The Bridges of Santa Cruz County

SC County has been undergoing some pretty major bridgework of late, and not the kind you get at the dentist. If you spend any time in Aptos or Soquel, you've probably noticed the extensive construction being done on the two villages' main bridges over the past few months (make that years.) Down in Watsonville, plans are in place to build a brand new bridge on Harkins Slough Road – providing year-round, weatherproof access to the future site of Pajaro Valley High. And finally, just for fun, take a look at one of the county's most impressive historical landmarks, the Felton Covered Bridge.

It may be just a bump in the road or a delay when getting from point A to point B. Most of the time folks aren't aware when they cross one of the many bridges in Santa Cruz County. But from the 1920s to the 21st century, the bridges of Santa Cruz County represent a feat of engineering as varied as the landscape from the redwood forest in Felton to the sloughs of Watsonville.

Through earthquakes and floods the bridges of Santa Cruz County have withstood the test of time. And the biggest challenges don't always come from Mother Nature; the County Department of Public Works could be facing a battle with the state budget crunch when they start construction on the new bridge over Harkins Slough Road for Pajaro Valley High School.

In 1996, CalTrans began doing seismic retrofitting on 20 bridges throughout Santa Cruz County. Santa Cruz County Public Works Director Tom Bolich expedited the repairs in an effort to get it done as soon as possible. Seven c.J. Cannino

years later, the work is wrapping up. Funding for bridge work comes from the federal government, with some subsidy from state funding. "Santa Cruz is ahead of the game," said Bill Williamson, director of design engineering for public works.

Aptos Creek Bridge

Soquel Drive, Aptos Village
Two years of hard work are finally
paying off, as the finishing touches are



The most complex work undertaken on the Aptos Creek Bridge was done below the roadway on the bridge's support structure. 21st century technology helped to ensure that the 70+ year old bridge should be with us for at least 70 more.





being done to the Aptos Creek Bridge. PG&E crews are relocating utility lines and according to Williamson, work should be complete within the week.

"It's been a two year struggle to get it done," said Williamson. But he said it's well worth the wait. "If there was a major earthquake, that bridge would probably be the only thing left standing in Aptos," he said. And he adds proudly that his department didn't receive any complaints of traffic delays.

To truly appreciate the seismic retrofit on the Aptos Creek bridge, you have to see it from underneath. "The thing that impressed me the most was how they set up all the scaffolding and platforms underneath," said Glenn Skogen, field representative for the local carpenters union. He adds that fiber optics that serve as the main connection for telecommunications in Monterey and Santa Cruz County run beneath the span had to be delicately relocated or service for both counties would have gone down.

The design specialist admits they don't make them like the Aptos Creek Bridge anymore and the retrofitting process was aided by a sound structure to begin with.

"We poured a lot of engineering into that project," said Williamson. Again, construction was limited to four months out of the year because of salmon and steelhead. "We had to be careful about tarnishing the water quality," said Williamson. Bridge builders poured extra concrete infill between some of the curved arch sections and put steel material wrap around the base.

According to Skogen, the Soquel Bridge basically entailed building a whole new bridge, but in Aptos most of the historic structure was kept in tact and that complicated the project. Both Williamson and Skogen give credit to the Agee Construction company.

Bargetto Bridge

Soquel Drive, Soquel Village

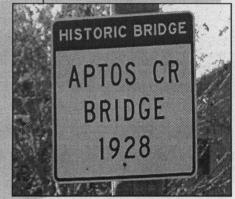
For the better part of two years, motorists have been enduring delays along Soquel Drive while the Bargetto Bridge and the Aptos Creek Bridge both underwent construction. Now finally complete, the Bargetto Bridge in Soquel is a model of modern bridge work. "We really like the Bargetto. We love doing bridges," said John Presleigh, assistant director of public works. Presleigh admits his department received complaints from frustrated motorists, but the project did start and finish on time and can be viewed as a model for

the rest of the county.

The next time you cross the span, know that a piece of local history lies beneath you. A time capsule was embedded in the concrete on the southwest corner of bridge. "We put in a bottle of Lawrence J. Bargetto Cabernet Sauvignon and pictures of Soquel," said John Bargetto, from Bargetto Winery. The bridge was named after John's father Lawrence in 1983. The elder Bargetto passed away suddenly in 1982 and as one of charter founders of the Soquel Water District and an active member of the community, the county granted permission for the bridge to be named after Lawrence Bargetto.

Work is nearly complete on the Aptos Creek Bridge, which will mean an end to the traffic delays that Aptos residents and visitors have come to know all too well over the past two years.

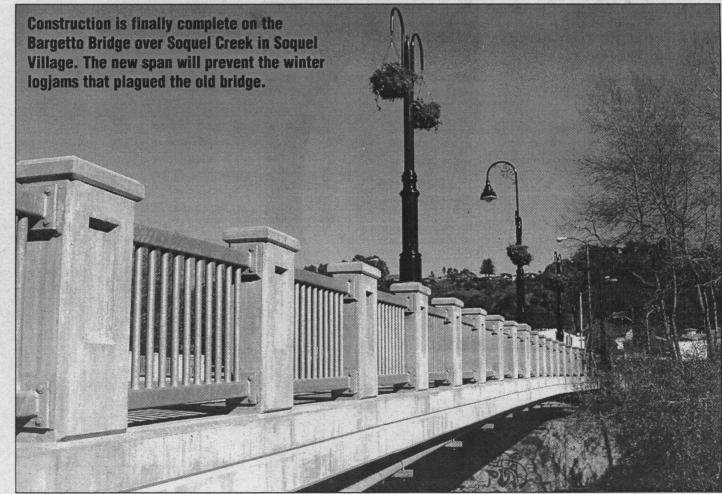
She's old, but better than ever...
Although recognized as an 'historic bridge,' the Aptos Creek
Bridge can now look forward to a long and bright future.

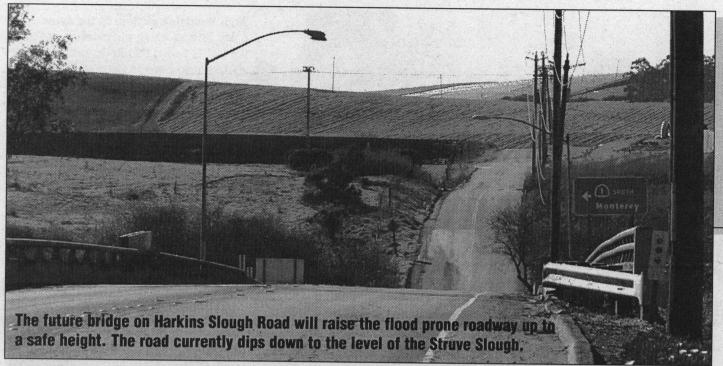


Construction on the Bargetto Bridge and the approach wrapped up in the beginning of December and was a joint effort between the Redevelopment Agency and Public Works. The \$3.5 to \$4 million bridge upgrade included more than just the bridge, incorporating a "streetscape" improvement plan. Along with the new span came signal upgrades, landscaping, new bike lines, a new and improved sidewalk, lights and hanging baskets. "It's a beautiful bridge," said Presleigh.

"I think of two things when I drive over that bridge," said John Bargetto, "I think the designers and builders did a beautiful job and I think of my Dad."

Continued on p.6





Bridge Over Troubled Water

The span that runs through historic Soquel had always been a source of worry because of the center pier, which would catch all the debris flowing down the creek during the winter. Public Works officials, along with residents, were concerned about the potential for flooding with a logjam in the middle of the bridge. "During the winter we parked a crane down there just so we could remove the debris,"

Presleigh. Engineers redesigned the bridge without a center pier and constructed it with an arch. The Bargetto Bridge is now three feet higher in the middle and much more structurally sound with the addition of new abutments, among other things. Bargetto said he was impressed with how well the creek flowed during the storms in December. "The bridge was finished just in time before we had that deluge in December," he said.

For the motoring public, the

Bargetto Bridge project was, to say the least, an inconvenience - and according to engineers it wasn't a picnic for them either. Because the Bargetto Bridge is a major thoroughfare, it was important to keep it open at all times. Construction was also limited to July through October because of the steelhead and salmon in the creek. The State Department of Fish and Game was concerned that falling construction debris could impede steelhead and salmon migration. A biologist was on duty to address possible concerns regarding the fish. Experts also developed a special piping system in the water that acted like the natural stream flow while they worked in the creek.

'It was a tremendously difficult project," said Presleigh. Workers closed down half the bridge while they made repairs and funneled traffic down from four lanes to two. Presleigh gives a lot of credit to the Soquel business owners who were extremely patient during the rebuilding process.

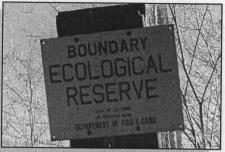
Bridge to the Future

Harkins Slough Road

Within the next two to three weeks. CalTrans is expected to give final approval on the design of the county's newest bridge. The Harkins Slough Road Bridge at the west branch of Struve Slough will be the gateway to the future Pajaro Valley High School. A large dip on Harkins Slough Road that floods during the winter has made it necessary to build a new bridge.

"Even if the new high school weren't being built, we would still need to build a bridge there," said Bill Williamson. According to officials from DPW, three future bridges within three miles of each other are planned to cross Harkins Slough. Two of those bridges will be inside Watsonville city limits.

According to Jorge Duran, the civil engineer heading up the Harkins Slough Bridge, preliminary design calls for five



The surrounding slough's designation as an ecological preserve has made the planning process a delicate and time-consuming endeavor.

rows of columns supporting the span. When complete, the project will probably look more like a causeway than a large bridge. It will have a sidewalk on one side and a bike lane on either side.

"It's pretty standard construction," said Duran. But what's out of the ordinary in this case is the timeline to construct the bridge due to the environmentally sensitive slough area. Each step of the project is subject to extensive reviews before final approval. "The timeline to construct a bridge is double now due to environmental concerns," said Williamson. State officials, by virtue of the California Environmental Quality Act and the National Environmental Protection Act, dictate the construction of the bridge to county officials. According to Duran and Williamson, CEQA and NEPA regulations have become more rigorous in recent years.

"We will have permit conditions (during construction) and the penalties are severe," said Williamson.

Williamson and his co-engineers take the Environmentally Sensitive Habitat Area, or ESHA, very seriously. After overseeing ten bridge projects in the county, Williamson said he's developed a unique working relationship with state and federal environmental officials. "There will be a biologist on site to make sure we're in compliance with the environmental process," he said.

The total cost for the Harkins Slough Bridge is estimated at \$4.2 million dollars, with construction set to begin in June 2004. Eighty percent of the funds will come from the federal government. Twenty percent of the generated from the funding is governor's Transportation Improvement Plan, but with a multibillion dollar state budget shortfall, those funds may be in jeopardy.

Duran said they are still waiting to hear about the funding, but the project has been recommended to be extended until 2004. If all goes according to plan, the project will go out to bid in 2004. With Pajaro Valley High due to be complete in late 2004/early 2005, the DPW must work quickly. "We feel that's going to be adequate time to build a bridge," said Duran.

