

Less Can Be More

Trusses give the timber-frame look for a fraction of the cost

By Anthony F. Zaya

TWELVE YEARS BACK, EVERY CONTRACT WE SIGNED, WITHOUT exception was for a timber frame encompassing a whole house, barn or commercial building. I suspect this holds true for others in the profession. Then, six or seven years ago we observed a slight move toward homes featuring isolated timber framing—usually great rooms, but also entrance areas and foyers. We refer to these combinations as hybrids.

Four years ago, we began to receive a swell of requests, particularly from architects and interior designers, for timber-framed truss systems that would sit on conventionally built walls. Timber-framed trusses now constitute close to 50% of our work. Some have been rather simple affairs. Others have been large, elaborate and complex. The reasons for this shift toward partial timber-frame features are varied.



This scissor truss conveys a timber-frame look in a conventionally framed house.

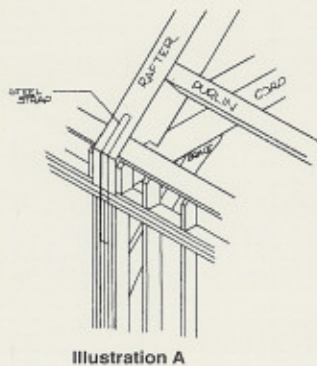


Illustration A

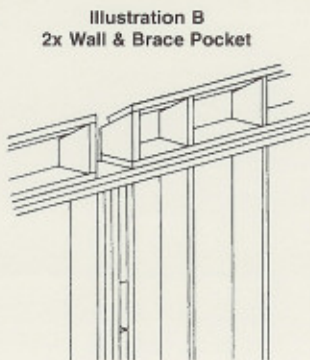


Illustration B
2x Wall & Brace Pocket

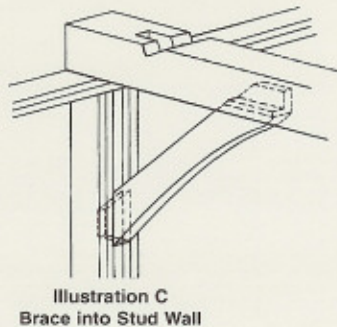


Illustration C
Brace into Stud Wall

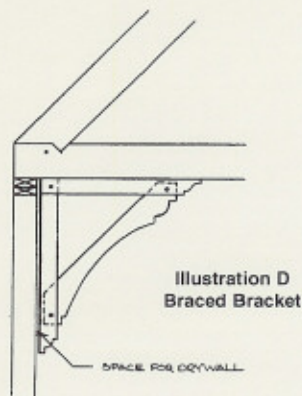


Illustration D
Braced Bracket

• **Less Money.** Economics no doubt plays a very strong part. A truss system sitting on a 2-by-6 wall is tremendously less costly than a whole-house timber frame and noticeably less expensive than a whole-room timber frame. Also, reducing the board footage allows buyers who may not have been able to push the budgetary envelope, to the point of affording more stable and desirable reclaimed or recycled softwoods or kiln-dried red oak for a whole frame, the financial room to upgrade material quality significantly at a cost still well below that of a whole-house timber frame.

• **Less Hassle.** Without posts and braces, bathroom fixtures and kitchen cabinets and appliances present no special work or cutting. The stair areas do not have to be worked around posts, and closets no longer hide posts.

• **Less Waiting.** A truss system takes a lot less shop time than a whole frame, a smaller raw timber order is filled more quickly, and raising trusses is easier. The result can be a 50-percent reduction in lead time.

• **More Impact.** It's not always economics. One mansion we worked on above New York City had a completed cost above \$5 million. The owners could have afforded timber framing for the entire house but instead chose to limit the timber framing to truss systems in three rooms. One proven way of making something more dramatic is not to surround yourself with it but to keep it limited and isolated. The less we see of it, the more special it becomes when we do see it.

We have used a number of methods of tying truss systems to

stud walls. Illustrations A and B show the way that has worked for us in most applications. There have been a few situations where wind braces from the bottom of the chord to the 2-by-6 built-up post under the truss was unnecessary. Such cases would find walls running perpendicular to the walls upon which the truss system sits. Those perpendicular walls may serve as buttresses. In all other cases, we provide resistance to racking by bracing from the chord into the built-up post (Illustration C) or by employing a brace bracket (Illustration D).

Depending on the spacing of the trusses, purlins may be employed. Ceiling material directly above can be wood, usually tongue and groove or drywall. Drywall makes a room lighter and thus feel larger, but tongue-and-groove boards need no painting.

The configuration of the truss system, along with its spacing, edge treatments, finish, etc., is a function of two elements: engineering and taste. Attack the engineering first, then deal with the aesthetics. The look and feel can be anything from simple to complex, from contemporary to Gothic.

Timber-frame truss systems are not really new. They have been employed for centuries all over Europe. Many truss systems sit on the masonry walls of churches, cathedrals and great halls. In this country, the Cabildo in New Orleans is a fine example.

Architects and designers are rediscovering and utilizing such systems in new and exciting applications. For those who want to spend less and see more, timber-frame truss systems are a viable alternative to whole-house timber-framing. **THI**

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