

## Classic Columns

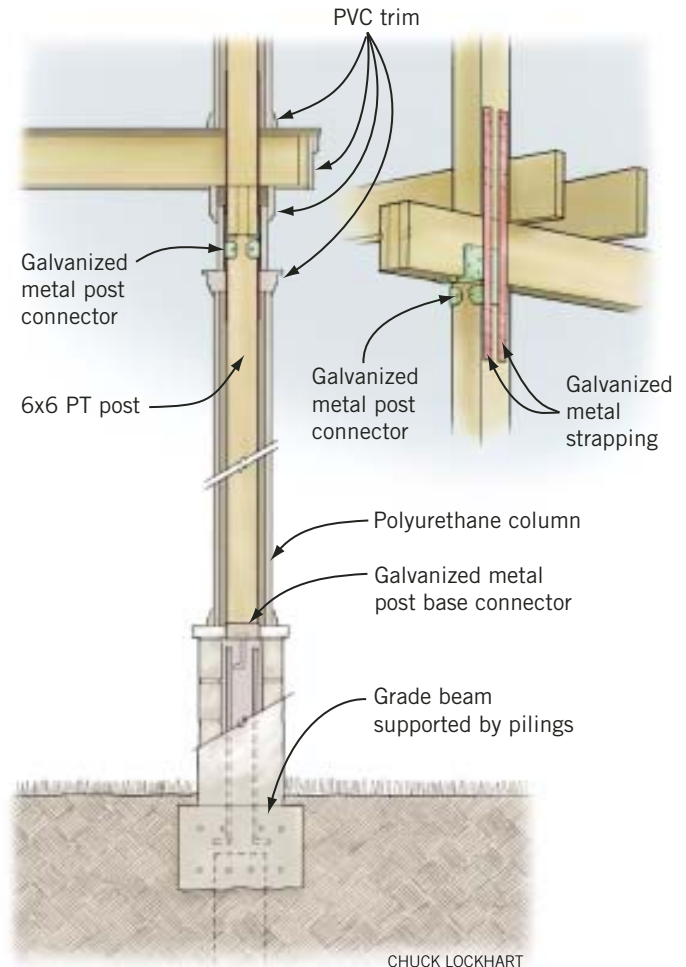
**Q:** Along the Jersey shore, porches are a common feature on most new houses. These days, many builders here are using *Fypon* columns that get slipped over pressure-treated posts. My concern is with the structural connections at the top and bottom. Most guys are just toenailing the base into a doubled-up rim joist on the deck and throwing a couple pieces of metal strapping over the girder to secure the tops. Is that enough to hold the porch in place during high winds?

**A:** A covered porch detailed for coastal zones must resist several powerful forces:

- Porch columns must be designed to resist lateral loads from surge or flooding.
- The columns and beams need to resist wind uplift loads as well as gravity loads.

- Because porches are exposed to the elements, their delicate details take a beating from sun, wind, and rain. At their best, they need to match customer expectations for a durable, low-maintenance weather exterior.

Contractor Smokey Saduk of the New Jersey beachfront building firm Haffelfinger and Standeven recently showed



CHUCK LOCKHART

*Coastal Contractor* the porch column assembly he uses on the company's custom homes. He, too, relies on *Fypon* polyurethane columns, but he also opts for other advanced synthetics, including masonry column bases, PVC-clad rail systems, and custom-tooled Azek trim (Figure 1, next page). All these materials have a good track record for standing up to the coast's continual salt- and sand-laden winds, with minimal use of caulking or paint.

Sited on sandy barrier islands, the houses Haffelfinger and Standeven builds typically rest on



### Got a question?

We want to hear from you!

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PHOTOS: TED CUSHMAN

**FIGURE 1.** The column shown above is designed to carry an upper-story porch; details may vary slightly for columns that carry both an upper deck and a lower deck. However, the principles are the same for any porch/deck configuration, as detailed in the illustration on page 27: The exteriors are composed of layered, weather-tolerant, low-maintenance synthetic materials, while the inner structures are strengthened by reinforced masonry, engineered connectors, and treated wood.

deep treated-wood piling foundations, tied together at the top with a reinforced concrete grade-beam grid. These houses are anchored to the foundation grids by 4-foot concrete block stem walls, with fully grouted cores and rebar reinforcement. Stand-alone piers for porch columns are built into the foundation gridwork. Above the grade beam, each column base is built with 16-inch concrete block, reinforced with rebar and concrete grout, and tied to the underlying foundation grid with anchor bolts, as shown (**Figure 2**). The 4-foot block piers receive a concrete stucco parge.

Columns for second-story decks often sit directly on the block piers. But first, a bluestone cap stone is set on each pier, with a 6-inch-square hole cut in its center to receive



**FIGURE 2.** Column bases are tied to the foundation grid below grade. Above grade, Saduk's crews lay up 4-foot piers of 16-inch-square concrete masonry block, with fully grouted cores. Capping the block pier is a 20-inch-square bluestone slab, with a 6-inch-square hole in the center to receive the base of a 6x6 treated-wood post. The anchor bolt (top, center) will hold down a galvanized steel engineered standoff post base connector for securely attaching the wood post to the concrete pier. This block pier has already received a stucco scratch coat and will be given additional cementitious finish coats.

the base of a 6x6 pressure-treated wood post. The foot of each wood post is anchored in a galvanized steel post base connector, which restrains the post from moving either side to side or up and down.

To construct the porch assembly, explains Saduk, the crew first frames up the porch beam and porch floor, supporting the whole assembly with temporary posts. Then the synthetic marble columns with their base and capital moldings have to be sleeved over their wood-post structural cores. The framers set the whole post assembly in place, fitting the foot of the wooden post into its connector and fastening its top to the porch beam above with framing connectors and steel straps before removing the temporary

posts. Once the porch is trimmed out in Azek, and the Fypon base and capital moldings are secured with screws, the underlying wood structure disappears, completely wrapped in durable synthetic finish materials (**Figure 3**).

Porch decks form an important part of the weather-resisting system too. Deck floors are fully sheathed with  $\frac{3}{4}$ -inch plywood, then waterproofed with Vortex spray-applied polyurethane (commonly used as a truck bed liner; available from [www.vortexsprayliner.com](http://www.vortexsprayliner.com)). The waterproofing extends up exterior walls under the drainage-plane building paper and into rough door frames, as well as up the base of deck posts. When completed, the synthetic-clad porch will invite its owners to enjoy coastal breezes and views, free from worry about leaks, maintenance, or structural integrity. — *Ted Cushman*



FIGURE 3. The porch's wood and steel structure is completely hidden once the porch receives its layered trim treatment of Azek ceiling beadboard, tooled Azek trim, and Fypon column base and capital moldings. In addition to its decorative purpose, the completed porch is able to shoulder its part of the design wind loads typical for a coastal home.