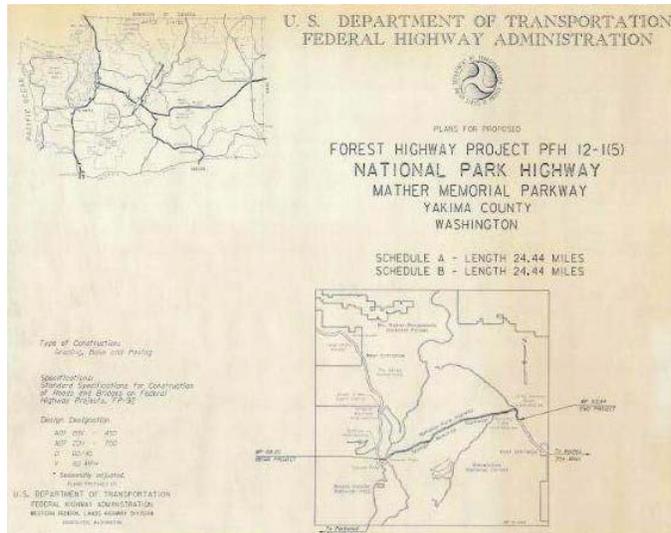


Chinook Pass (National Park Highway) 1994-95, Part I



Most construction projects entail a lot of problem-solving. That problem solving might be done by the Project Engineer; by a contractor, subcontractor, or supplier; or by the designer before the contract is ever issued.

The National Park Highway project began at Chinook Pass on the eastern boundary of Mt. Rainier National Park and headed down grade toward Naches and Yakima. The

terrain was steep and in some places the highway perched precariously on the canyon walls.

The work “was basically milling and paving,” **Gary Hunter** recalled, but if the potential problems were not immediately obvious when he took on the project in the summer of 1994, they soon began to present themselves.

One of the not-so-routine tasks on the job was undertaken to meet the special needs of a partner agency.

There was a 6- or 7-acre borrow pit on the project, Gary said, that was “really ugly, and water had begun collecting at the

bottom of it. The Forest Service wanted to have it turned into a nice scenic area with a fishing hole.”



A hydroseed truck shoots a mixture of water, grass seed, fertilizer, and mulch over the topsoil on the reclaimed borrow pit. Photo courtesy Gary Hunter

**Western
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*A Glimpse into
an Earlier Era*

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Regardless of who comes up with the solutions, it is ultimately the Project Engineer who is responsible for making sure that all problems are addressed and that the project is delivered to the customer's specifications.

Repurposing a Borrow Pit

This requirement provided the designer with a problem-solving opportunity, and plans were drawn up for a pond surrounded by plantings. Topsoil would be placed on the re-contoured pit, grass seed would be broadcast over the surface, and bushes and young trees would be planted.

“But those trees and shrubs and grasses,” Gary pointed out, “would require irrigation lines. So we designed an irrigation system with a sprinkler that would have about an 80-foot radius.

“The contract stipulated that the lines must hold 80 pounds of pressure over a 24-hour period, and required tests be run to prove there were no leaks in the system.” Gary said. “The subcontractor for the irrigation system ran the test, but it wouldn’t hold 80 pounds of pressure for even a half hour. They kept checking for leaks, running the test, but it wouldn’t hold the pressure.” Gary said the sub started

putting pressure on him to waive the requirement, but “I couldn’t do that. I couldn’t turn the project over to the Forest Service if this irrigation system wasn’t working properly.

“I got a lot of arguments from him,” Gary said, but his steadfast refusal to compromise the integrity of the irrigation

I couldn’t turn the project over to the Forest Service if this irrigation system wasn’t working properly.

system finally compelled the subcontractor to do the right

thing and find a solution.

The sub decided to bring in a retired superintendent – “who wanted to stay retired,” Gary noted – and they tried to sweet talk and cajole him into coming back for this project. Finally, Gary said, they “offered him enough money to get him to come back.

“The superintendent started trying to track down this leak, and he ended up tearing up a lot of the underground line before he finally found (it).” Once the leak was repaired, the problem was solved and “the system would hold pressure as it was required to do.”



A subcontractor recontours the pit in anticipation of adding plants and topsoil. Photo courtesy Gary Hunter



With the irrigation system working properly, the subcontractor places topsoil over the recontoured borrow pit.



The irrigation system in action. Inset: The subcontractor locates and repairs a leak. Photos courtesy Gary Hunter

Granite walls match original CCC design

The designers of this project faced many other challenges as well. Gary explained that the design included “a lot of concrete guard wall, because there was a big drop off below the highway.” The original walls had been built of granite by the Civilian Conservation Corps when the road was built in the 1930’s. “These concrete walls were designed to simulate that look.”

However, Gary said, the contract also specified that where the public could get close enough to see the detail, “at several turnouts and overlooks,” the walls had to be built of granite and replicate the look of the original CCC stonework.

The subcontractor in charge of those walls “was pretty renowned for his stonework,” Gary said. He had done some high-visibility projects in the Seattle area, including work on private residences for Microsoft’s Bill Gates and for the CEO of Boeing, and he had his own way of utilizing creative solutions. “He could not find qualified stonemasons anywhere in the U.S.,” Gary

noted, so he made an offer overseas.

Rhodes Masonry went to Ukraine to locate “master stonemasons who’d had years of rigorous training in stonemasonry.” He offered to sponsor them and move their families to the U.S. if they’d come to work for him.

When everything was still, you could hear this chink, chink. . . . like a bell ringing.

Jim Conquest also worked on the project, and, like Gary, he appreciated the craftsmanship and quality of work done by the



Ukrainian Stonemasons complete a wall. Stones in the foreground have not yet been shaped. Inset: Completed stone wall at Chinook Pass Overlook. Photos courtesy Gary Hunter

Ukrainian crew. When everything was still, Jim said, “you could hear this chink, chink. . . . like a bell ringing,” he said. They used a chisel with a special hammer that “looked more like a club. The head on it was round; it was a round, tapered cylinder. It looked like it probably weighed three pounds.”

The native rock used on the project was quarried nearby, Jim recalled, “and they’d create just piles and piles of rock chips. They’d look at a hole they had to fill and grab a piece of that rock and make that thing fit in there. It was just so perfect and immaculate.”

Jim recalled that the Ukrainian workers lived close to the job, possibly near the quarry, “in a kind of primitive plywood camp. . . I understand they used a 55 gallon drum or a plastic barrel for a shower.” That camp, he said, which was located on one of the service roads, was “where they



A stonemason uses traditional tools to shape a stone. Inset: Stonemasons check their stringline. Photos courtesy Gary Hunter

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A Glimpse into an Earlier Era

More of Gary Hunter's and Jim Conquest's remembrances of this project from will be shared in an upcoming article.

For Jim Hall's reflections on the Mather Memorial Parkway, see the story "Partnerships at Work: A Manager's Perspective."

Stories in this series have been developed by Marili Reilly from interviews and correspondence. Retirees who would like to share their memories may email marili.reilly@dot.gov.

Continued from page 3

ate, and lived, and everything...

"You just don't see people working as hard as they worked," he added, producing "the quality of the work that they did, and the quantity."

They worked under their own foreman, and Jim said he

never observed any issues with the crew. "They just did their work and did it well and went on. . . The integrity of their work and how attentive they were and how perfectionist," Jim said, "that's (what) sticks out in my mind."

Gary had the same impression. "They were just superb to watch, real nice. They were real artists. They didn't know any English," he said, but he enjoyed listening to them conversing quietly in their native tongue as they worked. "That was one of the pleasures of the job."



Ukrainian stonemasons, brought to the U.S. by subcontractor Rhodes Masonry, place a stone. Some of their tools rest in the foreground.



Stonemasons fit the shaped stones together and apply mortar. Inset: Completed stone wall at Fife's Peak Overlook. Photos courtesy Gary Hunter