximately five hundred licensed home inspectors. The most common complaint issue is missed critical items during the time of the inspection and one damage complaint.

Ms. Brown noted that many cases on the report are closed by the Department and are proceeding as a civil matter sometimes being referred either to Small Claims Court or Superior Court. Ms. Brown explained to the Board the Department's procedure when they receive a home inspector complaint noting that, at times, they act as mediator between the home inspector and their client known as informal mediation as opposed to a formal mediation. If an agreement cannot be reached, then the complainant is advised by the Department to proceed to court.

Ms. Brown answered further questions from Mr. Willette regarding the specifics of the standards of practice for home inspection how the Department uses the same in their investigations. She noted that following due process ultimately determines the further disposition of the complaint. She also answered some questions from Mr. Stanley regarding complaints relative to the inspector's report. The Board thanked Ms. Brown and the Department for the report and their work on the home inspection complaints.

5. OLD BUSINESS

It was noted by Mr. Stanley that at the Board's last meeting, Mr. Bruce Schaefer reported that he contacted Trinity College's testing program to clarify what the standards are to determine levels of pyrrhotite, and that there is no set standard at this time. Mr. Schaefer noted that he would inform the Board when this is determined. Since he is not present at today's meeting, Mr. Stanley asked that this matter be carried over to the next Board meeting agenda.

There were no further items discussed under Old Business.

6. NEW BUSINESS

A. Home Inspection School Application for Pre-Licensing.

School (Pre-Licensing):

World Inspection Network (WIN Home Inspection)

5550 W. Washington Boulevard, Suite 201
Chicago, Illinois 60661

Course (Pre-Licensing): *Principles of Home Inspection* (100 hrs.)

Mr. Kuzmich noted that although the Department has communicated with the applicant, they have not yet received their complete application package. It was agreed that if the application is received complete prior to the Board's next meeting, Mr. Kuzmich will e-mail the same to the Board members for their preliminary review.

ADDITIONAL NEW BUSINESS (ADDED AT THIS MEETING)

1. Mr. Willette noted two recent recertification courses were held on June 9, 2020 and June 23, 2020 pertaining to the inspection of failing foundations. Each course is representing three hours of continuing education for home inspectors. It was noted that the Board had previously approved the June 9th course. The Board approved the course held June 23rd at today's meeting. Both these courses are now approved for three hours of continuing education (each).

Mr. Stanley asked that the Department make note of this approval and if an application has been received for these courses. Mr. Willette noted that the initial offering of this course was in 2019 and named the instructors whom Mr. Stanley knows. It was noted that Mr. Stanley had previously sent course information to the Department for their 2019 offering. Mr. Stanley asked Mr. Willette to ask the providers to send Mr. Kuzmich a course syllabus that can be used to document these courses and the associated credit hours as being approved for continuing education. Mr. Willette agreed to do so.

2. Mr. Stanley stated that relative to next year's license renewal, the Board consider modifying the required CEU totals in recognition of the COVID pandemic. He noted several associations that have cancelled their CE meetings due to this crisis. Mr. Stanley asked Mr. Hurlburt if the Board can make changes to the required CE totals. In response, he noted that the Board can ask the Commissioner to consider waiving the required CEU's for next year. He also noted what the Electrical Board is considering for their required CEU's such as live and on-line CE classes. Mr. Hurlburt stated that these options appear to be working for the Real Estate and Appraisal Commissions.

Mr. Hurlburt will send the Board a draft of virtual training programs being considered for use by other Boards. It was noted that on-line CE courses are already used extensively by the Home Inspection Licensing Board. The Board also discussed how the American Association of Home Inspectors (ASHI) has been addressing continuing education during the pandemic.

Mr. Hurlburt would encourage the trade associations to consider on-line courses to maintain their membership and keep their groups together. Mr. Stanley noted he may reach out to the president of the Connecticut Association of Home Inspectors to converse the CE options the Board discussed today.

At the suggestion of Mr. Hurlburt, Mr. Kuzmich will forward the Department's Home Inspection Continuing Education course website links for their use.

7. CORRESPONDENCE

There was no correspondence discussed at today's meeting.

8. COMMENTS OR CONCERNS OF ANY PERSON PRESENT TODAY.

Mr. Stanley noted that the dates for the next Home Inspection Licensing Board Meetings are September 15, 2020 and December 8, 2020 and will either be held in person or by ZOOM webinar to be determined.

The meeting adjourned at 10:09 AM. (Willette/Stanley)

Respectfully submitted,

Robert M. Kuzmich, R.A.,
License and Applications Specialist

2020 MEETING SCHEDULE:

- September 15
- December 8 (start time 10:45 AM)

All meetings will take place at 450 Columbus Boulevard, Hartford, CT at 9:30 A.M.
unless otherwise noted.

Troubleshooting

BY NIGEL COSTOLLOE



While the painters' work affects how good the paint job looks (1), what happens before they arrive affects how well the job performs over time. Bowed and buckled clapboards are often caused by interior moisture driving through siding that has not been back-primed (2, 3).

Avoiding Paint Callbacks

As a custom painting contractor in the Boston market, I've spent a good part of my lifetime studying the way paint works. That includes taking courses and seminars provided by the Painting and Decorating Contractors Association, which I think every professional painter ought to join (I'm the president of our local chapter's residential forum; painters interested in best-practice solutions are encouraged to visit pdcaresidentialforum.org).

Photos by Ted Cushman and Clay DeKorne

While formal training for painters is certainly helpful, experience is still the best teacher. And when you think about it, painters are in a unique position to learn from experience, because we revisit projects years after construction is complete. Few builders have that opportunity; they might build a new project for a client and have a punch list

at the end of a job for minor mistakes or things that didn't get finished. But builders don't usually get a chance to go back after five years, seven years, 40 years, even 100 years to see what's working and what isn't working on a home. We painters do—in fact, that's most of what we do: We come along and fix things that are failing, and we get to learn from that failure.

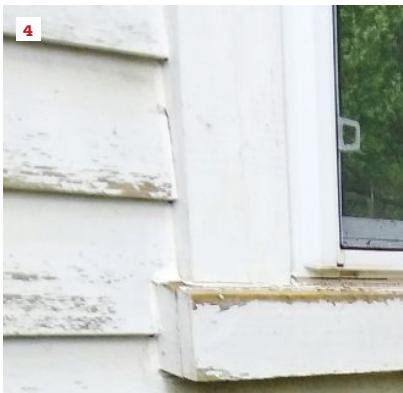
THE SOURCE OF MOST PROBLEMS

No coating lasts forever, especially on wood. Depending on the environment, you can expect a well-executed paint job to last somewhere between eight and 12 years. But often, paint begins to experience trouble long before that. And from what I've seen, that trouble is virtually never related to a flaw in the paint itself. Manufacturers have

had years to perfect their formulas, and they do continual research and development. If you invest the dollars for good-quality paint, rather than buying the cheapest can on the shelf, you can expect excellent performance from the product.

When I see problems, they're usually not caused by the paint or stain. Most commonly, problems can be traced back to the way the house was built or maintained. Less frequently, the issues relate to how the substrates—the wood trim, siding, or window and door frames—were prepped for paint. And least commonly, the problem is with how the paint was applied. Prep and painting are the painting contractor's job. But what the carpenters do before the painters even show up at the site can make all the difference to the endurance of the coating.

Troubleshooting / Avoiding Paint Callbacks



Unprimed siding won't hold paint for long. This paint job on a new addition (4) is less than five years old. Factory-installed primer is better than no primer, but it won't block the bleed-through of extractive oils in cedar (5). An additional coat of acrylic primer is needed before the finish coat. All field cuts need to be primed before installation of all siding and trim (6).

These days, most of my company's painting projects are likely to involve some carpentry as well. I now have a few well-rounded carpenters on my own payroll, and they sometimes spend days replacing siding and trim, or even remodeling a porch, before my prep crew starts work. So the tips here aren't just kibitzing—they're what our own carpentry crew needs to do in the field. If your carpenters do the same things on the next house you build or remodel, they'll be helping to give the paint or stain a fighting chance.

TIPS FOR TROUBLE-FREE PAINT

Use preprimed material. The minute you put wood up on a wall, the sun starts to attack its fibers, and the wood begins to experience swelling and shrinking as it gains and loses moisture to adjust to the surrounding air. To protect the wood, every piece of siding or trim that is nailed to a building should be primed first on six sides—that is, on all four faces and on both ends.

If you use unprimed material, you should prime it yourself before you nail it up. That includes priming the back face. Although it doesn't face the weather, the back of a board is often attacked by moisture coming from within the house. Back-primed wood can resist that moisture, but wood that hasn't been primed on the back will curl or cup. That unbalanced movement stresses the nailed connections, and moisture migrating toward the outdoors also attacks the bond between the coating and the wood, causing early peeling or wear.

Don't over-rely on the factory primer.

A factory-installed primer stabilizes the wood during shipping and storage, and it provides temporary protection when siding, trim, or windows are first installed. But it's not usually intended to be the primer for the material in service. That's why the label on a new window or door will often warn you that the unit should be primed again before it's painted. With those components, and

also with preprimed clapboards and trim, we always reprep the surface and apply a field primer before we apply the finish coating of stain or paint.

In fact, even if wood is installed and primed, but then sits for an extended period before the finish coating is applied, it may need to be washed or even sanded again and primed again. Primer is not supposed to serve as a finish coat; it is supposed to help the finish coat bond. And if it weathers before the finish coat goes on, you can't count on it to do even that.

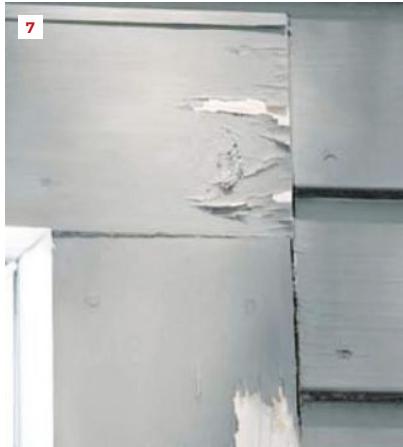
The one exception is factory-primed wood shingles. Many companies now apply both a permanent primer and a durable top coat to shingles, under ideal factory conditions and with controlled drying and curing. That's the best coating a wood shingle or shake can get—better than any field-applied coating. If you're going to use wood shingles, I'd advise you to go that route.

Field-prime all cut ends. Whether you use factory-primed material or prime it yourself, make sure to prime every cut end or edge. That's easy to do—just keep a can of primer and a brush at the chop-saw station and have the carpenter who's doing the cutting prime each end before he passes it to the carpenter who's nailing.

If you don't prime the cut ends, you're leaving open the part of the wood that is most open to moisture entering: the end grain. Nature intended wood to draw water into the end grain. In service, unprimed ends will absorb water and swell, and paint will start to come off the wood at that location first. If painters arrive to paint or stain a house that is sided with clapboards whose cut ends are unprimed, or trimmed out with boards whose ends are unprimed, there is very little they can do to address the issue. So it's up to the people installing that wood to make sure that the ends are primed.

Understand limits of finger-jointed material.

Many wood windows and doors are now assembled with finger-jointed wood. We also see a lot of finger-jointed siding and trim. If the wood has a factory primer applied, it may hide those joints, but it doesn't protect them from the weather. So it's important to prime finger-jointed material again as soon as possible after installing it. If



Here, carpenters have installed factory-primed window casing without sealing the ends. Failure has begun at unprimed ends (7), and in one case, water absorbed into an unprimed end has caused the wood to check (8). Not all of the failure is due to the carpenters, however. Stain was applied without any sanding or a second coat of primer, causing the finish to fail (9).



Water will collect and seep into the wood around an overdriven nail (10). Over time, smooth-shank nails will work their way proud of the surface (11) as siding changes in moisture content and temperature. Nails like this should be replaced with stainless steel, ring-shank nails.

those joints start to open up and let moisture in, they may not hold up the way they're supposed to, and they'll start to look bad as well.

Some finger-jointed material uses very small pieces of wood that don't match between one section and the next. Pieces with different grain density and grain orientation move in different ways, and they also accept paint or stain in different ways. If you use this kind of material, you should make sure your customer can accept the way it looks; coatings on sections with flat grain will wear or come loose sooner, and the joints and variations may quickly become apparent to the eye. While the material may be economical, the results may not be to everyone's liking.

Use the right nails. When siding and trim are nailed with smooth-shank nails—even galvanized nails—daily and seasonal wood movement can work the nails loose

from the material over time, leaving them standing proud. On repaint jobs, our prep crew usually has to pull a lot of nails that are high, and we always replace them with ring-shank nails (either hot-dipped galvanized or stainless steel). There's no good reason for a carpenter in new construction not to use ring-shank nails in the first place. I've never found a ring-shank nail that has worked its way high of the siding or trim.

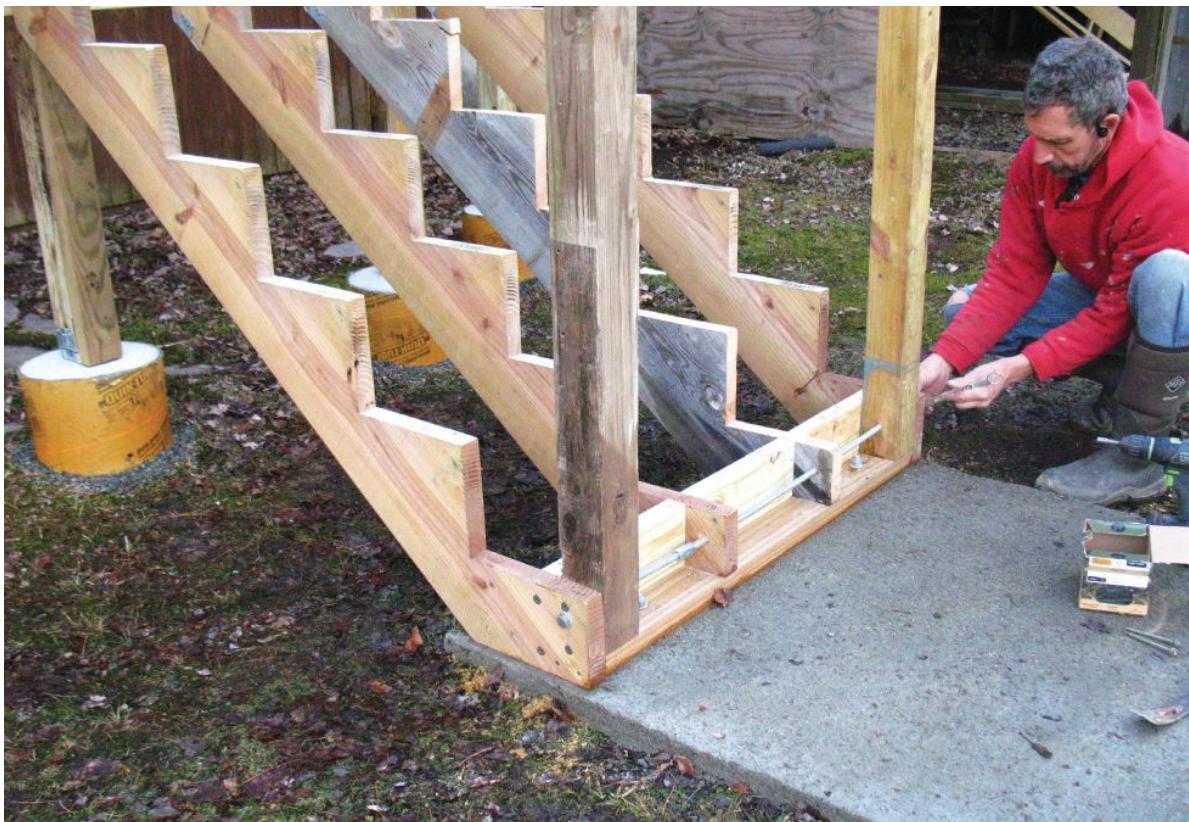
Be careful to drive nails just flush with the top surface of the wood, or perhaps a hair lower. Good carpenters develop a feel for how to set the nails just right with the final tap of the hammer. But gun nails are harder to control, and carpenters may get in the habit of driving the nail heads into the wood. That's bad practice—it provides a place for water to pool and attack end grain, and it creates a surface condition that is hard for primer to seal.

Keep joints tight. Open miters and wide gaps between siding or trim boards typically are caulked by the painter. But a caulk joint will not last more than a few years, and as it breaks down, the finish will, too. Paint lasts much longer when backed by primed wood.

PAINTER'S PURVIEW

There's a lot more to say about a durable paint job. Good surface prep and skilled application of the right coatings are critical. If you choose a well-qualified painting contractor, they'll likely be done properly. Just as important are the priming and nailing techniques I've described here; they could add years to the lifetime of the coating the painter applies.

Nigel Costolloe owns Catchlight Painting (catchlightpainting.com) based in Boston, Mass.



Rock-Solid Stair Posts

Blocking and a long threaded rod reinforce the structural connection between the posts and stringers

by Mike Guertin

Guard posts at the bottom of deck stairs are notoriously wobbly. Often, the posts are just screwed or nailed to the outside stringers, with the bottom stair tread providing the only reinforcement to the assembly. The posts may feel stiffly supported right after installation, but a few seasons of wet-to-dry and hot-to-cold conditions—as well as everyday use and abuse—will take their toll, and eventually, these connections loosen up. That's why I pay particular attention to how I reinforce the bottom of the stairway and secure the guard posts—I want them to remain solid and stiff for many years.

One approach that many deck builders use to install stable stair guard posts is to bury the post bases deep in the soil

or in a concrete footing. I've worked on 30-plus-year-old decks where the buried post ends were still solid, but that's not always the case. It's not unusual to see the beginnings of rot in buried pressure-treated posts, even ones that have been installed relatively recently, so if you take this approach, be sure to use wood treated to at least the AWPA UC4B (ground contact/structural use) standard, or even UC4C (ground contact/extreme use) if available. That way, you can be more confident that the buried portion of the posts will remain rot-free for a long time.

You might find it difficult, though, to find PT 4x4 posts suitable for this approach. Some lumberyards only stock wood treated to the UC4A ground-con-

tact standard, which is intended for general use, such as for joists that are close to the ground and posts that rest on footings but that aren't necessarily buried.

Rather than risk buried posts that can decay unnoticed, I use an above-the-ground post-reinforcing system, where the condition of the posts can be monitored and parts replaced if necessary.

The Footing Stabilizes the Posts

No matter where you build decks, the bottom of the deck stairs must be supported by footings. The 2018 IRC (R403.1.4 “Minimum Depth” and R403.1.4.1 “Frost Protection”) requires that when a deck is attached to a dwelling for support at a ledger, the footings on the deck—including the stairway footings—must reach

PHOTOS BY MIKE GUERTIN

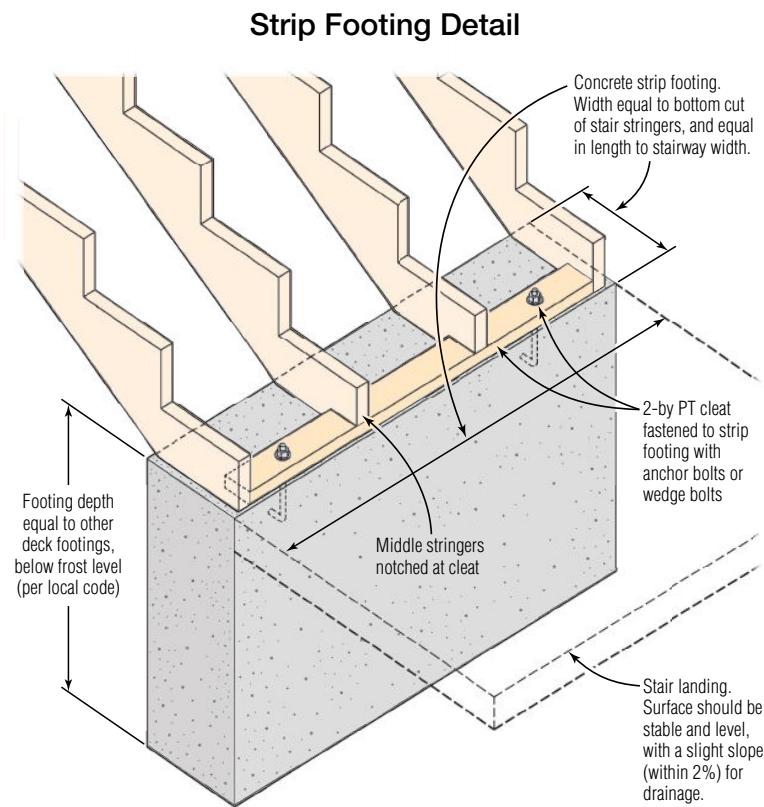
Rock-Solid Stair Posts

below frostline. When a deck is free-standing, the minimum footing depth required by code is 12 inches (R403.1.4.1, exception #3 "Frost Protection").

There are several ways to meet this requirement, and if you live in an area that has a frost-free climate or that has the type of well-drained soil that doesn't expand when frost occurs, a 4- to 6-inch-thick concrete slab landing might be the simplest option (if approved by your local inspector). Otherwise, my favorite approach is to pour a concrete strip footing that is at least the width of the bottom cut of the stair stringers (about 10 inches), the same length as the width of the stairway, and the same depth as the other deck footings (below frost level) (see Strip Footing Detail, right). While this might sound like a lot of concrete, it's not a lot more than if you were going to dig three or four 10-inch-square or 12-inch-diameter footing holes (per DCA6) next to one another, and it eliminates the problem of dirt from the closely spaced holes caving in on the others. (For more on floating vs. fixed footings, read "Deck Stairs on Frost Footings" at deckmagazine.com.)

Connecting the Stringers to the Footing

To provide an anchor point for connecting the stringers to a footing or an integrated footing and landing, I secure a 2x4 (or larger) PT cleat to the concrete, either with cast-in-place HDG J bolts installed during the pour or with expansion anchors that can be installed after the concrete is cured. The 2-by has to align with the front end of the stringers, so it helps to cut the stringers before casting the footings and landing so that you know exactly where to dig. In that case, I install 1/2-inch-diameter generic HDGJ-type anchor bolts when I pour the footing. If for some reason I'm not certain of the stringer layout, the cleat can be fastened to the concrete with expansion anchors (either ITW Red Heads or



Instead of using individual concrete piers to support each stair stringer, the author prefers to dig and pour a monolithic strip footing, which is sized to extend below frost depth and fully support the stringers' seat cuts. The stair stringers are locked to the footing by a PT cleat anchored to the concrete.

Simpson Strong-Tie anchors are typically stocked at the yards near me) after the concrete has cured.

After laying out and cutting the stringers but before installing them, I stack them up and bore a 9/16-inch-diameter hole 2 inches down from the top of the tread cut and 2 inches in from the riser cut. Later, I'll run a 1/2-inch-diameter threaded rod through the holes; drilling the holes before installing the stringers ensures accurate hole alignment.

I cut 1 1/2-inch-by-3 1/2-inch notches at the bottom of the center stringers so that they will fit around the 2-by cleat, and toe-screw them down with framing screws. The two end stringers don't need to be notched—they are simply screwed

to the ends of the cleat with structural screws (**Figure 1**).

Installing the Guard Posts

Once the stringers have been fastened to the footing cleat, the 4x4 PT guard posts can be mounted to the outer stringers. On the job shown here, I mounted the posts inside the stringers, but with this system, it is possible to mount them on the outside of the stringers. To hold the posts in place while I install blocking and the threaded rod, I fasten them to the stringers with a couple of 4 1/2-inch-long structural screws. I plumb them in line with the stringers; in the final step, I adjust the camber of the posts (**Figure 2**).

Next, I install a row of blocks ripped to



Figure 1. After pouring the concrete for the strip footing and stair landing, the author uses anchor bolts to connect a 2-by PT cleat to the footing (above left). When installing the end stringers, he fastens them to the cleat with structural screws (above right). The middle stringers will be notched to fit over the cleat.



Figure 2. The author screws the guard posts to the stringers (above left), then installs a row of blocking that fits tightly between the stringers (above center). A 1/2-inch-diameter galvanized threaded rod that fits through prebored holes in the posts and stringers ties the assembly together (above right).

the height of the stringer from footing to tread cut. The blocks are positioned behind the guard posts in a straight line and fastened through each stringer with 5-inch structural screws about 1½ inches up from the bottom of the stringer and down from the tread cut. I also drive additional 4-inch screws through the back of the blocks into the 2-by cleat.

Using straight 4x4 PT stock for the stair posts and cutting the posts and PT blocking to length on a sliding compound

miter saw ensures that all of the components are square. So even before my final adjustments, the posts are close to plumb.

Using the prebored holes in the outside stringers as a guide, I drill a 9/16-inch-diameter hole through the 4x4 posts, then run a 1/2-inch-diameter HDG threaded rod through the stringers and blocks. When long rods aren't stocked locally, shorter lengths can be joined together as needed with 1/2-inch HDG threaded couplers. With nuts and washers installed at

each end, I snug the rod up, but I don't tighten it down yet (**Figure 3**).

Next, I install a second row of blocking aligned with the front of the risers and on top of the cleat, fastening the blocks with structural screws or framing screws. (When the posts are positioned outside the end stringers, the first blocks run from stringer to stringer, rather than from post to stringer, as on this job.) Another variation I've tried is to cut 1½ inches off the riser face of the intermediate

Rock-Solid Stair Posts

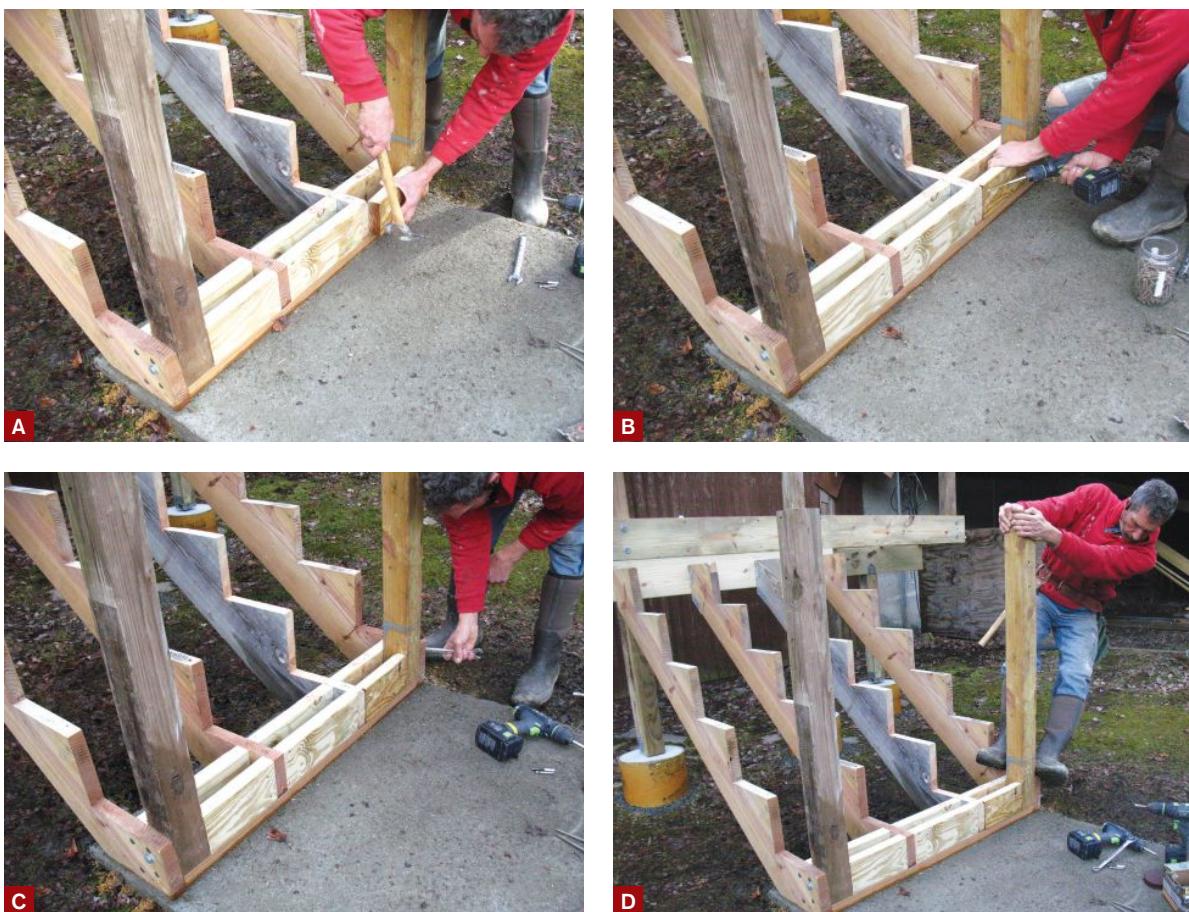


Figure 3. Next, the author installs a second row of blocking, aligned with the front of the stringers, to reinforce the assembly (A). After screwing the blocking to the stringers (B), the author tightens the rod nuts (C), and tests the assembly (D), making adjustments as needed with shims so that the posts are plumb.

stringers so that a single block can be installed from one end to the other.

Finally, I tighten down the end nuts and trim off the excess rod, coating the cuts with a rust-prohibiting coating. Tightening the nuts can cause the posts to camber inward. Final adjustments can be made by loosening the nuts, inserting shims between the outer stringers and the blocks (or between the blocks and posts), and retightening.

Although it's not shown in the photos, I also bore 1/2-inch-diameter holes through each block along the front, just above the cleat, so that any water that collects between blocks can weep out.

Testing the Assembly

To get a rough idea of the strength of this assembly, I set up a cable winch to pull on the top of a post, and I measured the load with a spring scale. In my makeshift testing, I achieved a load of about 400 lb. before the washers began to pull through the outer stringer. I think this is plenty strong, but using heavy-duty 3-inch-by-3-inch bearing plates instead of standard-cut washers would help the connection resist a greater force. On most jobs, not as a scientific test but for peace of mind, I give the posts a yank to make sure nothing moves.

Of course, this assembly will secure the posts from moving in an outward direction only; they can still move in line with the stringers under force. So I'm also counting on the guardrail assembly between the lower post and the post on the deck (which is designed to resist force in the direction of the stairway) that will be installed later to reinforce the lower post. ♦

Mike Guertin is a builder and remodeler in East Greenwich, R.I., and leads the Deck Workshop at JLC Live and the Deck Expo. See his website at mikeguertin.com; follow him on Instagram: @mike_guertin.

RECALLS

SEPTEMBER 16, 2020

MWE Investments Recalls Westinghouse Portable Generators Due to Fire Hazard

The recalled portable generators can leak fuel, posing a fire and burn hazard.

Remedy:

Consumers should immediately stop using the recalled generators and contact MWE Investments to arrange for a free repair.

Units:

About 7,500

Consumer Contact:

Website:<http://www.westinghouseoutdoor-power.com>

E-mail:info@wpowereq.com

Phone: (855) 944-4796



SEPTEMBER 16, 2020

Monoprice Recalls Ethernet Cables Due to Fire Hazard

The cables do not meet the flammability requirements of the UL 1666 voluntary safety standard, posing a fire hazard when the cable is exposed to a flame.

Remedy:

Consumers should immediately stop using the recalled cables and contact Monoprice to schedule a free installation visit to inspect and replace the cable at no charge.

Units:

About 10,800

Consumer Contact:

Website: <https://mpcmrrecall.com/>

E-mail: mpcmrrecall@monoprice.com

Phone: (844) 500-7656



**Contact CAHI c/o
James Enowitch
34-3 Shunpike Rd. #236
Cromwell, CT 06416**

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The public is always welcome.

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