

## Forest Highways: Construction and Redesign

*Compiled from individual interviews, Winter 2008*

*Under ideal conditions, WFLHD staff all works together to get the job done. Project Development comes up with the design, Contracting writes the contract and awards the job, and the Construction staff makes sure the contractor builds the project to specifications. When conditions are less than ideal, however, there may need to be some redesigning done “on the ground.”*

As late as the 1960's, portions of the Mount Hood Highway were narrow and crooked. **Vern Ford** worked on the reconstruction of the section from just east of Government Camp up to Bennett Pass during the 1967-1969 construction seasons. “When we got up on top of Barlow Pass and going on over to White River and Bennett Pass,” he said, “you were following the old road but widening it significantly and straightening it out. It was a really crooked one. There wasn't hardly a place...where two cars could pass – they were just real short tangents.”



*Mount Hood Highway, circa 1920's, from WFLHD Photo Archives.*

“We straightened all that out,” he said. The segment where the highway goes by the White River still floods out. “They have one area” he said, that is “right up close to the bank, and the river bank sloughs off...and dams up the river. Then it builds up, almost like a lake, (and) then it will break through in one massive flood.”

The construction season on a project so near to Mount Hood was short. “Generally we couldn't really start any construction until probably June,” Vern said, “and by at least November you'd be snowed out, and you couldn't do any more.”

That project was a major reconstruction which he called “one of the most challenging jobs that I ever had, because there was so much subterranean water” which remained undiscovered until excavation was begun. In some areas, where the ground was a little swampy, Vern said, they knew there would be water, but “a lot of it we came on was very unexpected.”

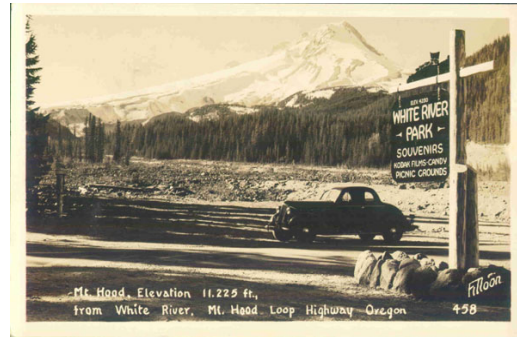
He had reviewed the bid package before the contract was let. “They had an item in there,” he said, “for 800 feet of perforated under-drain pipe. I knew that wasn't going to touch it.” He remembered that by the end of the job, “we had used 10,800 feet – not 800 feet, but 10,800 feet. It was a huge overrun. But it was the only way you could get it built.”

Vern noted, “the last time I went over (that road), it still held up really well, except for that area over by the White River.” Even now the road floods, and will continue to until some permanent fix can be discovered, he noted, adding “I don't know what it would be, short of building a...huge bridge across the whole area. That would be tremendously expensive.”

Vern observed that redesigning on the ground was pretty common in those days, and that the Mount Hood project was no exception. **Merle Hewitt** was the Project Engineer the first year on the project, before he transferred to the Oregon Division. Vern had been the assistant Project Engineer “so I was left there...to finish it.”

It was from the top of Barlow Pass and over to White River, Vern said, where “the design just was not working at all. So Merle and I worked late into the nights redesigning one section that was probably two miles long in order to rebalance the job.” He said the design, in that case, had “made some bad assumptions on the classification of materials in the cuts.”

Then it was up to the contractor to construct to the new design. “We had a contractor that was extremely aggressive: Peter Kiewit and Son, a big outfit. We were working our tails off just to keep stakes out ahead of them. We wouldn’t much more than get a section staked and they’d be on the work, so it took a lot of real coordination...just to keep ahead of the contractor.”



*Historic postcards from WFLHD Archives.*

**Fred Rogers** worked on another portion of the Mount Hood Highway. He recalled that he and **John Bucholtz** were sent out ahead of a survey group to flag a line from Barlow Pass down to the junction with U.S. Highway 26. In order to open up a scenic vista for the traveler, he said, “we tried to aim the road toward Mount Hood.” This was difficult at times because the dense, mature forest often obscured their view of the mountain. When the survey crew eventually came through, however, the views of Mount Hood were right where they had planned them. “That’s the way it is,” Fred said. “You can see it!”

While they were doing the flagging, they came across an area where some of the trees were newer growth. “We flagged down the hill, and we came across...a column of trees that were shorter” than the trees on either side. The segment, about 40 feet wide, was a portion of the old wagon road, the Barlow Trail, where, he said, “they were later going to construct a turn-out.”



*Mount Hood Highway, circa 1920’s, from WFLHD Photo Archives.*

Vern Ford believes that turnout is near a site known as the Pioneer Woman’s Grave. “Just before you got to Highway 26,” Vern said, was “where the Barlow Road crossed Highway 35.” Near the turnout is the grave of the historic Barlow Road traveler. Vern noted “It’s still there. It’s a rock cairn where they buried this pioneer woman.” The old road, he said, used to go much closer to the grave, but when they did the reconstruction, they moved the road further up, cutting into the hillside. He noted they widened areas “where the Barlow Road passed.” There are signs noting where the old road crosses the highway.

Vern found working in the area particularly interesting because his mother’s grandparents had come out west that way. “He was (from) Iowa.... She was originally from England, but she had settled in Kentucky. (They) came out over the Oregon Trail in

1852” and settled in West Linn. The couple had a homestead that was eventually broken out among their nine children. “My grandfather bought another two farms before the town of West Linn (grew up around it). That’s where I was born and raised.” Now he says, it’s all changed. “Any more, there’s not a whole lot of the old pioneer families left. They’re just all pretty much gone.”

**Willis Grafe** also had memories of redesigning “on the ground.” He was still in the Junior Engineer training program when **Wendell Strubel** pulled him out of a course and told him “‘**Bill Utz** just fired his transit-man up at Packwood. Go up there, he’ll need help.’ About three weeks later,” Willis said, “I was sitting on top the White Pass, Project Engineer on a two mile job.... I had four other guys. We went up and laid the road out. I had to redesign some of it because the grade had been laid too low and it was in the swamp.”

In fact, he asserted, “Every job I’ve ever been on I had to redesign in the field.” The reason this was so often the case, he said, was “because I had better information than the designers had. I always had fun with Westby on that – I says, ‘hey, you guys, I got more information than you got -- I gotta do something about this – the creek’s gonna get too high.’” Although it would be years before **Ray Westby** took over the design department, the White Pass was a prime example of redesigning on the ground. “As they came over the Pass,” Willis said, “it was a relatively level area, and after they got the clearing done it was nothing but a bunch of potholes full of water all over the thing. So I had to raise the grade over the whole thing by a couple of feet.” It was “just like being back in the Yukon,” he said, recalling his experience on a survey crew in 1942.

Vern Ford had a similar experience until he initiated some changes in procedures. “Pretty near every job, when you’d started the construction, you’d get someplace into it and you’d run into something that just didn’t work, and you’d have to redesign short sections of it” in order to make it work. He observed that it was a common weakness in the system that “you never saw one of the designers...out on the job.”

When he came in from Construction to work in Design, he said, “I always had a real problem with that. In fact, I was one of the first that helped initiate having designers actually go out on the job and look at stuff physically on the ground, so you’d get a better idea of what you were doing.” That he said, eliminated a lot of the need for redesign after the construction started.

*Vern Ford continued to work in the field until 1976. Fred Rogers spent several years on the Forest Highway program. Willis Grafe worked for Federal Lands until 1957 when he went to the Oregon Division. If you have stories to share, please email me at [marili.reilly@fhwa.dot.gov](mailto:marili.reilly@fhwa.dot.gov).*

