

# Who will challenge Goliath? New giant wooden roller coaster awaits riders

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*Curtis Clark works high up on the new Goliath roller coaster under construction at Six Flags Great America in Gurnee, Ill., on April 30, 2014. Photo: Stacey Westcott/Chicago Tribune/MCT*

CHICAGO — Alan Schilke’s job is to make people scream.

Schilke is a hotshot roller coaster designer, who is building a massive, record setting wooden coaster at Six Flags Great America in Gurnee, Ill. When he first saw the small construction site, he knew he would have to do back flips to squeeze shrieks out of his customers.

“Necessity is the mother of invention,” he said. “We had to make a crazy ride just to get it to fit on the site.”

The resulting attraction will set three records for wooden roller coasters. Goliath will be the fastest and steepest wooden coaster in the world, with the longest drop. It will hurtle riders at 72 miles per hour (mph) down an 85-degree, 180-foot cliff. Then it will rocket them into hairpin curves, two upside-down twists, and a zero-gravity stall to make passengers feel momentarily weightless.

Goliath is the latest in a revolution in coaster construction, coaster fans say. It twists wooden tracks into shapes never before seen, with inversions, overbanked curves and whip-crack reversals of direction.

## "Can't Wait" To Ride

The rising coaster structure is still a few weeks from completion. The Goliath is due for its public opening May 31, with a preview for season ticket holders the day before. Coaster lovers are already planning group outings.

“We are definitely excited to ride this thing,” said Scott Heck, a spokesman for American Coaster Enthusiasts. “I know a lot of people across the country want to come. I can’t wait.”

The coaster is being built by the innovator in wooden roller coasters, Rocky Mountain Construction Group from Hayden, Idaho. The company is run by Fred Grubb and his wife. Before launching the business, Grubb was a carpenter and welder building coasters at Silverwood Theme Park in Idaho. In that job, he often had to repair old wooden coasters.

Grubb and his engineers decided there must be a better way.

Traditional wooden roller coasters like the American Eagle or Little Dipper at Great America have simple steel plates lining the track where the wheels go. Rocky Mountain instead built a steel trap that encases the wood track and is much stronger.

The company then developed a method of building new wooden coasters. Rather than building tracks on-site, as done in the

past, Rocky Mountain cuts, flexes and welds the steel into whatever shape is needed and fastens it to laminated pine in the shop. At the same time, workers curve it to within a sixteenth-of-an-inch margin of error over 40 feet of track.

### **Quiet Ride On Nylon Wheels**

That approach allows the track to bend in ways traditional wooden rides wouldn't.

The company wowed riders last year after it built the new Outlaw Run coaster at Silver Dollar City in Branson, Mo. The ride won a Golden Ticket Award from Amusement Today as the best new amusement park ride of 2013.

Using a similar approach as Outlaw Run, Goliath's wheels will ride on a metal covering that is also filled with grout to provide more strength and a quieter run. That's an important concern to neighbors who live near Great America. In addition, the cars will run not on traditional steel wheels but on nylon wheels in the cold and urethane in the heat.

The construction crew of about 35 men from Idaho included former tradesmen, loggers and rock climbers. They are used to winter temperatures in northern Idaho that often drop below zero, but even they were taken aback by the latest Chicago winter, one of the worst on record.

"Our guys are tough," Grubb said. "Even they said this is absolutely brutal."

Since September, they've worked 11-hour days, six days a week, through the snow and cold. They've missed only two full days of work because of weather. But with the wind chill and snow numbing workers' hands and making footing on high structures dangerous, the crew members had to stop frequently to recover in warming shelters.

### **Hold Onto Your Hard Hats**

Crews still must finish building the track and installing the mechanicals, like the chain that lifts the cars and the magnetic brakes that stop it. Then will come after hundreds of test runs, featuring water-filled dummies wearing accelerometers to ensure that riders can endure forces more than three times the pull of gravity.

Despite the winter work, crew members say building coasters is a lot more rewarding than building an office or a sewage treatment plant.

"It's better," supervisor Matt Whiteman said, "because when you're done, you get to ride what you're working on."

Park officials wouldn't say exactly how much the coaster cost, but said it was more than \$10 million.

The Goliath will make Great America the wooden coaster capital of the world, park officials say, with more feet of wooden track than anywhere else. When finished, the 3,100-foot ride is expected to last about a minute and a half — though the moment riders plunge over the top may seem to last an eternity.

Steel coasters at the park like Raging Bull can bend crazily and go faster and higher. But traditionalists love the look and ride of wooden coasters, which are increasingly rare. Schilke, the designer, says wooden coasters feel faster in a tight space.

"It's a different feel," he said. "Everybody knows the difference. If you closed your eyes, you'd say, 'I'm on a wooden coaster here.'"