Truckee Donner Railroad Society—Newsletter

Keeping Truckee Railroad History Alive!

Snowshed

February, 2022 Volume 14 Number 4

News & Events:

Truckee Railroad Museum (the caboose) is temporarily closed due to the Omicron surge. It will reopen as soon as it is safe for docents and visitors.

Museum of Truckee History is also closed for now due to Omicron.

See our Facebook page for details & updates.

Contents:

President's Letter, by Jerry Blackwill 1

Cab Forward Locomotives: Continuing Evolution of our Country's Train System By Judy DePuy 2

Presidents Letter

Jerry Blackwill

Our Santa Claus train run in December was a huge success. Santa rode Tom Smith's steam train and our Union Pacific diesel-electric train took passengers through the woods. We gave happy kids and parents over 600 rides in a three-hour period. Thanks to all of our members who operated the trains and helped with the crowds.

Hard-working Crew of the Santa Train: December 4, 2021

We're looking forward to a good year in 2022. The latest variants of COVID seem less lethal and we hope to increase our activities. We are still building funds for the interpretive signs around the rotary snow plow and crane in the Railyard pocket park. Thanks to all who have donated, we hope to have the signs installed this year.

Please send your membership renewal in as soon as possible. Take advantage of the offer of free rides on the Virginia and Truckee Railroad out of Virginia City.

Jerry Blackwill

Cab Forward Locomotives: Continuing Evolution of our Country's Train System

By Judy DePuy

The completion of the Transcontinental Railroad through the Sierra was a feat unto itself. It was the first railroad from the West to the East and is the most historic portion with its run from Roseville, California to Sparks, Nevada. With its completion, the focus was on a need to get more freight over the Sierra.

The issue faced by Central Pacific (later consolidated with Southern Pacific) was that the Sierra receives the heaviest snowfall of anywhere in the continental United States. Shortly after the rail completion, the railroad started to build snowsheds (starting in 1867). Over 40 miles of snowsheds were built and rotary snowplows helped ease the problem, but the snowsheds inevitably created other problems: smoke and heat.

Steam engines, fueled by wood and later in part by coal (due to its density), were the technology in those days. In the 1860s, three, four and five eight-wheeler engines, helped by small ten-wheelers, were required to haul a train of 20 cars moving at eight miles per hour. It was slow going but they got over "the hill," the Sierra. The train was still faster than the alternatives.

By the time of the turn of the century, California's Central Valley had developed into a prominent agricultural center and a major supplier of produce to eastern markets. It was the proliferation of product from the orchards and ranches of Sacramento, San Joaquin and Santa Clara Valleys that fueled the increased need to haul the freight. The Southern Pacific Railroad needed the revenue, the producers needed the clients, and so the railroad had to haul as much freight as possible.

The Ordeal of Handling the Loads

The solution, they thought, to handle the larger loads was to build larger engines. Southern Pacific used wood and coal fired engines until around 1905-1910 when they switched to oil, which did not require stoking.

The new huge oil-fired locomotives ran into the same issues as the wood and coal-fueled engines in the tunnels and snowsheds. In the old wooden snowsheds, the steam from the low pressure cylinders hit the low ceilings and blasted back into the cab. The concrete snowsheds and tunnels were even worse.

The larger engines almost asphyxiated the enginemen by exhaust and hot vapor. To overcome the fumes, the crew would use a respirator which would take air from the main reservoir, through a reduction valve and purifier, by way of a tube to the crewman's mouth and nose. It gave some relief but they still had the heat, the deafening noise, and the hot steam from the huge low pressure cylinder exhaust. A splitter was used on the stack to diffuse the steam and gases but it was still 350-700 degrees and the men felt like they were in a trap.

Continued on Page 3

Cab Forward Locomotives (continued from Page 2)

The Solution: Cab Forward Locomotives

Cab Forward locomotives were introduced by Southern Pacific out of necessity.

Called Cab-Ahead, Back-Up, Cab-Forward, Cab-in-Front, Cab-Fronter, Cab-First, Stack-in-the-Back, the design was to put the cab and its crewman ahead of the tender, smoke and heat. It was a simple design of turning the entire locomotive, minus the tender, 180 degrees. This was possible by burning oil rather than wood or coal, since the oil could be piped from the tender around to the firebox at the front of the engine.

When the design was first introduced on the Southern Pacific Sierra line the crews were unwilling to ride in it. They argued that being at the front of the train, with no protection, created a danger to the engineer and fireman in head-on collisions and crossing accidents. After having ridden in them they found that they could do their runs in relative comfort and soon became the best supporters for the concept.

Cab-Forwards became a very distinctive locomotive crossing the Sierra Nevada as well as on Southern Pacific's line from Dunsmuir, CA to Portland, OR.

SP Cab Forward Heading a Troop Train during WWII.

Photo credit Southern Pacific Corporation, from "Those Amazing Cab Forwards" by George H. Harlan

Evolution of Locomotives Continues

Southern Pacific Railroad used the cab-forward designs from the early 1900s until the late 1950s. They were extremely popular after WWI and used during WWII.

Train technology continues to evolve. Having to refuel the oil and water in the steam-powered cab-forwards made it increasingly difficult as mountain towns along the line were dwindling.

Diesel internal combustion engines came along and were cheaper to run and re-fuel plus several engines could be run from one front cab. Note that Cab-forward engines were still used as 'helper' engines to the new diesel engines over the Summit in the 1950s.

Look at the trains coming through Truckee. You will see one to three locomotives in the front, a couple in the middle and maybe some in the back. They only need one set of engineers on the front engine. They are all interconnected. The cab is still in front because of the pioneering work of the steam engineers in the early 1900s.

Truckee Donner Railroad Society

Our History: Railroads of the Truckee area played a significant role in founding and developing the town of Truckee. From the blasting of black powder in the granite over Donner Lake, to the hissing of the first steam engines coming into town, to the whistles of lumberjacks in the mountains, to the crack of ice being loaded in the reefers, to the tourists flocking to enjoy the beauty of the area, Truckee's story is very much the story of its railroads.

Our Mission: Our mission is to preserve, interpret, and educate the public about railroading life and history in the Truckee region including its contribution to Truckee and the nation. We will accomplish this through the acquisition, preservation, and restoration of relevant equipment and artifacts and the development and display of exhibits in one or more museum facilities in Truckee.

Volunteer!

You can help TDRS and serve the community by volunteering for one of our projects or ongoing operations:

- Snowplow & Crane Restoration
- Truckee River Railroad Operations
- Museum Docent

Contact our volunteer manager volunteer_manager@truckeedonnerrailroadsociety.com.

Donate!

You can also help by donating at our website, truckeedonnerrailroadsociety.com, at the bottom of the home page.

www.truckeedonnerrailroadsociety.com
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