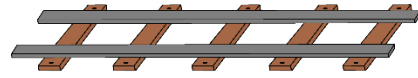


# On Track



Vol. 5, Number 4, April 2026

**If you are receiving this newsletter for the first time, welcome to the fold! We continue to catalog our visitor logs, and your email appeared! If you wish to be taken off our list, just let us know, but we hope that you will stay with us, follow us online, and return to visit us in person sometime soon. **Additional financial support will never be turned down (maintaining and operating a steam locomotive is expensive)! Previous editions of this newsletter may be found on our [website](#). If you have comments on the newsletter, please send them to [nmheritagerail@nmheritagerail.com](mailto:nmheritagerail@nmheritagerail.com) or to your humble editor, [John Taylor](#).****

**FROM THE PRESIDENT** Spring is shaping up to be an exciting and productive time for New Mexico Heritage Rail as we continue building momentum toward our long-term vision in Albuquerque.

Work is progressing with the City on finalizing our access agreement at the Albuquerque South Rail Yards, an important step toward establishing a stable, long-term home for NMHR. At the same time, we are preparing for upcoming track improvements that will support future operations and equipment staging.

We're also looking forward to the Route 66 Rail Yards event on April 18–19, where ATSF 2926 and a passenger consist will be on display. In preparation, we held a volunteer work session on March 28.

Earlier this month, we hosted our “All Things PTC” lecture at the WHEELS Museum on March 21. If you missed it, presentation handouts are available at the restoration site. Progress continues on the PTC installation for ATSF 2926, with key components arriving later this year and installation targeted for completion by the end of 2026.

As we approach board elections, I encourage members interested in serving to get involved. To run for the Board of Directors, please contact Chris Rosol at [vice.president@nmheritagerail.com](mailto:vice.president@nmheritagerail.com) by the second Saturday in May to request a nomination petition.

Thank you for your continued support—we couldn't do this without you.

—MathewCasford  
President & Chief of Rail Operations

**PROFILE OF A MEMBER:** This month we feature our former *jefe*, John Roberts. John's father worked for Control Data Corporation, so his early childhood featured time in Mountainview, California, Long Island, New York, and Houston, Texas, before the family put down roots in Albuquerque, where his father ended up working for Sandia National Laboratories.

Having settled down, John graduated from Eldorado High School, home of the Eagles, in 1981. After graduation, he attended TVI (now CNM) and got a certificate in machine trades while working part time as a cabin boy on the Sandia Peak tram. He worked for a time as a drafter, but decided to reenter the educational system, graduating from UNM with a BS in mechanical engineering in 1989 and a masters in 1995. Along the way, he picked up a skill in AutoCAD drafting.



John was a materials research scientist at Sandia National Laboratories but ended up working on laser effects on materials for Ball Aerospace (now BAE Systems Space and Missions Systems, Inc.—say that three times fast!) in 1996. This year he celebrates 30 years with that company, continuing his work as both a test engineer and engineering manager in the field of laser/material interactions (damaging things with powerful lasers on behalf of the Department of Defense).

Along the way, John married his upstairs neighbor, Patti, an event planner for the Convention Center and a youth minister for several Methodist churches in the Duke City. They have two children, Heather, who is married to an Air Force NCO, and our oft-bearded CMO, Henry. Heather, her husband, and their two children are stationed at Lakenheath Air Force Base in England which helps to explain John's frequent trips across the pond (and we all thought it was to play with traction engines (i.e., steam-powered tractors)!).



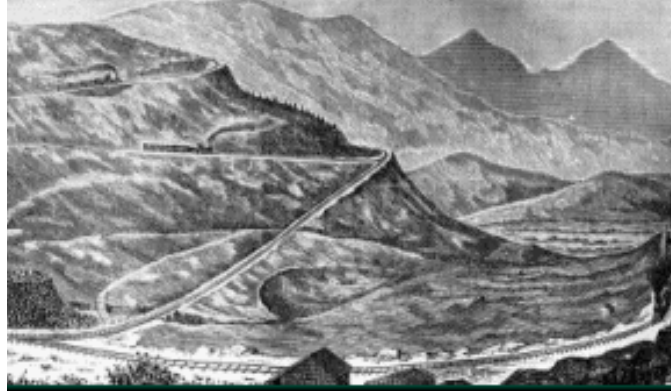
John hooked up with 2926 via Henry, then a freshman in high school, who had become enamored with steam engines during a family trip that involved a ride on the Durango and Silverton narrow gauge railroad. When they returned home, Henry saw an article about our organization, and the father and son visited the site in March 2011 where they were greeted by Jon Spargo and Dr. Mike Hartshorn. The rest is history. Since joining, John has worked on virtually every part of the locomotive and, most recently, served as president of our organization.

When not playing with trains or visiting grandchildren in England, John's past has included a job making jewelry using lost wax casting, has made chain mail (a particularly useful trade these days since knights in shining armor have been gone for well over 500 years), and dabbled in amateur rocketry, following a group called LDRS (Large Dangerous Rocket Ships) that goes to out of the way places and launches really big rockets just for the adrenaline rush! For 30 years, John could be found on grass, sand, or hard courts playing competitive-level volleyball (until his shoulders decided they didn't like him anymore).

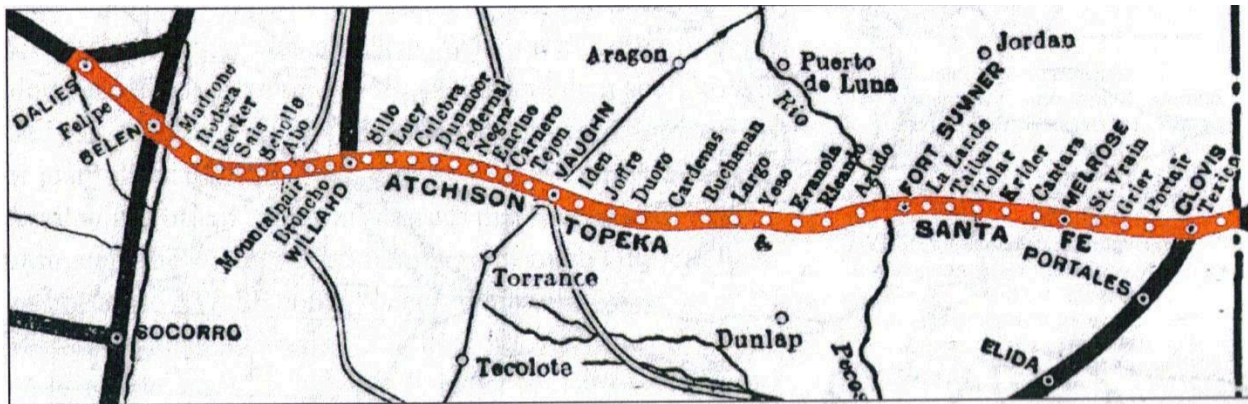
John continues to help us out as the immediate past president on the Board of Directors and as our principal liaison with the City of Albuquerque regarding our pending relocation to the Albuquerque Railyards. So, if he comes in wearing garish jewelry, don't make fun—he may be wearing chain main under those faded blue overalls!

**A SHORT HISTORICAL NOTE:** When Santa Fe management was choosing a route to enter and cross New Mexico, they chose the well-documented northern route of the Santa Fe Trail over Raton Pass. This route brought them right past Santa Fe, the capital and political center of the territory and into the central Rio Grande Valley where most of the population and commerce was concentrated. On the other hand, there were disadvantages to the Raton Pass choice, in particular the three percent grade at the Pass and another three percent grade at Glorieta Pass, just east of Santa Fe.

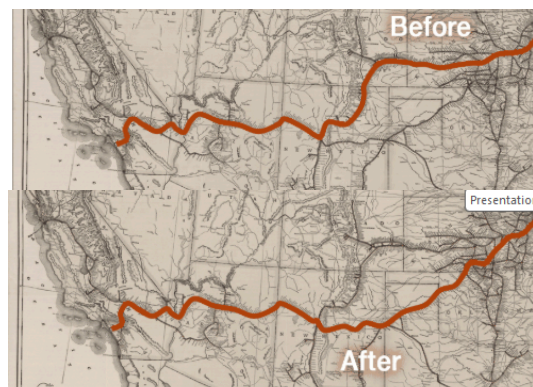
There were alternative routes—the Dry Branch of the Santa Fe Trail avoided Raton Pass but still encountered Glorieta Pass and had water problems for the locomotives. There were also surveys dating to the pre-Civil War years that would enter New Mexico well to the south of the steepest of the Rocky Mountain passes, but these bypassed Santa Fe and much of the commercial and business interests in the northern part of the Territory.



In big business, the bottom line usually wins the day. The passes at Raton and Glorieta proved to be both expensive and dangerous. Most trains had to be double or even triple headed going over the passes, and the switchbacks were just accidents waiting to happen. In 1902, the Santa Fe formed a new subsidiary, the Eastern New Mexico Railroad, for the express purpose of building a line from Texico on the Texas-New Mexico border straight across the eastern plains and through Abo Canyon (whose maximum grade was 1.25%) to Belen. Another eighteen miles of track was laid west from Belen to the small village of Rio Puerco, and a junction with the East-West line from Albuquerque to California through via Isleta Pueblo was established at Dalies, a small village named for a prominent Belen businessman.

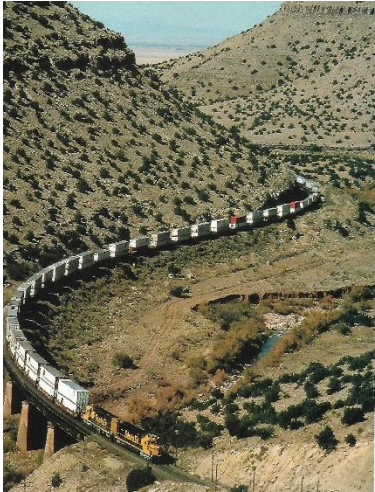


This line came to be known as the Belen Cutoff with the track to Dalies sometimes called the Dalies Cutoff. Although the term “cutoff” may suggest that the overall mileage across the territory was substantially reduced, that was not the case. In fact, the distance from Chicago to Los Angeles was only reduced by six miles for trains taking the Cutoff.



A Kansas construction firm, Charles J. Lantry and Sons, was hired to do the work which began in 1903. There was a short hiatus due to a national depression in the middle of the process, but the line was completed by 1908 at a cost (in 1908 dollars) of approximately \$7,000,000. The two most expensive parts of the project were blasting a path through Abo Canyon and constructing the bridge across the Pecos River.

As traffic increased along the Cutoff, the portion through Abo Canyon became something of a choke point, especially for freight service, until it was double-tracked between 2000 and 2015 for a cost of \$10,000,000.



*Before double tracking*



*Double tracking the Cutoff through Abo Canyon*

The Belen cutoff was used by both passenger and freight traffic until the demise of the Santa passenger service in the 1970s. With between 80 and 100 trains a day, it is still the main transcontinental route for freight trains running on BNSF track across the southern part of the country.

**HOW DOES IT WORK:** When we think about the water supply to the boiler, we almost always focus on the Worthington system or the injector. But where does the water come from? Well, the humble tender, of course. First, this is more than just a big water tank. And it is BIG—24,500 gallons big. Santa Fe designed it to support an engine like ours which evaporates 100 gallons a minute at 60 miles-per-hour and which was designed to run in the Southwest with very challenging water sources!



*The water canister being removed during the tender overhaul*

With this much water (nearly 10 tons) and curvy tracks, the problem of rhythmic sloshing led designers to baffle the entire water tank to prevent tender-induced derailment. You don't have to climb inside to see the extent of the baffling--just notice the rivet pattern on the side of the tender. Of course, going inside will just confirm your suspicions.

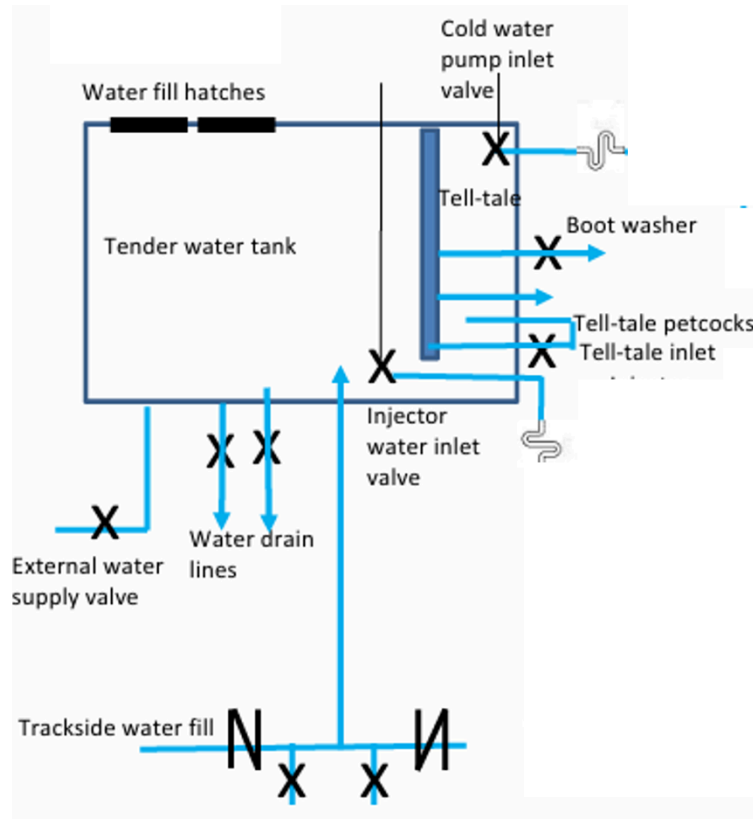


Exterior of the tender showing baffle rivet pattern



One of the NMHR founders, Albert Leffler, inside the tender

From an operational point of view, there are three things we need to know about the tender—how do we get water in, how do we get water out, and how do we tell how much water we have left.

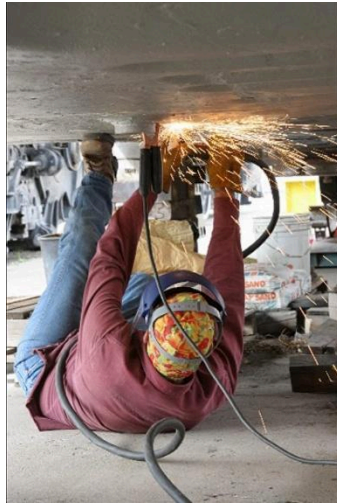


There are three ways to fill the tender: Originally, two large hatches on the top were used during normal operations at water stops. Since those water stops are largely gone, we have added trackside water fill piping to allow us to hook up to fire hydrants or water trucks.. Note that the trackside fill does not have external shut-off valves, Instead, water flow is restricted to the inlet direction using large check valves in

the piping. There is also an external fill valve on the rear of the tender which allows us to fill from a tank car, normally referred to as a canteen, which could accompany us on an outing.



*Trackside fill piping*



*Rick Kirby welding water pipes on the bottom of the tender*



*External canteen piping*

The two largest water outlets are the cold water pump on the fireman's side below the cab and the injector on the engineer's side, also below the cab. The shutoff valves for these water sources are on a shelf on either side of the front of the tender. There are also drain valves on the trackside water fill and on the bottom of the tender itself.



*Injector inlet valve, tell-tale petcock inlet valve, bootwasher valve and*



*Cold water pump inlet valve*

We can tell the water level in the tender two ways. There is a valve outboard of the injector inlet valve called the bootwasher (see photo above). If this valve is opened and water comes out of the bootwasher outlet, there is at least half a tank of water. For more accurate water level, there is a series of petcocks, called a tell-tale, on the fireman's side of the tender. When the petcock valve, the small valve between the bootwasher valve and the injector inlet, is opened, water will come out of one or more of the petcocks to give the crew an idea of how much water remains in the tank.

**WHAT'S NEW IN THE STORE.** Check out the new postcards.



Also we are closing out the tan polo shirts now marked down to \$10. We have one medium and eight size XLs left. Get one before they are gone!

**How you can help and other tidbits:** If you are interested in donating to our cause (because operating a steam locomotive is expensive!) go to our [GoFundMe](#) and [Venmo](#) links! Be sure to check out our [Facebook](#), [YouTube](#), and [Instagram](#) pages as well! Other potential sites of interest: our friends at the [Wheels Museum](#), [Rio Metro](#), and activities at the [Albuquerque Railyards](#). Please see our Membership page to discover our other volunteer opportunities.



*Have a Blessed Holiday Season*