

San Francisco Chronicle

SFCHRONICLE.COM | Thursday, October 19, 2017 | PRINTED ON RECYCLED PAPER | \$1.50 ★★★★★

Bay Area

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SAN FRANCISCO CHRONICLE AND SFCHRONICLE.COM | Thursday, October 19, 2017 | Section D EB



Photos by Michael Macor / The Chronicle

Churning out housing

Factory_OS in Vallejo is betting use of modules can fuel industry

By J.K. Dineen

For decades, developer Rick Holliday has been one of the Bay Area's most prolific and forward-thinking builders of both market-rate and affordable housing, creating thousands of units from West Oakland and Emeryville to San Francisco's South of Market and Bayview districts.

Now Holliday is betting that the future of multi-family housing in the Bay Area will take shape not in a particular neighborhood or community but in a cavernous 250,000-square-foot historic shipbuilding facility in an industrial part of Mare

Modular continues on D5



Workers (top) test air casters used to move modular structures around using hydraulic air, inside Factory_OS at Mare Island in Vallejo. Above, developer Rick Holliday says modular construction can save money and time.

BAY AREA

Churning out housing

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Island in Vallejo.

There Holliday and partner Larry Pace, who heads up Cannon Contractors, are building a Factory_OS, an assembly-line facility they say will be able to pump out pre-fab modular boxes at a speed and cost that will help change how multifamily housing is produced on the West Coast.

Though the factory won't be up and running until early next year, the group already has five projects in the pipeline with more than 1,700 housing units — developments in Oakland, Emeryville, Mountain View and Union City. If you include all the developers who have expressed interest in taking a look at the factory for potential projects, it's closer to 20,000 units.

"We believe we can be 40 percent faster and 20 percent less expensive," said Holliday, adding that in hot markets like San Francisco, the savings could be 40 or 50 percent. "Clearly, that is something that has resonated with developers."

Though prefab mods have long been used for single-family homes, the use of stackable Lego-like mods for taller buildings is on the rise, particularly in urban centers like Los Angeles and New York, where the housing crisis is most acute. The \$5 billion industry represents 3.1 percent of the overall building sector, up from 2.1 percent in 2014, according to Tom Hardiman, executive director of the Modular Building Institute, a 327-member trade group.

But while there are multiple off-site factories in Idaho, Washington and Southern California, there are none in the Bay Area, Hardiman said. The size and location of Factory_OS is creating plenty of industry buzz.

"It's in the right spot — the San Francisco Bay Area is in the middle of an important

growth area for our industry," he said. "(Modular) is really catching on in these large urban areas that have severe housing shortage issues."

On a recent Monday, Holliday and Pace were at the factory with Jay Bradshaw, an organizer for the Local 22 Carpenters union, and a few other industry veterans. They were testing out different types of air casters — a pneumatic device that forms a lubricating film of air between a load and floor surface, similar to that of a hovercraft or an air hockey table. The casters will allow the workers to slide the modular units — which can weigh as much as 50,000 pounds — easily across the factory floor.

The research into air casters was typical of the level of detail that is going into every inch of the factory assembly line, Pace said.

"I've spent the last three years doing nothing but studying the manufacturing of what we are trying to do here," said Pace.

Advocates say modular construction offers more predictable scheduling, less disturbance to the neighbors, greater labor consistency and predictability, less waste, and increased job-site safety. The factory will have 30 work stations, each dedicated to a step in the building process. One modular will take roughly five days to work its way through the factory, and the factory will pump out at least four mods a day. The modules are shipped out with completely finished interiors—from flooring to fixtures.

The Factory_OS facility will be the biggest of its kind in the United States. It was previously occupied by Blu Homes, a single-family-home modular group that spent millions on improving the building before deciding to close it and outsource the work.

"The size of this building and the layout is what will make the difference for us," said Pace.

"We believe we can be 40 percent faster and 20 percent less expensive."

Developer Rick Holliday

Factory_OS leadership also includes architect David Baker, whose firm has designed thousands of units in the Bay Area. He said Factory_OS "is not pioneering something new ... but refining a technology."

"The Bay Area needs at least one factory," he said. "You can truck the mods over the mountains, but it's crazy to do that. It takes a lot of time and a lot of energy and submits the boxes to a lot more stress than they should be under."

But not everyone is thrilled with the rise of mods. The industry is creating something of a rift in the unions that make up the San Francisco Building Trades Council.

The Carpenters Local 22 has signed on with Factory_OS and will provide as many as 200 workers for the assembly lines. The union members will be doing carpentry, but also some of the work typically done by plumbers and electricians and other trades.

"There will be a great workforce out here," said Jay Bradshaw, director of organizing for Local 22. "It's really industrial work. It involves a lot of carpentry in the plant, but it's not unlike an auto plant. It will be all carpenters doing everything."

Other construction industry unions are not happy with that scenario. Michael Theriault, secretary-treasurer of the Building Trades Council, told The Chronicle that the group would oppose modular projects in San Francisco. He made an exception for a 100 percent homeless supportive housing development planned for Mission and Seventh streets.

In an email, Larry Mazzola Jr., business manager for the



Michael Macor / The Chronicle

The view from outside the huge facility at Factory_OS.

Local 38 Plumbers and Pipefitters and president of the San Francisco council, called modulars "cheap crap that skirts all city values, codes and laws." He said the trades "have been trying to find a way to have the modular units built in San Francisco, with local labor." He objected to the carpenters performing other trades' work.

"I disagree that anyone can do it cheaper or faster. No one can match the skills of our workers," he wrote.

Baker compared the situation to an auto plant where assembly line workers are AFL-CIO members and said the Bay Area housing industry needs to think creatively.

"It's a work in progress, but we have to move forward and not let 20th century concepts

keep us from meeting new millennium challenges," said Baker.

The rift might limit the number of projects Factory_OS does in San Francisco, but Holliday plans to target the entire West Coast. The location of the factory on the water on industrial Mare Island could allow them to send entire projects up or down the coast on cargo ships.

"We could pull a barge up and I could put an entire project on it," said Holliday. "It stretches the market area for the factory. From Seattle to San Diego is where you have the most severe housing cost problems."

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