

Extended Stay. Expanded revenue.

Beating mountain resort time constraints to get “heads on beds” in record time.



Hawthorne Extended Stay by Wyndam—Jackson, WY

Quick Facts

- Developer: GCHB Venture
- Onsite Contractor: Snake River MEP
- Location: Alpine, Wyoming
- 130 rooms/260 beds
- Phase 1: 68 rooms
- Phase 2: 62 rooms
- Design & Preconstruction: 9 months
- Factory Completion: 1 month
- Building Assembly: 10 days
- Est. Time Savings: 10 to 16 months



Few places are as picturesque as Jackson, Wyoming. That can be both a blessing and a curse. 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. People like Casey Rammell are attacking this challenge on multiple levels—and they’ve tapped Autovol for help.

Growing up in nearby Driggs, Idaho, Casey has built a range of housing and accommodations in the area, and cofounded GCHB Venture with partner George Masing. Bringing housing to these parts takes a lot of know-how and ingenuity. Mountain resort conditions pose a triple threat: short build seasons, lack of local workforce, and a huge imbalance in housing supply and demand.

TOP: Architectural renderings of the Hawthorne Extended Stay by Wyndam in Alpine, Wyoming

While the following may look like a typo, the average free-market rate for a new single family home in Jackson/Teton County, Wyoming was \$5.1 million in 2023 according to a report from the Teton County Housing Department (TCA). *

The report says only about 60% of Jackson's workforce are residents. Attainable housing for that workforce is a major factor. An example TCA assessment scenario: a nurse and police officer with three children would see a monthly shortfall of nearly \$1,000—and be unable to afford living in Jackson. The urgency for more housing impacts not only Jackson, but the construction crews who need a place to stay while building in Jackson during a short build season.

"We're attacking a 3,000-unit problem 60 units at a time," Casey shares. "The quicker we can turn more projects, the sooner we'll bring some real impact. It starts with being able to house the crews we bring to the area during the summer months when lodging prices are astronomical."



Casey and George were planning a project in Alpine Wyoming, just 36-miles south of Jackson. This gateway community could put less-costly housing within reach of the construction crews building in the area.

While planning the project, they considered both workforce housing apartments and hospitality with kitchenette. Besides housing construction workers, the hospitality approach could also house service workers, and accommodate vacationers unable to afford a stay in Jackson. Either way seemed like a good opportunity to pilot a modular construction solution to area's housing challenges.

Casey had first heard of modular years before while attending a construction management program at Purdue University. During a course, he saw the potential of modular to solve just these types of problems.

"A professor at Purdue showed us a video in China of them stacking a 30-story building in 17 days," Casey recalls. "Then he said, 'here's the future guys.'"

Casey had tried projects using panelized and containerized approaches that left him unsure, but still determined to try again. He and George saw automated modular as a possible silver bullet worth reconsidering. Reaching out to Autovol soon helped them get on board.

"We were still very interested in the process, but we had to find the right company to do it with," Casey said. "Once I went over and walked Autovol's plant to see how they did it and what their inspection process was, it closed all the gaps for us right there."

Top: Casey Rammell, Co-owner of GCHB Venture and President of Snake River MEP



Initial Autovol visits included Casey and George as well as Autovol's CEO, Rick Murdock; CTO, Curtis Fletcher; Director of Business Development Michael Merle, and Director of Preconstruction, Steve Clough. Steve helped define the project upfront by designing a preconstruction checklist that aligns developer needs with modular design and factory best practices to optimize efficiency and constructability.

“The initial design came together in a matter of a couple hours...”

Before hitting Autovol's factory floor, the project was designed and modeled by Prefab Logic, another firm co-founded by Rick and Curtis. The design was created using Prefab Logic Housing products, developed by Curtis. Already factory proven and site friendly, the predesigned products accelerated the process for the developer/architect significantly and reduced the overall design costs. These products also leveraged the power of standardized design and supply-chain materials to take advantage of economies of scale.

“The initial design came together in a matter of a couple hours,” Curtis says. “That formed a good basis to customize with some customer-specific features. With these tools, we can establish a starting place and customize a design in a fraction of the time. At the same time, the design is basically vetted for constructability in the modular factory and onsite. Besides speed, these tools also greatly simplify materials procurement and project execution.”

Prefab Logic transformed the basic design into a digital twin of the final project. The digital twin process was completed upfront for all project phases. Once completed, this digital twin became a meticulous model of the actual building. This model contains all building specification data. Everything can be viewed in VR to give stakeholders a virtual tour of the building's architectural, structural, mechanical, electrical, and plumbing features. These critical models not only drive the factory robotics, but can also guide the entire manufacturing and on-site teams on how to bring the entire project together smoothly and efficiently.

Prefab Logic has done preconstruction on more than 80 modular projects, including all of those built in Autovol's automated factory. Prefab Logic worked with all stakeholders as well as state agencies to get the project approved to everyone's satisfaction while compressing the schedule significantly. The firm's Director of Design, Marshall Bosier, says this project went quickly, despite a change in funding mid-project that impacted the design.

Top Left: Curtis Fletcher, CTO and Co-Founder, Autovol; CEO and Co-Founder, Prefab Logic **Top Right:** Project floor plan designed with Prefab Logic Housing products



Above Left: Prefab Logic digital twin makes all building components viewable in VR. Scan QR for a virtual tour! **Above Right:** Marshall Bosier, Prefab Logic Director of Design

“We can get an integrated model ready in as little as eight weeks, and be getting approvals and creating shop drawings for the factory to get started building. This wasn’t that fast, but it was one of our quickest projects from kickoff to approval,” Marshall says. “On this project, they had first planned an apartment (R2) occupancy but shifted to a hospitality (R1) type of occupancy. That requires a different level of code. So we had to pivot and rethink some of the design elements for things like bathroom accessibility.”

The plan was to build the project in two phases. This would enable the property to open sooner and start accommodating guests while completing the second phase. The digital twin was designed to provide a complete factory-ready model for both phases upfront. That gave the factory everything it needed to bring each phase into production quickly. It also enabled everyone a way to plan both phases ahead of time, and begin prepping the site in advance.

“It was super beneficial that the onsite work was going on while the Autovol factory was prepping and building,” Marshall Says. “Our digital twin helps there because the onsite team can accurately create the foundation, during and even before factory work, with confidence that everything will align once the modules are set onsite.”

“We can get an integrated model ready in as little as eight weeks...”



Above: Prefab Logic digital twins contain all building data and make building components easy to view. Autovol robots do the heavy lifting so tradespeople can work smarter.



As Casey, George, and crew were focused on the site, the Autovol team was transforming shop drawings into finished modules. Autovol's CEO and co-founder, Rick, says it was one of the company's quickest projects.

“From the time we laid our first boards here at Autovol to the time we delivered the product was 30 days...”

“From the time we laid our first boards here at Autovol to the time we delivered the product was 30 days,” Rick says. “It was Autovol's first project in Wyoming. Our team has lots of past experience with mountain resort projects and we look forward to doing more of them.”



In those 30 days, the individual units were practically move-in ready—from fully tested plumbing and electrical, to appliances and final finishes. Autovol Preconstruction Director Steve Clough kept critical lines of communication open between all the stakeholders during this critical phase where accurate execution and timing are everything.

“All the stakeholders leaned into this project and I think it really paid off in quality and strong execution,” Steve says. “We had developed a preconstruction checklist to define things upfront. It paid off as everything came together. Things like the room size put Autovol's module length limit to the test, but the factory crew was ready, and they delivered.”

Top: Autovol builds and ships modules from Nampa, Idaho, to sites across the West **Above:** Rick Murdock, CEO and Co-founder, Autovol; Chairman and Co-Founder, Prefab Logic



All the careful planning and collaboration enabled the finished modules to begin shipping immediately after factory completion. Seasoned crews from Snake River MEP and Accuset Construction were keyed up to set the building at breakneck speed.

"Onsite logistics were amazing," Steve says. "And the alignment turned out extremely tight, with tolerances of 1/8-inch."

Some advanced approaches made the onsite set process especially efficient. Autovol onsite services director Joe Sievers and Accuset founder Kirk Hall brought forward a smart suggestion: pre-building the roof in pieces on the site foundation in advance.

"We were at a scope meeting at the factory," Kirk says. "We asked Casey, 'have you ever thought of pre-building the roof pieces on the foundation then setting them off to the side?' They were on board instantly."

While the modules were enroute from Nampa to Alpine, an onsite team sheeted prebuilt roof trusses on what would become the building foundation. This sped up the completion of the roof structures, as well as the "dry in" process essential to protect the building from any potential rain.

"We finished the roof structures on the ground," Casey says. "They swung them out of the way while setting the modules, then set them on top. We probably got the roof sheeted in a quarter of the time on the ground than we would have in the air. With this approach, it had us pretty much dried in after about 10 days."



"We probably got the roof sheeted in a quarter of the time on the ground than we would have in the air..."

Top: Steve Clough, Autovol Director of Preconstruction **Above:** The onsite team had these roof pieces ready in advance, so they could be placed by crane very quickly



“I like to do things as efficiently as possible. We get our doors open quicker and the customer gets a better product...”

Collaboration and preplanning between the set crew, Autovol onsite services, and the teams led by Casey and George, made the project go exceptionally well, according to Kirk.

“They worked really well with us to preplan that and other onsite activities,” Kirk says. “I’m very impressed with them. I’d love to work with them every day.”

Kirk also pre-planned a time-saving approach to onsite module transport. All the modules were delivered to a laydown area at the site. Using two trucks, Accuset could shuttle one module in place for crane set, while getting the next prepped and loaded onto a second truck.

“Using two trucks was definitely the way to go,” Kirk says. “It kept things moving and avoided stoppages for peak efficiency.”



Top: Room interiors were fully finished and tested at the Autovol plant **Above:** Modular construction greatly reduces onsite build time, materials clutter, noise, and waste



Two-truck shuttling and other carefully planned and executed approaches enabled the team to assemble the entire phase 1 building and most of the roof in record time.

“We had the building set and most of the way dried in after seven days,” Casey says.

“...getting your doors open 10 months sooner is a pretty big savings.”

At this writing, the project is still a few months from occupancy. But many of first-phase rooms are already reserved for long-term guests including GCHB Venture crews, and staff at a clinic in Alpine eager to provide housing for health-care staff in such a limited market.

With all the guest rooms largely complete, and a roof over their heads, Casey and George can now focus on getting the exterior, corridors, and common areas done. They believe adopting this approach will save 10 or more months.

“This project would have gone 18 to 24 months on a conventional schedule. We’ll do it in 8,” Casey says. “That kind of speed is good for everyone. I like to do things as efficiently as possible so that everyone on the project makes money. In that process, things go quicker, we get the doors open quicker, and our customers get a better project in the end. Hopefully we’re generating a few million a year in gross revenue, so getting your doors open 10 months sooner can mean a pretty big savings.”



“We had the building set and most of the way dried in in seven days...”

Top: Two flatbed trucks onsite enabled one module to be prepped while another was being set **Above:** This 68-room phase-1 building took shape in a matter of days

Valued Collaborators

Click a logo to find out more about any of the team shown here who helped make this project so successful.



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