

Cutting edge Bay Area tunnels poised to open

Martha Mendoza, Associated Press, 2-24-13

PACIFICA — Two slick new mile-long tunnels are undergoing final safety tests this month, poised to divert motorists away from an ocean cliff-hanging roadway dubbed Devil's Slide south of San Francisco to a smooth, Alpine-like passageway unlike any in the U.S. today.

The \$439 million project, paid with federal emergency funds, features massive exhaust fans, carbon monoxide sensors and a pair of 1,000-foot bridges soaring 125 feet above a grassy horse ranch. A series of 10 fireproof shelters are staggered between the double bores, and remote cameras dangle from the ceiling, monitored by an around-the-clock safety staff of 15.

The tunnels, the first in the U.S. designed and built with an Austrian technique, have a Euro-glossiness to them, with white, glistening walls and shiny pipes gliding down a rounded ceiling. There's a bit of theme park vibe as well, with retaining walls and fake boulders at the entrance sculpted by the man who shaped and molded Disneyland's Indiana Jones ride.

"A new highway tunnel is a rare beast in this country, and what they are doing at Devil's Slide is certainly different than anything we've seen in the U.S.," said Neil Gray, director of government affairs at the Washington, D.C.-based International Bridge, Tunnel and Turnpike Association.

The Tom Lantos Tunnels, named after the late congressman, are the first tunnels built in California in more than 50 years. There are only a handful of tunnels under construction in the U.S. today, including the Alaskan Way Tunnel in Seattle, and the fourth bore of the Caldecott Tunnel, just 34 miles east of Devil's Slide in the eastern San Francisco Bay area.

Unlike those tunnels built to relieve commuter congestion, this new pair, 15 miles south of San Francisco, will divert a treacherous 1.2-mile stretch of the Pacific Coast Highway that constantly erodes and frequently collapses.

It's a spectacular section of road that was never meant to be.

Just three years after its 1937 completion, the road tumbled into pounding waves below. The road has fallen eight times since, causing costly closures that have devastated communities to the south — Montara, Moss Beach, El Granada, Princeton and Half Moon Bay — that depend on the route for daily commutes and for tourism from motorists heading south from San Francisco.

Each closure turns a 7-mile scenic drive from Pacifica to Montara into a 45-mile detour through the hills, and some have lasted for months.

In addition to slides, every year there are serious — often deadly — accidents on the narrow roadway, which twists so sharply that safe drivers are forced to slow to less than 25 mph. Reckless motorists have plunged hundreds of feet down the cliffs or drifted into oncoming traffic, resulting in horrifying head-on collisions. Plans are to turn the road, once closed, into a pedestrian and cycling park.

The new route, once bitterly contentious, became a model of Californian cooperation in 2006 after local voters declared 3-to-1 that they wanted the more expensive tunnels instead of a state-backed 4.5-mile road that would cut inland around a rugged, sage-covered mountain, crossing streams and paving over sensitive plants and habitat.

But not everyone wants to be rerouted.

For decades, Capt. William "Smitty" Smith, has eased his SUV every morning through the stretch, driving south from San Francisco to his charter boat in Half Moon Bay.

"I come around the Devil's Slide bend and the whole world opens up, the entire coast, and I can see what kind of day I'm going to have," he said.

Now, instead of dense fog, rainbows, choppy seas and rolling currents, he'll face a tunnel long enough to challenge the toughest breath holders in the back seat.

Other residents are apprehensive about earthquakes. The tunnels cut through a seismically flashy area, where the notorious San Andreas fault grumbles and jolts.

"I'm not going to like going through those tunnels, but it's mind over matter," said Phoebe McGaw, working in a coffee shop a few miles south of the project. "And it's about time they finish."

Neither on budget nor on time, it was a 5-year, \$240 million project when it launched in 2006. Seven years and \$439 million later, Y. Nien Wang, project manager for design contractor HNTB Corp., said seismic concerns, along with few existing standards and regulations, made it a particularly challenging project.

The Federal Highway Administration is only now developing national tunnel inspection standards, and doesn't track information on tunnels in any systematic way. And since this was the first tunnel constructed in decades in California, there were many first-time decisions to be made about seismic safety and design.

"A lot of what we did will be a model for future tunnel work in California," said Wang.

The one-lane tunnels with wide shoulders for stalled cars and bicycles are built to withstand a magnitude 7.5 to 8.0 earthquake, the maximum movement geologists estimate for this reach of the San Andreas fault.

Caltrans spokesman Bob Haus said the site's geology also added costs. With one set of machinery for soft rock, a different set for hard rock, crews dug with what were at the time the two largest excavators in the country, 148 tons each. Each time they bumped into a different type of rock, they would have to swap out the entire set of machinery.

"We had to demobilize, remobilize, demobilize, remobilize," said Haus. "That adds up."

And then there were the red-legged frogs. Early on, planners realized that at least one of the 256 streams this protected species lives in ran close to the tunnel sites. Thus, a team of three biologists were hired to protect whatever frogs they could find.

Going from sliding roadway to high-tech tunnels has been a grinding process for U.S. Rep. Jackie Speier, D-Calif., who spent hours in emotional hearings about the slide as a county supervisor 25 years ago.

"When we first started debating this issue, I was young and frisky. Now I'm old and color my hair," she said. "But residents on the coast no longer have to live in fear that their road will wash out and they'll be stranded."