

A Few of BPR's Construction "Firsts"

From an Interview with Ray Westby, January 10, 2008

Federal Lands Highway offices have long been leaders in the use of new highway technology, implementing new processes and adopting new techniques.

Everyone has a favorite memory, and one of **Ray Westby's** favorites is the Heart of the Hills project in Olympic National Park. He came to work for the Bureau of Public Roads in 1950 and spent the four years from 1956 to 1959 on that project. A portion of the road had already been completed. "Before World War II, they built about five miles from the top down and (then) they built up to the tunnels," he recalled. "I was Resident Engineer from the tunnel up to about five miles from the top."

The first tunnel had already been drilled when he went to the job. "We drilled the second tunnel and mined both....There were about 8-9 miles in there." It was on this job that the Vancouver Direct Federal office built a **reinforced earth wall**: "The first one that we built in this area." In fact, he noted, "I believe we were the first, even before the State of Washington."

Ray still sees some of the people he worked with there. "A lot of the fellows that...are still around worked with me up there – **Jack Johnson** – quite a few of them."



Two of Ray Westby's early jobs were on the Olympic Peninsula of Washington, just south of Port Angeles.

Another of the "firsts" Ray remembered was also on the Olympic peninsula. "I had (a) paving job – about 14 miles (long)....between Sappho and Crescent Lake on 101." It was the "first **cement treated base** that this Division got involved with. I think it's quite common now." The road wasn't standing up to the heavy log trucks. "That was when they were doing really heavy logging out there," he said. "We did a cement treated base and then we did an overlay of pavement."

It was on a job near Hope, Idaho, that he recalled the first use of *rock pilings*. Ray was working in Design at the time, and said “we never contracted anything out, except something special.” This project was special enough to warrant a contract with a German firm, and the rock piling made the difference, saving the project.

The alignment went along the shore of Lake Pend Oreille. When “they moved a (railroad) over-crossing,” he said, “that left the bridge sticking out over the railroad with no place to go except into the lake.” The intent was that they would put in some fill at the edge of the lake and bring the bridge back to the road, paralleling the shore, “but every time they started dropping any fill in there, it would start disappearing so they gave up on it.”

The bridge had been sitting unfinished for several years before Ray stepped in. “I don’t know how I got involved. I guess just because I was here.” His solution was to initiate the contract with the specialty firm. “In effect what they did was they sunk a piling down and they dropped rock into it....I think they were – if I remember right – 8 or 10 feet on centers.” The rock piling were sunk throughout the whole area where the fill was needed.

“They also used the *reinforced earth wall* to retain the road from sloping too far out into the lake,” he said. The bridge was saved, and as Ray put it, “that took a monkey off our back.”

*Ray left the Heart of the Hills job to become an Area Engineer in Olympia, then headed up by Division Administrator **Ro Rogers**. He worked there from 1959 to 1969, then returned to Vancouver and was put in charge of the Design section.
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