

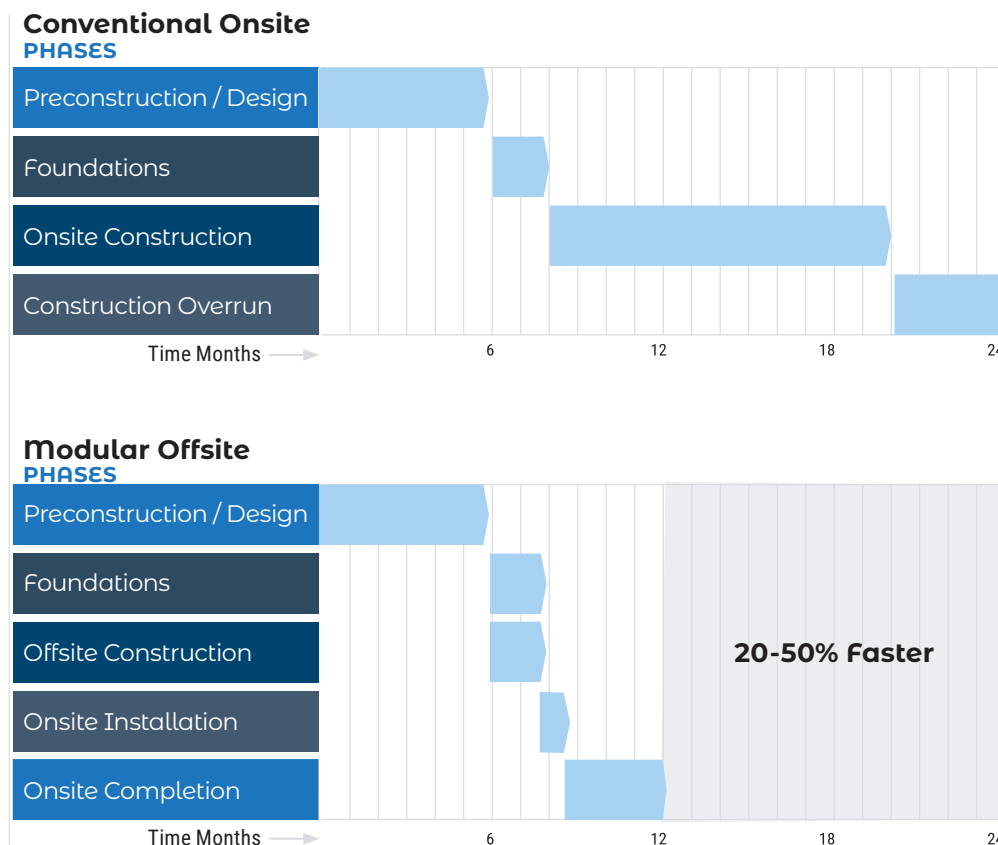
An aerial photograph of a construction site. Several large, rectangular modular buildings are arranged in rows. A large, bright red lightning bolt graphic is superimposed over the center of the image, pointing downwards. The text 'DOUBLE TIME' is written in a bold, white, sans-serif font, with 'DOUBLE' on the left and 'TIME' on the right, separated by the lightning bolt. The background is a dark, blue-tinted aerial view of the site, showing various construction materials and equipment.

DOUBLE TIME

**Two speed-to-market success stories
built on teamwork and innovation**

Construction Duration Timeline

The modular/offsite construction industry in the U.S. has really started to take off. The percentage of projects built offsite in the U.S. has nearly doubled in the past five years. Among the advantages of offsite modular construction, completion time is at or near the top.



Doing onsite and offsite work in parallel, modular construction can shorten completion time up to 50% based on studies by the Modular Building Institute. With factory automation and ever-smarter approaches, Autovol strives to compress completion time even further. And it's working.

The above chart is based on findings by the Modular Building Institute, illustrating how modular can help many projects get to the finish line more quickly.

It's about time



Innovative best practices plus the right team of stakeholders in factory and beyond are noticeably speeding up the time to produce a project, and get it ready for occupancy. Autovol has seen impressive speed-to-market results on more and more recent projects. We'll break two of them down in the pages that follow.



With the help of a dedicated offsite crew, served by robots doing the heavy lifting, this Extended Stay went from factory to occupancy in months, not years.

355 Sango Court



Project

Sango Court is an affordable apartment rental development in Milpitas, CA. The 102-unit, transit friendly property is about a half mile from the nearest BART station, and close to parks, shopping, schools, dining, and numerous employers. This makes it a potential gem in one of America's most expensive metro areas—in terms of both cost of housing and cost of construction labor.

Challenge

Up to this project, Autovol's unique human-robot team had built projects for just one customer. Autovol's heavily automated approach had been quickly proven by successfully completing 6 multifamily projects for The Pacific Companies in just two years. Now the factory would be put to the test with its second-ever customer team, including a municipality, general contractor, and developer—all beginners at modular construction. The project had already been designed for onsite construction, and needed to be redesigned for offsite modular production. This increased the need for urgency and attention to detail—from sprinting through preconstruction to protecting finished modules from rain onsite.

Quick Facts

- Affordable Multifamily Housing
- Studio, 1, 2, 3 bedroom units
- Buildings: 1
- Units: 102
- Unit types: studio (23), 1 bed (40), 2 bed (27), 3 bed (12)
- Efficiency: GreenPoint Rated
- Parking: 60 vehicles (including 36 parking stackers), 102 bicycles
- Amenities: interior courtyard, community room w/kitchen, resident services

355 Sango Court has something for everyone, from studios to 3-bedroom units, demonstrating that modular construction can be both versatile and fast.

355 Sango Court—continued

Solution

Autovol and preconstruction firm Prefab Logic began by inviting all stakeholders to see Autovol's factory approach firsthand. The entire team quickly rallied to build a complete digital twin of the project, redesigned to be constructible by the Autovol team, robotic system approach, and standardization-driven recommendations. Success relied on deep collaboration using a sprint process, VR reviews of the final design, an assigned GC representative during factory construction, and tightly managed onsite services. With everyone leaning into this approach, the team was able to make up for lost time and gain speed and efficiency advantages the world's most advanced technology in modular preconstruction and automated factory construction.

Results

Sango Court is an on-podium efficiency success story achieved by a team of first timers. The developer, general contractor, and municipality were new to modular and new to Autovol. All parties leaned into the project and learned from each other. Autovol even adopted new practices the general contractor had recommended from their onsite construction experience. With all the challenges and learning curve, the team this project completed and occupied nearly 3 months ahead of schedule.



355 Sango Court proves that time isn't an obstacle to amenity-rich, architecturally beautiful, affordable housing.

Timing

- Preconstruction redesign: 5 months
- Design integration/shop drawings: 2 months
- Factory online to offline: 64 days
- Shipping finished modules: 50 days
- Onsite modules crane set: 12 working days
- Total: 119 days factory online to final module set
- Onsite completion: 10 months
- Estimated time savings: 2 to 3 months

Hawthorn Extended Stay—Alpine, Wyoming



Project

Hawthorn Extended Stay by Wyndam is a two-phase project in Alpine, Wyoming, near Jackson Hole. The three-story, 68 room phase-1 project provides a combination of tourist hospitality and workforce housing. Each unit includes a full kitchen and two queen beds.

Challenge

Mountain resort areas share some common challenges: long winters, short build seasons, and small towns with few local skilled workers. The scarcity of housing has forced even dual-income families to make a tough choice: commute from the few towns nearby with scarce but less costly housing, or leave their dream community. To help close the housing shortage gap, local builders and developers face the challenge of not only hiring construction crews from other regions. They also had few ways to provide housing for those workers when workforce housing is just as scarce as residential and hospitality quarters.

Quick Facts

- Hotel and workforce housing
- 1 King- / 2 Queen-bed studio rooms
- Developer: GCHB Venture
- Onsite Contractor: Snake River MEP
- Location: Alpine, Wyoming
- 130 rooms/260 beds
- Phase 1: 68 rooms
- Phase 2: 62 rooms

This new Extended Stay gives workers and vacationers a cost-effective option near Jackson Hole, Wyoming.

Extended Stay—continued

Solution

An Extended Stay property in the area is an ideal way to bring more accommodations to market for both vacationers and workers, while avoiding vacancies and optimizing income. But how could local builders find a labor force to build housing for a labor force that couldn't find housing, and in an area where the build season is cut in half? With modular construction, a dedicated offsite workforce got the rooms finished while the site was being prepped. With a little extra planning, the onsite GC even prebuilt roof components onsite to immediately protect the mostly complete rooms as soon as they were assembled into a building onsite. The project was slotted in the Autovol factory in late spring, allowing all summer and early fall to get the property ready to open. Both phases of the project were first built as digital twins, so that each phase would be factory-ready in advance.

Results

The developer of this project was driven by a desire to change the game in how resort housing is built. Their vision addressed the housing crisis in their mountain resort area in three ways: provide more affordable housing to their own construction crew, add more affordable vacancy options for vacationers, and neutralize a short build season using smart, time-saving construction innovation. By putting this vision to the test using a modular approach, they sped up a project that would typically take 18 to 24 months by completing it in just 8 months and one build season.



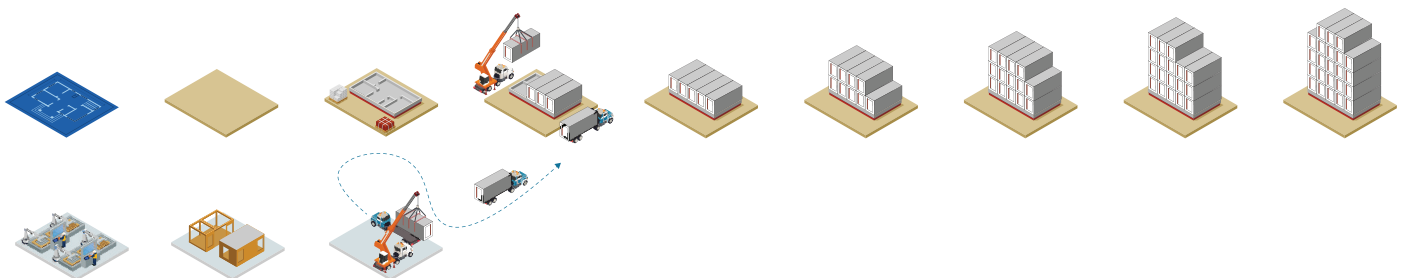
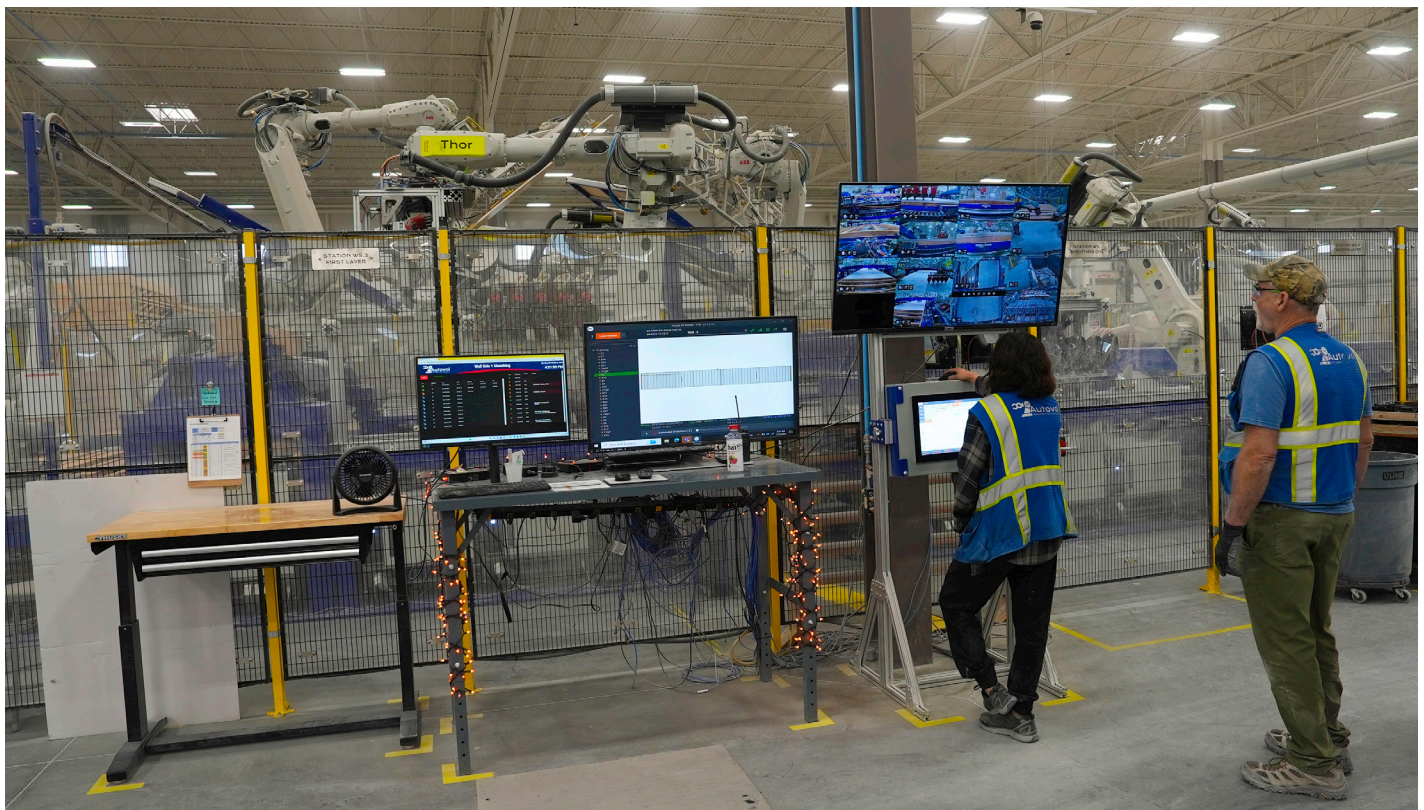
Timing

- Design and preconstruction: 9 months
- Factory online to offline: 1 month
- Building assembly: 10 days, including roof
- Factory production start to occupancy: 8 months
- Estimated time savings: 10 to 16 months

Top: Roof segments were built onsite and craned into place immediately after the building was assembled. Center: Rooms arrived in Alpine fully finished and inspected. Bottom: This entire building was set in less than a week, with very minimal construction noise or material clutter/waste.

It's go time for modular construction

Modular methods can save time in many ways. Onsite foundation work and offsite construction can be done at the same time. Building in a controlled environment creates opportunities to keep working smarter and avoid delays in everything from materials supply to weather. And now-proven robotic automation is an added game changer. Robots can increase efficiency, precision, and speed and do the heavy lifting needed to produce more housing per worker and offset a shrinking labor force. Modular construction isn't for every project. But for many, it's a true game changer whose time has come.



Modular construction is smart construction that enables onsite and offsite crews to complete tasks in parallel and reduce delays. Factory automation increases speed, precision, and productivity, making a smart construction brilliant.

Get more done in less time.

In September 2024, Autovol celebrated 22 major projects and 3,000 completed modules. In five years since founding, we became America's highest-producing multifamily modular operation.



Autovol production stats during its September, 2024 celebration of 3,000 modules produced.

Explore our company, projects, and unique approach to modular at:
Autovol.com

If you're considering modular for an upcoming project,
let's talk:



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