

# From the JLC Forums

## Framing a Basement Ceiling

In this thread from May 2013, forum members debate various methods for framing a flat ceiling to accept drywall in a finished basement.

### [dgbldr, Michigan](#)

Say you want to frame a basement ceiling for drywall. The joists are not in plane and you need to drop 3 to 4 inches anyway to clear ducts, pipes, and other stuff sticking below the joists. No soffits, just one flat ceiling. What's your favorite method for framing the ceiling quickly and accurately?

### [Portstan, Maryland](#)

The quickest and cheapest way is to scab 2x6s to the existing joists and set with multiple string lines or a laser level. It's low tech ... but isn't terribly difficult to make it perfect. Not that suspending a ceiling below doesn't have its advantages, but it's not exactly rocket science.

### [jimAKAblue, Sterling Heights, Mich.](#)

Dropping ceilings in most basements is relatively easy. I use the bottom of the subfloor as my baseline and just cut all the hanger blocks to one dimension. I then attach my "ceiling joist" to the blocks, flush with the bottom ... You will encounter a few high or low spots, but they will be quite easy to see and adjust after the framework is completed.

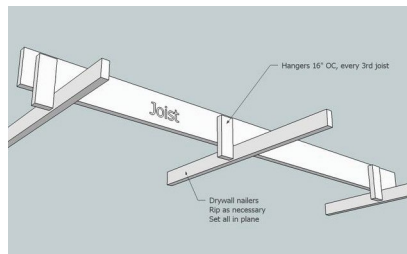
Because you are in MI, it's quite possible that you will encounter some dropped floor joist areas. We often dropped entire sections  $\frac{3}{4}$  inch for the mud base for ceramic floors. Occasionally, I'd drop the entire length of a beam and then build up one side. Just adjust your hanger blocks  $\frac{3}{4}$  inch and your framework will be in plane.

### [dgbldr](#)

Pretty much what we do. Just scouting

for better techniques. Using the subfloor as reference is an interesting idea, but a decent laser is cheap enough so I don't know if there is anyone out there without one.

We simply set the bottom of the hangers at the laser plane and then install the nailers flush with it (see illustration).



This ceiling system suspends nailers from 2x4 hangers placed 16 inches on-center on every third joist.

### [jimAKAblue](#)

I developed my technique after messing around with lasers and string lines when I installed grids in basements. I eventually found that it was efficient to hang my wires, then just make a bend at the same distance from the bottom of the deck. After installing all of the grid, a quick glance would expose any high or low points. Typically, I'd have to rebend one or two spots.

For me, it isn't worth pulling strings or lasers.

### [Dick Hackbarth, PE, St. Paul, Minn.](#)

I'd do what you show in [your drawing]. Set a laser level 2 or 3 inches lower than you want the bottom of the nailer 2x4s, then use a 2- or 3-inch spacer block held

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under the 2x4 to locate its bottom elevation to nail it off.

## [dgbldr](#)

Too complicated. What we do is set a plane laser to the final plane we want and leave it on. Then we go around the room and nail up the hangers so the bottom edge just touches the laser beam. Then it's a simple matter to nail up the long pieces flush with the bottom of the hangers.

By the way, a rotary laser is not necessary. A 180-degree laser against a wall will cover the whole room.

## [Dick Hackbarth, PE](#)

Just remember that the nails in the short hanger blocks are loading the blocking in tension parallel to the grain, near the end of the block to boot, a very weak nail-loading orientation. So, watch the end distance in your nailing. From that standpoint,  $\frac{3}{4}$ -inch plywood might be better for the hanger blocks.

Then, a second consideration, the design load of the ceiling system shouldn't be a hanger-loading problem, but there isn't anything to make this look like a light hung ceiling. What if someone hangs a swing or chin-up bar with a few lag screws from what they think are floor joists? One or two hangers and a spanning 2x4 might have to take that load.

## [customwoodworking](#)

I don't want to make any waves here, but the suspended grid is by far the easiest and most efficient way to frame ceilings.

Think about a few things here. I can get the material into the residence in about three minutes, solo!

Also, no dust for the homeowner to complain about (yet), and all that scrap wood you need to dispose of now is replaced by a small cardboard box with minimal metal scrap that you get paid for when you sell it to the scrap yard.

You no longer have to tell your electrician to sweep up his hole shavings, and


your lighting layout is spot-on.

Your client is much happier because you didn't lose any height in her already-only-7-foot basement, except for the thickness of drywall and the lowest point on the joist.

Your drywall guy lowered his price

because his install was easier when all his materials landed perfectly on layout and laid flat as glass, plus you didn't call him back to float out that bad spot in the middle of the room where the light hits it just right.

Case closed.



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## Box Newel With a Metal Stanchion

Steel comes in handy to stiffen a newel post in this June 2013 thread.

**M Smith, Whittier, Calif.**

I just finished this small stair job last week — large custom box newels and an 8-foot run of guardrail with plain square balusters painted white (client supplied a picture).

I had a metal stanchion welded up from a remnant piece of 3x3-inch tubing with 1/8-inch wall thickness, and a 6x6x3/8-inch steel plate drilled for 3/8-inch lag bolts. Parts and welding cost me \$55.

After some careful layout and blue tape on the floor, I lathered up the bottom of the plate with Bondo, set the stanchion in place, slipped the box newel over, centered it on my layout, and held it firmly in place for about a minute. The bottom of the newel was scribed to the floor so it sat plumb in both directions. I slipped

the newel off, drilled holes for lags, and anchored it down. I lathered up the stanchion with PL Premium about three-quarters of the way down from the top, and added a healthy dose right at the weld joint area. I carefully slipped the newel over, and propped a stick against the ceil-

ing to put downward pressure overnight.

The inside diameter of the newel was 3 1/8 inches — just enough wiggle room for the PL to get some purchase.

Result: *Very solid install.* The box newel itself has a lot of mass because the base is 7 1/4 inches, and it doesn't have a "weak



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link” like a traditional turned post, so they tend to be stout regardless of the install technique.

## [IamTheWalrus](#)

Nice job, nice description. How would you have done it had you been part of the team for the from-ground-up build? It looks like you had to do what you did because you were invited to the party kind of late....

## [jimAKAblue, Sterling Heights, Mich.](#)

What is the function of the Bondo?

## [M Smith](#)

Because the bottom of the steel plate was not flat and the wood floor was not flat, [the Bondo] allowed me to set the stanchion quickly in the exact location I wanted it and plumb it in both directions. It also gives a void-free, solid base material so that when you tighten down the lags it stays true. It sticks to just about anything and sets quickly. I use it for a lot of applications where I have an uneven surface. In conjunction with PL, it can be a fastener-free technique for prefinished items.

Ground up? Would have been a solid 4x4 subpost down below subfloor as deep as you can get it, sandwiched and lagged into framing. As it was, on this job I was subcontracted by the flooring company, who had already torn out the old wood flooring and installed new, very expensive wood flooring, and *then* called me out to the job.

## [Newman, California](#)

Don't use Bondo, it's not dense — use epoxy instead.

## [BobboMax, Portland, Ore.](#)

I like everything except lagging it to the floor. You don't know what you're actually engaging, and I expect the lags to loosen over time as the floor moves. Not, mind you, that I have any better ideas, unless you could go under the floor and use

bolts and *big* washers. Bellevilles [spring washers] would be ideal, might even work with lags.

## [Shane Gillespie, Tennessee](#)

Very nice. I tell you what comes to my mind: The next remodel guy trying to

disassemble that. He's gonna be scratching his head saying, "What in the world is holding this thing!"

## [Gary Katz, Moderator](#)

Very very nice and clean. I like the Bondo idea a lot!



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