

## Reflections of a Resident Engineer

By John Parr, Emp #142, with introduction by Don Marske

*I met John when he was serving as Randy Naef's resident inspector on the Lahaina Wastewater Treatment Facility. That was 1982. Then out of the blue in 2024, John sends me the following highlights of his 31-year career spanning 22 projects as an engineering technician, a resident inspector or, when needed, a resident engineer. Over the years, we have featured Reflections from our engineers featuring the development and design of our major projects. I thought it would be fun to hear from our construction inspectors as they convert those designs into the built environment. John's journey was special. Enjoy.*



I have completed about 22 different job assignments with the company from 1965 to 1996. I will highlight a few of the more interesting ones. Thanks for the opportunity to air out my scruffy hide!

### Highlights of Work Prior to CH2M HILL

I finished 1 year of forestry at the University of Idaho and followed this up with a trade school course in Machine Shop at Idaho State College/Pocatello. I enjoyed trade school and graduated in 1958!

I worked with the Union Pacific Railroad (RR) bridge crew from Biggs Junction up to Wasco & Grass Valley. The damn locomotives set fires inside the canyon; and it badly burned one of our crew members, Allen Emel, an old ex prize fighter from Portland.

I then went south and worked with the Southern Pacific RR bridge crew between Medford and Ashland. I remember early one spring eating lunch looking down on old Highway 99 watching all the Buicks, Pontiacs, and Oldsmobiles with chairs and mattresses tied on top slowly heading north for the berry and bean harvest in the Willamette Valley. Some RR workers referred to them as C.I.O.s (California Improved Oakies). [sorry]

I got tired of railroad work and jumped ship to the U.S. Forest Service at Grants Pass. We slope-staked a heavy-duty logging access road out towards Agnes looking down on the Illinois River. The camp boss would not let us go into town on weekends. He was a poker shark and took most of our wages.

After Grants Pass, I took a job with the Oregon State Highway Bridge Department (OSHBD). They sent me down to Klamath Falls one winter. We were rotary drilling and taking split tube samples for the main bridge piers over the Link River. About 30 feet down, we hit a big layer of iron pyrites; and, lord God, I thought we had hit the

mother lode. I was jumping for joy. Dang!! - no early retirement!

After Klamath Falls, the OSHBD sent me out to work on the proposed new bridge across the Columbia River - the Astoria Megler Bridge. They set up a churn drill on a steel barge, and we were taking split tube samples of the ship channel bottom. Forty feet below the bottom of the channel, we were going through perfect Douglas Fir logs. One night, they left me on the barge to secure the equipment. At about midnight, I looked upriver to see a freighter coming downstream sideways at the barge. The towboat captain fire-walled his engines to line up the freighter, but it was too late. I am looking up at this monster as it slid by about 20 feet outboard cutting our two barge anchor lines, snapping off our casing and 1 week's work. Scared the hell out of me.

We finished the test holes for the bridge's high span, and I was sent out into the middle of the river to help put a load test on some prestressed concrete piling. I don't know why these pile bucks jet the wood piling almost to grade and then hit them twice with a hammer and expect them to hold. Anyway, they were big jacks from France. Taking turns, we jacked pressure on the piling for about 4 hours. At this point, the gage stopped moving; and we realized the whole damn wooden test tower was being lifted upwards. I suspect some OSHBD engineers did some fancy load calculations for the piling final design.

Following the Astoria bridge work, I was sent to drill test holes for the Portland double-deck Marquam Bridge across the Willamette River. The highlight was working with a WWII POW survivor, Emmett Gibson. His story was filling in the railroad bomb craters in Germany. He would hide in culvert pipes during live bomb raids and then do it all over again.

**Youngs Bay Bridge.** After finishing work on the Astoria Columbia Bridge, I was sent around the corner to the Youngs Bay Bridge where we were taking split tube samples of the bottom. We tied two barge anchor lines to the adjacent railroad trestle. My drill foreman, not understanding the power of a deck winch, tore out a RR vertical support piling from a bent. This caused me grave concern, and I told the foreman to call the railroad. He never did. To make matters worse, we had to work with the tide; and this guy delayed our departure. Our 35-foot tugboat made it approximately 200 yards away from the barge, and we went hard aground. The tugboat keeled over 45 degrees in the mud. The boat operator, Victor Manners, and my foreman, Herbert Duvall, got into a hell of a fight. I left the cabin and went down below and laid on top of the diesel motor for heat (December). I fell asleep; and 6 hours later, the tide lifted the boat; and Victor fired up the engine with me on top. The freaking fan blade chewed off the bottom of one boot and damn near gave me a heart attack. Yes sir. Construction work is dangerous.

**Dalles, Oregon.** I took a highway survey job with the Oregon State Highway

Department (OSHD) and was sent to Dalles, Oregon, for the relocation of Interstate I-84 freeway. Eisenhower's federal interstate highway program was in full swing. General construction dredging was contracted to pump thousands of cubic yards of gravel out of the Columbia River for our project. Lo and behold, out of the dredge pipes came hundreds of ancient Indian artifacts including spearheads, arrowheads, beads, net anchors, stone knives, scrapers, and one stone paint pot. A sad issue here was that many baby sturgeons came flopping out of the pipes. My survey crew stopped work just to pick up artifacts, but nobody was there to place baby sturgeon back into the river. During construction, it was common in the morning to see Indians loading U-Haul trailers with 8- and 9-foot sturgeon and heading to Portland for quick money.

I passed my engineering tech exam in Dalles, Oregon. I was then sent to Canyonville, Oregon, for work on Interstate 5. We hammered away at spiral curves and tangents through the mountains towards Grants Pass - jumping back and forth from "P" lines to "I" lines with dumpy levels and K&E transits followed by slope staking some severe bench cuts and always in the rain. This got old fast, but I always loved the calculating and numbers game!

**And so, in late summer of 1965**, I came wandering into the CH2M office on Western Avenue in Corvallis and carefully filled out an application. Good old Swede Nordquist came walking out with my application and asked me to go to work right away. And the rest is history.

**1965.** Right out of the gate, Swede sent Frank Thompson, Emp #90, me, and Hal Bosley down to North Roseburg to collect elevations for a sewer design. Damn near got my head torn off by an airborne German Shepard dog yanked up short on a steel chain. Hotter than hell in Roseburg at that time. After work, we hit the hotel bar for a beer. Some bar redneck threw some aspersions at Frank, and the fight was on. The first time I ever seen a bartender fly over the bar counter feet first to break up the fight.

**Sometime around 1966.** I was sent up to Portland with Ralph Peterson and another tech to put a load test on a Terminal 2 prestressed concrete piling. At that time, Ralph was still in college and working part time with CH2M. Driving 80 miles to Portland, Ralph gave us a blow-by-blow account of the animal farm hierarchy that really impressed the tech. We started the load test; and sure as hell, after 5 hours of jacking, the gage stopped moving. Same damn thing as the Astoria Megler Bridge, piling lifting the test tower!

**1967.** I was assigned to a high earth-filled dam project out of Toledo, Oregon, - the Mill Creek Dam and Fish Ladder! Near the end of the project, a ribbon-cutting ceremony was planned with Governor Tom McCall officiating. All the blue-collar workers on the dam, including myself, were instructed to stay down out of sight inside the fish ladder. My very first glimpse of political bullshit. Black limousines pulled up, a short speech, and bam, they were gone!

**1968.** I was sent to Ferndale, WA, to help the resident engineer, Bill O'Farrell, on a water treatment plant. O'Farrell was Irish, and I enjoyed working with him. He subsequently had a heart attack, and I wound up cutting my teeth on my first water treatment facility. We sank a raw water caisson with cutting edges beside the Nooksack River. It got hung up on a log 18 inches above grade on one end. We sent a diver down with dynamite to drill and place charges. It was snowing outside and "boom," that damn caisson settled to within two tenths of grade.

A highlight of this job was watching thousands of salmon migrating upstream with fins out of water followed by an Indian war with white fishermen. Upstream fishermen dumped in straw bales to plug up the gill nets. Tension was high!

**Samoa, California.** Arlen Borgen sent me down to a large industrial water treatment plant for a Georgia Pacific (GP) paper mill. This project was fast-tracked at time and materials with many large machines sitting idle and billed to GP.

I had a memorable flight from Portland to Samoa in GP's boom-tailed Lockheed. The aircraft wig-wagged all the way with two GP CEOs up front smoking cigars. Motion sickness and cigars was catching up with me, and I wanted out. Samoa was fogged in, and we had to land at a high mountain strip. It was also fogged in. The pilot stood the plane right on its wing tip and dived through an opening for a visual landing. Froze my ass waiting for a ride into Samoa.

At the job site, Norm Ward gave me a good lesson on checking structural re-bar. GP pulled out all the stops giving their employees a Fourth of July picnic in their own private red wood park southeast of Eureka. Gigantic redwoods, and full beef animal was barbecued. The volleyball players were interrupted by a monster redwood limb crashing to the ground, narrowly missing a girl player. She passed out and had to be revived with water!

**Lake Oswego, Oregon.** I found myself working with Burton Lee Anderson, who I admired for his people and job skills. This was a complex transmission and distribution water system throughout the city that included dynamiting hard rock pipe trenches around the lake. While on this job, Bob Adams came out field and asked me directly if I was OK after the high stress Terminal 2 Dock project. I told him I was OK with it.

**Wenatchee, Washington.** I worked with John Doran on Pangborn Airfield. It was a resurface of the main runways and diagonal taxiways project, a classic mix of hot asphalt-flagged dump trucks and airplanes. The highlight of this little job was sleeping at the YMCA and playing chess with the old timers sitting in the lobby. These old farts were really good. I never could get the best of them.

**Burley, Idaho.** With Mike Anglea, this was a waste recovery plant for the J.R. Simplot

Potato Company. It included two clarifiers and a large aeration lagoon with 50-horsepower (HP) floating aerators. Interesting job. A large rotating vacuum drum filter delivered potato peelings, Tater Tots, and Krinkle cuts sludge into huge tank trucks. This material was hauled out to Simplot's cattle feed lot and mixed with hay and grain batched out from silos. Fifty thousand head of cattle standing shoulder to shoulder! Hell, the animals were square and not round!

**Camas, Washington.** After the Burley project, I came waltzing into Ken Durant's project, a wastewater treatment plant, pump station, river crossing, and outfall into the Columbia River. It was a nice design utilizing a maze of glass-lined pipes. The river outfall line with diffusers was pulled into an underwater trench and covered with large rock. One of our in-house divers from Seattle inspected the outfall line - found a very large and rare five-sided basalt rock. It was sent to the Portland Museum.

Many years later after I retired, my wife, Pat, and I visited Ken Durant and Penny at their home near Sherwood. Ken had planted himself an olive orchard and had just harvested his first oil crop. Who would have thought? Oregon cold-pressed olive oil!

**Portland, Oregon.** This Container Dock T-6 patterned after the port facilities in Los Angeles involving circular sheet piling cells with interconnecting arcs! This job was off to a bad start with the longshoremen kinking the sheet interlocks when lifting them out of the ship's hold. This required logging the extra time involved to thread the piling together during construction. Magnets were used to lift the sheets and rotate them into a vertical position. The sheets were covered with ice, and several of them fell away from magnets endangering the workers below. All the workers were in harm's way. Willamette Western was the general contractor, Arthur Ridel.

**Lewiston, Idaho.** For the Port of Lewiston, Idaho, this project included all new paved streets, a new railroad spur line and trestle, storm water drainage, a complete sewer system with manholes, and water mains with fire hydrants. It was a very difficult job for me. We had a fly-by-night contractor. I had to hold money on the contract and request help from Burt Anderson to spell out the contract requirements for them. I managed to purchase all used rail iron, rail ties, tie plates, and spikes for the Port spur line. And the paint for the trestle was turquoise. Ha Ha.

New concrete grain elevators were being constructed as our job progressed. Project engineer Otto Vydra and his wife decided to try the Middle Fork of Clearwater River in their kayaks during spring runoff. They were both thrown clear out of their kayaks and barely made it to shore.

**Neah Bay, Washington.** Following the completion of the Port of Lewiston project, my old friend Burt Anderson called and asked if I would complete his project at Neah Bay. To fully understand Burt, he was a mining engineer working around native populations in South America and later in Alaska. To

this day, I believe he was saturated with Neah Bay Indians and wanted out. So, yes, I took the job. It was a small water treatment plant and 1-mile of transmission line through a muddy alder swamp using asbestos cement pipe (yikes!).

I stayed at the only motel in town run by Jean and Aaron Abbot. Aaron was a dynamiter by trade (Cascade Mt. Logging roads). He and Jean lost their potato farm in Moses Lake after being unable to pay the high irrigation costs and property taxes. Aaron said he would never pay taxes again after losing everything they had.

On the second night at the motel, there was a knock on my door. An Indian boy, Stormy Thompson, asked if I would buy him a box of 22 shells; and he would shoot me some ducks. Hell yes, I like duck meat. The next thing I heard was somebody had shot the windows out of the work boats in the bay. I was in big trouble. Oh yes! That night there were two ducks on my porch. FYI. Fish ducks are not very good eating.

Getting back to Neah Bay ...

Aaron had about 200 feet of 40 percent ditching sticks tubed into the mud at 3-foot intervals. Exploding the first one ignites all the rest and cuts a perfect "v" ditch for the pipe. Turns out some fool happened to be out on a cedar stump near the charge. Aaron stuck the two wires in his mouth checking for ground and then hollered "Fire in the hole." The explosion lifted the guy and stump together and pitched them out into the alder swamp. Fortunately, it just knocked him out and unharmed. Aaron had a very funny smile with his two eye teeth gone from checking dynamite wires. I grabbed a paper out of a Dupont box to read at home. It had an oily texture; and after a splitting headache and a racing heart, the light bulb finally came on, nitroglycerine.

I got permission from Stormy Thompson to dig clams in the bay. There were very large Gaper clams and Sand Cockerels. The Gapers were cousins to the large Goey Duck clams. I easily dug a plastic garbage can full of clams. Jean Abbot, a Japanese lady, at the motel said she would clean all of them for half. What a deal. Exceptionally nice people, Jean and Aaron.

I did find out later that some of the largest octopus were found in this area. The Indians place a small piece of blue vitriol (copper sulfate) on the end of a stick and poke it back into the rocks. The octopus comes rushing out of the hole to get away from it and the Makah Tribe have dinner again.

I finished the job and was happy to leave as there were a few unstable drunks from God only knows where. Troublemakers from Canada cross over to the States and vice versa. Passports not required!

**La Push, Washington.** The Quileute Indian Reservation. This project included a new sewage treatment plant, gravity sewers and manholes, lift stations, a dosing chamber, and an ocean beach drain field. I don't know if this one would fly in today's world. Indian cars and dogs, fishermen, pot smoking hippies, and lots of rain. Trying to keep cut stakes ahead of three digging crews and do the plant layout on the weekends was just a little more than I could handle. I called project engineer Tim Morley and requested survey help. One week later...no help. This was the end for me. I called Morley and told him I quit and to get a replacement. I was told to hang on while waiting for a replacement!

I drove into Forks, WA, to get food supplies. While driving back, I picked up a hitchhiker needing work. I gave him a place to sleep and paid him out of my per diem money. After 1 more week of struggling, I got ahead of the workload and still no help from Morley. Resigned to the fact that I could handle this job, I stayed with it and happy that I did. I met two of my favorite friends from La Push. Both were guitar builders for the Martin Guitar Company traveling through.

This job was funded by several agencies that required separate cost accounting for each agency. The plant site itself was compromised by an uphill slide forcing a relocation further out into a swamp requiring more gravel and more work. Aside from the rain, the natural setting of this area was beautiful beyond description: mushroom hunting, clam digging, fishing, and hiking the exquisite ocean beaches. I was sad to leave this little corner of the world.

**Kaanapali, Maui.** Project Engineer Randy Naef and I were paired off to complete a sewage treatment expansion on the Kaanapali/Lahaina side of Maui. The project was primarily financed by the AMFAC corporation and delivered to Maui County on a silver platter. Unable to agree on terms, the project was significantly delayed. I filled in my time working on other jobs.

Saltwater corrosion had made severe inroads into an all-metal tank farm in Kahului. Storage of gasoline and jet fuel made this job extremely dangerous with ongoing cutting and welding followed by two-part epoxy paint coatings. Corrosion had caused deep pitting on large segments of piping, and some tank bottoms had to be completely replaced. Sandblasting and painting were continuous. I was happy to be clear of this job when ours finally started.

Hawaiian Dredging was the general contractor, and Ivan Nakashima was the job superintendent. I got along well with them, and some follow-up change orders improved the job. I enjoyed working with Randy Naef.

Without exception, construction work is dangerous; and I broke my arm tripping on rebar!

The fun part of Hawaii was staggering. Ivan Nakashima let me use their welding

machines on the weekends allowing me to greatly improve my welding skills. Working with scrap metals, I built two beautiful lobster traps with pieces of scrap rebar. Pat's youngest son, Rick, and I would pitch these off the cliffs near the Sheraton resort and come home with lobster dinner. All went well until the Filipino resort workers found our traps at 2:00 or 3:00 in the morning and cleaned us out. We did get our traps back.

Pat worked for the Marriott Resort as a painter and would moonlight painting apartments on the side. Her wages far exceeded my CH2M pay scale (sorry). I could never understand why she would never take a lunch to work until I found out that Eggs Benedict was an employee perk; and that beat the hell out of a soggy tuna fish sandwich!

Pat's son, Rick, and I did some fabulous skin diving in strange places. We took a Hawaiian sling out and nailed an octopus. This powerful little guy crawled under a rock bending our spear and flooded the water with black ink. I finally dragged him out, and it was dinner time again. Using rock salt to remove all the slime, they are delicious in chowder. Also, on the weekends, Pat and I would escape to a remote ocean beach church camp and snag some beautiful kiawe root pieces (iron wood/ mesquite) out in the water. The root pieces were highly laced with fiddle back streaks. A dull Homelite chain saw works the best.



Pat's ironwood (kiawe) bear carving.



Pat's son, Rick, with the ladies of Halloween.

Fun times were had in old Lahaina when Halloween hit. All the jet setters from the states fly over and display the most outrageous masks and costumes you have ever seen in your life. Pat's son, Rick, graduated from Lahaina Luna High School. My God! Walking on a pathway of Plumeria flowers with leis wrapped around your neck. What a celebration! We sampled our first taste of poi wrapped up in a green leaf at the graduation.

Before we left the island, I presented our two lobster traps to the Japanese CEOs at AMFAC. They were both pleased and wished us well! Pat and I both enjoyed working alongside the island people.

**Mount Vernon, Washington.** A small water treatment plant. I took this assignment from the Seattle office. Most of the deep underground pipe work had been performed before my arrival. The plant was high tech with an elaborate motor control center. Somewhere



along the line, powerful pumps were activated pumping water into a closed valve causing a reverse water hammer. This broke apart a large manifold and flooded out a motor control center. I believe the CH2M inspector was let go as the Mt. Vernon Director of Public Works requested a replacement. A new motor control center and manifold had to be reinstalled. My job was to oversee all mechanical and electrical repair work including the project completion and testing. This job closed out my incredible adventure with CH2M HILL! I was long overdue getting away from living out of a suitcase!

After following heavy construction, you soon develop a high degree of safety awareness. You are constantly faced with harm, and this job was no exception. The number crunching was always a challenge, but your people skills were far more important to complete a quality project.

Arlen Borgen cut most of my early job assignments followed by Ken Bielman on my later assignments. Construction is a learning process, and I was fortunate to have good mentors. Some of my favorites were Larry Well, Randy Naef, and Burton Lee Anderson.

Pat and I live 12 miles north of Lyle, WA, in a small cabin surrounded by oak trees. We love it here.

Love to all the CH2M HILL alumni,  
Pat and John

