

elcome! Enjoy your stay with us!
Your room has been created just for you in DeSoto, TX!"

It's highly unlikely that major hotel chains will lure guests by advertising the fact that their room recently arrived by boat, truck or both. In the hospitality business, modular construction has become a major source of new facilities for hotel owners and operators. With condensed manufacturing timetables and lower per-room construction costs, off-site assembly of guest rooms enables operators to keep pace with traveler demand for lodging.

Hospitality construction is hitting a near-boom pace, just now recovering from the standstill resulting from the 2008 economic downturn. Today, the total number of hotel rooms in the U.S. is approximately five million, according to the STR Census database, and another 100,000 are forecast to be added in the next year to 15 months. With demand for occupancy rising, hotels hope to capitalize on the advantages of construction of guest rooms where repetition of dimensions

and fittings can get rooms to market faster.

Factories dedicated to the assembly-line production of ready-made overnight accommodations are located around the U.S. in such places as DeSoto, Boise, ID, and Orlando, and overseas in Toole and Gdansk, Poland, and Riga, Latvia.

For the past 30 years, modular off-site construction has often been associated with residential and low-rise commercial buildings. Now, Marriott, Hilton and Holiday Inn have all entered the modular market, and Marriott, in fact, announced in May a plan to sign 50 hotel deals in 2017 that incorporate prefabricated guest rooms or bathrooms. In October, the 142-room Oklahoma City AC Hotel, a Marriott brand, will open, followed by a facility of similar proportions in Hawthorne, CA. "We believe the modular process will be a game-changer and impact openings," says Karim Khalifa, senior vice president of global design strategies for Marriott.

Depending on the owner's requirements, pods can be delivered with all elements, including the

50 LD+A October 2017 www.ies.org



lighting, in place. Public spaces, such as lobbies, restaurants and corridors, are typically designed separately and built conventionally at the project site. With improvements in assembly techniques for the modules, hotels can choose to have entire rooms framed and fitted out, or specific areas, such as bathrooms.

Susan Furbay, vice president of HVS, hospitality industry management consultants, cites the timesaving benefits of modular construction. "While modules are being built at the factory, building contractors are involved in breaking ground, laying the foundation and grading the site," she says. Coordinators manage on- and off-site activities for the delivery of the modules, arrange for transportation details and secure special equipment such as cranes to lift them in place. "Modular construction steers clear of such issues as scarcity of skilled labor in certain areas, and weather and vehicular conditions at the ultimate site."

Prefab hotels are touching all corners of the U.S. CitizenM's 210-pod Bowery Hotel on New York's

Lower East Side was manufactured by Polcom Modular based in Popole, Poland, loaded onto cargo vessels, then transported by truck from the dock to the site. Brooklyn's Pod Hotel in the Williamsburg section, also a Polish-made product, from Gdansk, followed the same routine.

One of the largest modular hotel projects just completed in the U.S. is the 410-room Canyon Lodge & Cabins in Yellowstone National Park, operated by Xanterra Parks & Resorts. According to Dylan Hoffman, Xanterra's director of sustainability, the region's severe winter weather would have extended the construction timetable to five years. By working with Guerdon Modular Buildings' 53-ft-long modules, the project's five buildings were ready to receive guests for the 2017 season in less than three years.

## **LIGHTING'S FIT**

Lighting manufacturers are poised to get in on the ground floor of modular. GE has lighting programs in place with the major hospitality chains Prefab projects such as the Canyon Lodge and Cabins in Yellowstone Park (above) and the Arlanda Hotel in Stockholm (opposite) can slice years off the traditional building timeline.

www.ies.org October 2017 LD+A 51

Projects including the Arlanda Hotel are built through a linear production line process with 11 different stations responsible for specific tasks.



including Marriott and Hilton. "Working with our distributors, we provide assistance to the in-house designer or the architect, or to the construction firm," says Nick Diligente, vertical manager for commercial and hospitality distribution.

Philips Lighting has created the position of key account managers assigned to service the requirements of the major hospitality chains for conventional and modular construction. Says Keith Graham, a Philips key account manager for retail and hospitality, "We are constantly monitoring and evaluating new growth opportunities in the hotel market, including modular construction. While modular pod manufacturing is still in its early phases of development, we've been advising on lighting solutions. They range from deploying the type of LED lamp, to connected lighting systems, integrated luminaires, controls, sensors and software."

Specification responsibilities vary depending on the hotel chain and the specific brands within the chains. For mid-tier brands, Graham collaborates with corporate designers on the entire lighting specification to establish continuity across the brand. For more upscale properties, he works with the architect and lighting designer to establish the lighting presence. "Guests are very aware today

of the look, feel and experience they expect from their choice of accommodations," he says. "Once these lighting specifications that meet the criteria have been established, the corporate chain will typically publish these guidelines for designers, consultants and pod producers."

Designers may likewise have a role to play. David Rodstein, of Rodstein Design, makes the comparison between modular hotel-room construction and cruise-ship modular cabin and suite design and construction. Rodstein has analyzed lighting needs for cruise-ship guest quarters, taking into consideration bathrooms, reading, night lighting, and wash illumination of ceilings and walls. "Especially in the higher end spaces, the added drama that designed lighting can provide can be seen and evaluated in mock-ups," he says. This would be the challenge for the lighting designer who sees the modular hotel market as an opportunity.

Brett Andersen, principal designer at Focus Lighting, agrees that the design opportunities for modular hotel lighting are worth investigating. "We've designed lighting for a number of hotels, so applying our expertise in hospitality to the modular market could be an area for us to consider."

52 LD+A October 2017 www.ies.org



At Brooklyn's Pod Hotel, each prefab module contains two guest rooms and an interior corridor.

## **MOD IN ACTION**

Last November, the First Hotel Arlanda Airport, a turnkey project built at the 1.3 million-sq ft Forta Modular plant in Latvia, opened in Stockholm. In addition to 150 guest rooms, the facility was delivered with a 200-seat restaurant, seven meeting rooms, exhibition hall, conference rooms, auditorium for up to 350 and fitness area with large sauna. Minimal on-site work carried out by the client included the foundation, module assembly and landscaping. Stylish contemporary furniture, lighting, draperies, equipment for the restaurant and bar, plus the lobby and public areas, were all crated and sent north from Riga to Stockholm.

Forta Modular views the hotel pod market as a natural extension of their work in manufacturing medical and residential buildings for export. Forta Modular installs all pod lighting in its factory and delivers it already built-in with the modular hotel units. It uses a linear production line in the factory, similar to that of the auto industry, with specialists working at 11 different stations, each responsible for a specific job.

Off-site installation of lighting begs the question of quality control. Forta Modular reports that their modules undergo a series of quality assurance tests, which includes the light fixtures, before they can move on to the next station. For each modular

project the company designs, a functional prototype is built at the factory. When the client visits the mock-up, Forta staff, the inspection team and the client experience the way the actual room will look and evaluate the combined comments.

Garrison Architects designed the Pod Hotel in Brooklyn, in collaboration with Polcom. The venue is BD Hotels' third micro facility, with 249 rooms each measuring approximately 100 sq ft. Large windows overlook the building's more than 10,000 sq ft of public spaces, including a sidewalk café and three courtyards. Room rates start at \$125 per night.

The Pod Hotel's fixtures articulate the architecture and reinforce the hotel brand, with ease of maintenance for facility staff. For the guest rooms, lighting was installed in the modules and the rooms were shipped as locked turnkey units. Full-size module mock-ups (each module contains two guest rooms and an interior corridor) were built in the factory and allowed the design team to review the quality of light inside the building as it would be experienced by guests in Brooklyn. Lighting for the public spaces was installed on-site.  $\square$ 

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www.ies.org October 2017 LD+A 53