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Member museums and railroads receive eight copies of HeritageRail Journal and can have them sent to up to eight different addresses. Contact Lynette Rickman contact@heritagerail.org to make address changes.

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FROM THE FRONT PLATFORM

By Bob LaPrelle, HRA President

A Post-Pandemic Check-up…

One of the great benefits of belonging to an association like HRA is the broad network of people and organizations we interact with that add to the depth and breadth of our services. Chief among them is the American Alliance of Museums (AAM). Representing over 50,000 museum professionals, and 4,000 institutions, the Alliance is the standard bearer and lead voice for advocacy in our field. AAM's core standards for accreditation are rooted in HRA's Recommended Practices "Toolkit" document.

HRA is a proud member of AAM, and serves on its Council of Affiliates. We also sponsor AAM's Advocacy Day each year, when representatives from museums throughout the U.S. assemble on Capitol Hill to meet with legislators and their staff. This ensures continued federal funding for essential programs like IMLS/OMS as well as favorable tax policies like charitable deductions that benefit museums.

This all leads to an important report recently released by AAM titled *National Snapshot of United States Museums*, 2023. I'd like to touch on a few findings that are relevant to HRA members - both museums and tourist railways.

The report provides interesting and useful information about the current health of museums and related attractions that undoubtedly includes the heritage rail sector. It is based on a survey of 340 directors of institutions from around the U.S., and looks at their visitation, staffing, and financial health post-COVID. My museum participated in the survey when it was conducted back in March and April.

The overarching message of the report is that, "while museums are continuing to recover from the profound damage inflicted by the COVID-19 pandemic, it will take years for many of them to return to pre-pandemic levels of staffing, revenue, and attendance."

Overall post-COVID performance breaks down this way: Two-thirds of respondents have not rebounded to pre-pandemic attendance numbers, one-quarter have not returned to pre-pandemic staffing levels, and financial recovery is mixed.

Here are some telling numbers:

Only 33% have recovered 100% or more of their pre-pandemic attendance. Two-thirds report an average of 71% attendance as compared to pre-pandemic levels. Further, 41% report lower visitation in general attendance, while 40% saw lower in-person field trips.

Some 26% report a decrease in staffing by a median of 20%. Thirty-six percent report the same staff size as compared to 2019, while 38% have increased their staff. Sixty percent report having difficulty filling open positions. Those positions are largely front-line roles such as guest services, admissions, and retail - all which undoubtedly also pertain to the heritage rail industry. Many are adjusting their compensation, with 84% increasing hourly compensation, and 49% closing the gap between the highest and lowest salaries. Fifty percent have implemented staff wellness policies.

Regarding financial assistance during COVID, 60% of museums received Payroll Protection (PPP), and 17% received Shuttered Venue grants (SVOG). Eighty-eight percent and 68% respectively, said this funding was critical to their survival.

At least 22 heritage rail organizations including tourist railways received SVOG funds - a federal relief program introduced by Senator Cornyn of Texas. The measure was expanded from performing arts venues to include qualified museums largely through the efforts of AAM and Senator Klobuchar of Minnesota. Proof that advocacy works!

Finally, on the financial front, 30% of museums have seen their net operating performance decrease by a median of 20% as compared to 2019, while 39% report a median increase of 19%. Interestingly, 31% report no change.

So, there you have it. Thanks to our friends and colleagues at AAM and to the respondents. These numbers can be applied to related fields to some extent – heritage tourism, etc. For instance, staffing is a challenge for all of us regardless of attendance and financial performance. You can access the full 12-page report at: aam-us.org.

At HRA, we want to know how you're doing and how we can help in this post-COVID world.

Next time, I'll discuss our changing audience, and the next generation heritage rail workforce.

Bye for now, be safe!

RECOMMENDED PRACTICES FOR RAILWAY MUSEUMS: PART 10 RELATED BUSINESS ACTIVITIES

By Aaron Isaacs, HRA editor

The introduction to Part 10 says *"Operating a railway heritage attraction can be financially challenging. Relying solely on ticket sales or admissions can leave an organization short of meeting cash requirements, and hurt the chances of the organization's long term sustainability."*

There's never enough money. Museums often have to look beyond normal operations and fund raising to augment their bottom line. Fortunately, if you have a large campus, indoor building spaces, and/or a railroad and operational rolling stock, it can open the door to revenue opportunities. It pays to be innovative, as you'll see in the examples below.

If you own a railroad, maybe you can haul freight. The premier example is the Tennessee Valley Railroad Museum. It initially purchased the Chattanooga Belt Line to gain access to the Chattanooga Choo Choo complex and short line Chattooga & Chickamauga for excursions. Along with the acquisition came a couple of shippers, so they started hauling freight. Next came the opportunity to serve a shipper close to the museum site, but off museum rails, so a trackage rights agreement was negotiated with the Class One. When they leased the old Louisville & Nashville Hook and Eye, with its famous loop. With it came the opportunity to run occasional unit trains of copper tailings out of Copperhill, TN. The big move was the creation of for-profit subsidiary Tyner Terminal to switch a large industrial park. Soon thereafter Volkswagen built an assembly plant there and the switching operation became big business. Since then the museum has added industrial switching at another Tennessee site. In 2022 freight accounted for 46% of TVRM's total revenue. The Boone & Scenic Valley and the Texas State Railroad also haul some freight.

The Tennessee Valley Railroad Museum does contract shop work for other museums and tourist railroads using its well-equipped steam shop. In 2022 it brought in $300,000. So does the Midwest Central Railroad in Mount Pleasant, IA. Seashore Trolley Museum recently made money building a replica streetcar for a wealthy client.

If you have a railroad that sits vacant over the winter, there's money to be made in car storage. The Illinois Railway Museum, Monticello Railway Museum, North Shore Scenic Railroad and Boone & Scenic Valley do it. So does the Prairie Dog Central, through its for-profit subsidiary Prairie Rail Solutions, which also offers transloading, car cleaning, track maintenance and training. Prairie Dog credits its for-profit business with saving the tourist railroad.

Quite some time ago, the Museum of Transportation in St. Louis discovered that event planners are always looking for interesting venues and don't mind if their banquet, conference, wedding or corporate team building is surrounded by vintage rolling stock. In fact, the novelty is a selling point. So the museum freed up some space in its largest open air train shed and began successfully soliciting events. They now advertise six different event spaces, including a newer visitor center designed with events in mind. Exporail is another that actively advertises its event venues. No museum has carried the idea further than the West Coast Railway Association in Squamish, BC. Its roundhouse was purpose-built for events and has become the largest such venue in the area. Beyond bringing events into the roundhouse, it has created a for-profit subsidiary, Blacksheep Event Rentals, to lease event furnishings and equipment regardless of the location. A recent newsletter said Blacksheep has contracts for 60 weddings this year.

Simply owning land can bring in revenue. The Oklahoma Railroad Museum makes money every year providing parking for a huge softball tournament. The Illinois Railway Museum purchased considerable farmland to provide a buffer from NIMBY neighbors and now has a revenue stream from farm rent. Western Railway Museum gets rent from two pipelines and a cel tower on its right of way. A number of museums use their grounds to host flea markets, car shows and other non-railroad themed events.

It goes without saying that every museum needs a museum store. Taking something with you is a well-established part of the museum experience and a good revenue source. Some museums have gone beyond the usual in-store offerings. For many years the Colorado Railroad Museum has held periodic mail order (now online) sales of donated railroad books. Illinois Railway Museum has an entire on-site and online bookstore devoted to used books. In 2022 Elgin County Railway Museum did a major housecleaning of everything you can imagine and held a huge auction for one-time revenue. Most museums have plenty of scrap lying around. Why not convert it to cash and clean up the place in the process?

By now readers have probably learned that I think rail bikes are the next big revenue stream. In the past year the number of bike sites has increased from 29 to 35, and there's plenty of room for growth. Yes, it's a ride ticket, but most of the time the bikes are run as a turnkey operation by a contractor who pays a negotiated fee. That puts it in a different category, using your physical plant to add revenue outside the normal museum experience.

To download a copy of Recommended Practices, go to heritagerail.org and log into the Members section.

ACQUISITIONS

Louisville & Nashville SW1500 #5000 (EMD 1970) donated by CSX to Kentucky Steam Historical Society.

Western Pacific GP35 #3002 (EMD 1963) to Ogden Union Station Museum.

The transfer of Santa Clara County-owned Southern Pacific 4-6-2 #2479 to the Niles Canyon Railway included a GE 65-tonner. Niles already has one, those they arranged for it to go to tourist line El Dorado & Western.

Pennsylvania Trolley Museum has acquired Pittsburgh PCC #1713 (St. Louis 1949). It was stored by a private owner inside a building, so the body is in good shape. Once painted in Pittsburgh Steelers colors to celebrate Super Bowl victories, it was well known locally as the "Terrible Trolley", not a criticism but a reference to the celebratory "Terrible Towel" waved by Steelers fans. It will be repainted in that scheme.

An Elgin Joliet & Eastern sand tower donated by BP's Whiting Refinery to Hoosier Valley Railroad Museum.

Santa Fe "Super Fleet" B40-8W #537 has been donated by BNSF to Railroading Heritage of Midwest America.

CSX has donated part of the Pan Am work train to the Railroad Museum of New England. Included are ex-Boston & Maine troop sleeper #49, B&M flat car with caboose body #77 and Maine Central 50-foot boxcar #20141.

BNSF has donated hydrogen test locomotive #1205 to the Oklahoma Railway Museum, along with former Great Northern wide-vision caboose #12622 (GN #X142). The locomotive was a "Green Goat" battery switcher rebuilt by Canadian Pacific from GP9 #8637 (EMD 1957) until BNSF bought it in 2007.

The Peninsular Railway & Lumberman's Museum that operates the Simpson Railroad has purchased Simpson Timber caboose #1201 (Simpson Shop 1964) with the help of a grant from the Mason County Heritage Commission. The home built wood car body sits atop one-half of a former Great Northern caboose underframe.

New Jersey Transit has donated ALP-44M electric locomotive #4424 (Asea Brown Boveri 1996) to United Railroad Historical Society of New Jersey.

The Niagara Railway Museum has acquired a pair of Yugoslav 0-6-0Ts. They had been owned locally for over 40 years.

Private owners have donated Merchants Despatch Transportation 0-4-0T #5 (Vulcan 1924) to the Rochester & Genesee Valley Railroad Museum. The locomotive was the company's shop switcher. The company was owned by the New York Central.

The Village of Minerva, OH has donated New York Central steel bay window caboose #20480 (St. Louis Car 1952) to the Mad River & NKP Railroad Museum.

The Erie Lackawanna Railroad Historical Society has acquired a former bank building in Avoca, NY.

Consumers Power Co. has donated a GE 135-ton center cab diesel to Michigan's Coopersville & Marne tourist line.

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STRASBURG RAIL ROAD — PHOTO BY STEVE BARRY

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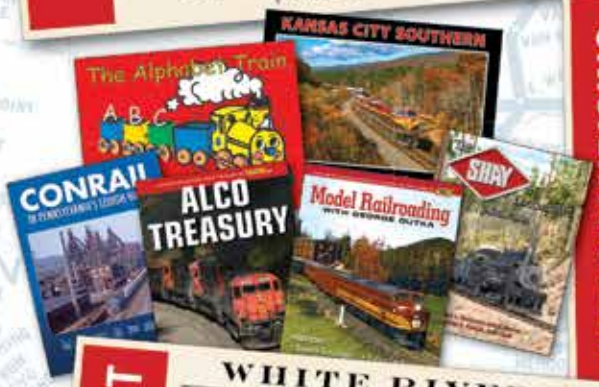

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The Monon Railroad Historical-Technical Society has donated Monon business car #2 and Monon wide vision caboose #81532 (Monon Shops 1956) to the Hoosier Valley Railroad Museum. Both pieces are currently at the Indiana Railroad Museum in French Link.

The Fort Wayne Railroad Historical Society has acquired the 1882 Lake Shore & Michigan Southern (later New York Central) depot in Pleasant Lake, IN, where it now runs excursions.

A true pioneer locomotive, the Reading Rocket (built in England 1838), is leaving its longtime home at Philadelphia's Franklin Institute for the Railroad Museum of Pennsylvania. It was retired in 1879, then restored for exhibitions, appearing at a series of world fairs and the Baltimore & Ohio Fair of the Iron Horse in 1927. The Reading loaned it to the Franklin Institute in 1933. Successor Conrail has decided to move it to RRMPA.

HERITAGERAIL NEWS

Large government grants

The past couple of months have seen the announcement of the largest government railway preservation grants since the federal Transportation Enhancement grant program was gutted by congress in 2012.

- State of Nevada $23 million to Nevada State Railroad Museum for a visitor center in Boulder City
- State of Texas $10 million to Texas State Railroad for track work, railcar maintenance and other projects.
- State of Nevada $7.6 million to Nevada Northern for freight barn remodeling, and $800,000 to stabilize the East Ely Depot Museum
- State of California $7 million to the Southern California Railway Museum to complete the track to the Perris Metrolink depot, including a track connection to Metrolink.
- U. S. Dept. of Agriculture $1 million to Western Pacific Railroad Museum for the 100 x 200 foot Frederick Whitman Multi-Purpose building
- State of Minnesota $200,000 to Minnesota Transportation Museum for roof replacement and operations.
- State of Pennsylvania $125,000 to West Chester Railroad Heritage Association for track repairs, grade crossings and bridge restorations.

Also:

CSX has donated $5 million to B&O Museum to build a "CSX Centennial Garden", with amphitheater and multi-use event space next to the South Car Works Building. This is part of a proposed $30 million set of improvements. The State of Maryland has pledged $3 million.

NRHS grant awards

The National Railway Historical Society has announced its latest grants.

Denver South Park & Pacific Historical Society, Denver, $5,000, and Galloping Goose Historical Society of Dolores, Inc., Dolores, Colo., $3,750, for acquiring and transporting rail for the recreation of the Como, Colo., railyard to the King Wye.

$7,500 -Old Dominion Chapter NRHS, Richmond, Va., to return the chapter's 1943 Davenport locomotive to operation.

$5,800 -Midwest Railway Preservation Society, Cleveland, for exterior restoration of the 1924 Pullman 10-section solarium lounge car M. Baxter.

$5,000 -Arts Services Inc., Buffalo, N.Y., for PBS distribution of the documentary film "Trolley Park: Midway Memories."

$5,000 -City County Preservation Committee, Harlowton, Mont., for restoration of the roof of 1910 passenger car.

$5,000 -East Troy Railroad Museum Inc., East Troy, Wis., to install ADA-compliant bathroom in car 107.

$5,000 -Friends of the Railroad Museum of Pennsylvania, Strasburg, Pa., for lease of a large-format scanner to permit museum volunteers to digitize Vulcan Iron Works blueprints and drawings.

$5,000 -Friends of the SP 4449, Portland, Ore., for exterior restoration and painting of GN-1 steam generator car.

$5,000 -Gulf Wind Chapter NRHS, Tallahassee, Fla., to stabilize the southwest corner of the historic Lloyd, Fla., depot.

$5,000 -High Plains Railroad Preservation Association, Cheyenne, Wyo., to restore Union Pacific 1870s-era caboose 2095 and move it to the Cheyenne Depot Museum.

$5,000 -Kentucky Railway Museum Inc., for cocooning of historic L&N coach 665 to prevent deterioration until it can be fully restored and preserved.

$5,000 -Llano River Railroad, Llano, Texas, to rust treat and prime 1950s-era Pullman-built passenger car.

$5,000 -Mid Continent Railway Historical Society Inc., North Freedom, Wis., for 16 reproduction bottom and seat back cushions for East Jordan & Southern No. 2 combination car.

$5,000 -Nashville Steam Preservation Society, to install 1,500 staybolts in the firebox of Nashville, Chattanooga & St. Louis J3 4-8-4 No. 576.

$5,000 -National Museum of Transportation, St. Louis, to build a canopy over the Rock Island Aerotrain.

$5,000 -New Mexico Steam Locomotive & Railroad Historical Society, Albuquerque, N.M., for installation and wiring of electrical equipment in baggage car NMSX 3939.
$5,000 -North Carolina Railway Museum, Inc., New Hill , N.C., to repair floor and repair and re-install four side doors on 1916 Pullman F-9 Atlantic Coast Line baggage and express car 704.
$5,000 -West Jersey Chapter NRHS, Palmyra, N.J., to create a National Historic Site of the Bordentown District of the Camden & Amboy Railroad.
$4,600 -Sumpter Valley Railroad Restoration, Inc., Baker City, Ore., for construction of a building to house an archive and book collection.
$4,200 -Chesapeake & Ohio Historical Society, Clifton Forge, Va., for window seals, glass, and gaskets to eliminate water infiltration in Gadsby's Tavern dining car.
$4,100 -The Goldfield Historical Society, Goldfield, Nev., for building, hanging, and painting of three sliding doors of two historically significant Tonopah & Goldfield freight cars.
$2,500 Missouri Pacific Historical Society, St. Louis, to purchase additional archival shelving for collection.
$2500 -Baltimore Streetcar Museum, Inc., for a mural on the exterior of substation museum and landscaping improvements.

Lake Superior & Mississippi off endangered list

Duluth, MN has two tourist railways. Better known is the North Shore Scenic that starts at the Lake Superior Railroad Museum and runs 26 miles to Two Harbors. The older, more modest operation is the Lake Superior & Mississippi on the far west end of the city. It operates five scenic miles of the original Northern Pacific main line to St. Paul. A major line relocation bypassed it in 1894 and it became a branch ending first at Fond du Lac, then further shortened to New Duluth. It follows the north bank of the St. Louis River, except for a long causeway that cuts across a wide spot called Mud Lake.

The line skirts the site of an abandoned U S Steel plant. Gone since the 1980s, it polluted the soil, groundwater and river with toxic chemicals. It was placed on the Superfund National Priorities list in 1983. In 2017 a plan was announced to clean up the pollution. Not surprisingly it was necessary to remove part of the railbed in the process. Trail advocates had been coveting the right of way for years and saw this as an opportunity to replace the LS&M. At the time the railroad seemed to be without allies. Things looked grim.

Then came Covid. The railroad shut down and the pollution cleanup began. During that period the local decision makers had a change of heart. U S Steel agreed to replace the removed portion and pay some compensation to LS&M for lost revenue during the shutdown. In the process, the track, which was rather doubtful in places, is being upgraded. The trail is being built, but it won't displace the railroad, most notably where the single track causeway crosses Mud Lake. LS&M resumed excursions in August 2023.

Age of Steam Roundhouse, Sugarcreek, OH

A new 4-track Car Shed was completed in 2022. It measures 464' X 64 feet and can hold 20 coaches or 37 average freight cars. It is named for the Timken Foundation, which partially funded it. The shed's design is based on Wheeling & Lake Erie's wooden, open-air, 2-track car repair shed that was 500 feet long when it was built in 1910 in Brewster. 350 feet of that building remains today.

This overview of the Age of Steam Roundhouse shows how the new storage shed is situated.

Tri-State Railway Preservation Museum, Port Jervis, NY

The museum has moved its collection out of its leased store front site and into a rehabbed 60-foot boxcar at the new Port Jervis Transportation Museum. Tri-State was always a partner in the new museum, contributing its collection of small artifacts and archive.

Cumbres & Toltec Scenic Railroad

The C&TS is one of those places with so much happening that it's hard to keep up, especially the activities of the Friends. Their highly-organized work sessions bring in scores of volunteers from across North America to work on dozens of projects simultaneously. Not all will be completed this year, but the scope of activity is something to behold. Here are some highlights from this year's scheduled work.

- Restoration of MOW 0252 (1889 Tourist Sleeper Car 470)
- Restore UTLX tank cars 11036 and 11037 to operational condition
- Construct period trucks for passenger coaches
- Restore UTLX tank car 11050 original GRAMPS car
- Restore converted stock car 5774

- Restore GRAMPS tank car 11056 to operational condition
- Rebuild flat car 6649 to roadable condition for MOW service
- Box car 3223: Install trucks, truss rods couplers, brake rigging, airlines, etc.to make car full operational (2023 - research and located needed parts)
- Reconstruction of Cumbres Car Inspector's house
- Cosmetic restoration of engine 483 and tender for static display
- Construction of Friends Storage Building
- Reconstruct high side gondola 1000
- Rebuild boxcar 3566 as a Hollywood Movie Boxcar (HMB) for public display
- Rebuild double deck stock car 5600 to road-able condition.
- Restoration of D&RG / D&RGW express baggage Car 163
- Repair Sublette bunk houses and section house

Add to that list painting and letter several cars and a lot of general maintenance work.

The Fox River Trolley Museum has restored Chicago Aurora & Elgin interurban #458 (St. Louis 1945). The car was purchased from the moribund Trolleyville collection, where it never ran and was used as a parts source. Joe Hazinski photos.

In Antonito the "carport" extension to the car Restoration Facility is finished and will offer shelter for two more cars. On the railroad side, a storage building is under construction at Antonito to house the restored 4-car 19th century

Fort Wayne Railroad Historical Society has completed the restoration of Nickel Plate SD9 #358 (EMD 1957).

North Alabama Railroad Museum has cosmetically restored Union Carbide boxcab diesel #11 Ingersoll-Rand, GE, Alco 1926). Bryson Heath photo.

NUCLEAR FUEL TRAIN ESCORT CABOOSES RESTORED

By R. Victor Varney, North Carolina Railway Museum

After a multiyear effort planning and fundraising, the North Carolina Railway Museum (NCRM) rescued 10 rail cars trapped inside nearby Duke Energy's Harris Nuclear Power Plant. All 10 rail cars were moved 5 miles over public roads to the NCRM in May 2022.

Two of these rail cars were cabooses that had been modified by Duke Energy predecessor Carolina Power & Light Company to serve as spent nuclear fuel train escort vehicles, CPRX 10002 (ex-C&O 3124) and CPRX 10009 (ex-D&RGW 01510). They were owned by the utility along with seven other rail cars in fuel train service hence using the rail name CPRX. These fuel trains ran between CP&L's three nuclear plants in the Carolinas between 1989-2008. The crews that rode in these escort cabooses were a combination of utility, railroad, and for security North Carolina State Highway Patrol personnel. The trains ran primarily on the CSX.

Both of the cabooses were donated to the NCRM by Duke Energy. Modifications included installation of diesel generators, 120V electrical systems, AC, support for utility, Highway Patrol, and local law enforcement radio systems, refrigerators, microwaves, and more. One of the most unique additions were the mounts for the rifles carried by the NC SHP security detail. Remarkably, virtually all the contents carried onboard these cabooses (except radios and rifles) were left behind by their crews after the last runs in 2007 and 2008. It's very rare to come across rail cars that come with nearly everything they carried on board when in use.

Over the past year, the two cabooses were meticulously restored by our volunteers to when they entered service for CP&L. On May 20, 2023, the NCRM hosted a special event for fuel train veterans from Duke Energy, CSX, and the NC SHP along with state government officials to inaugurate the cabooses into service on the NCRM's New Hope Valley Railway. (NHVR).

For more information about the NCRM, NHVR, and the fuel train cabooses, see our website triangletrain.com

PRR BOBBER RESTORATION 2019-2022

By Victor Humphreys, Illinois Railway Museum

Reprinted with permission from the IRM's Rail & Wire magazine.

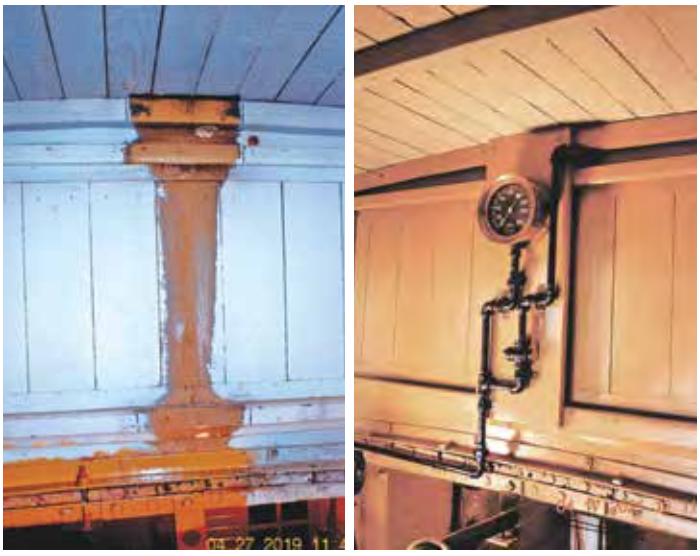
The last update on the restoration of Pennsylvania Railroad (PRR) Class ND cabin car 476199 was almost three years ago (see, *Rail & Wire,* Issue 262 (Spring 2020), pp. 6-11). Since that time many exterior areas of the car have been restored. The car now has a new canvas roof along with the installation of the chimney, roof walks and cupola braces. The exterior siding was completed, finish painted, and lettered. It is *almost* operational. The only unfinished exterior items are the brakes and the four pedestal bearings. The interior work has also been completed. The cabin car floor was painted and the water storage tank above the sink was painted and installed. Other articles added to the car interior were a fire extinguisher, a PRR first aid box and a metal rack for holding flags and fuzees.

Work inside the car's cupola saw the installation of the air gauge and new piping that connects it to the train brake system and installation of the seat cushions made several years ago. Before the floor could be painted, a sheet metal patch in front of the ice box was removed. The sheet metal covered up a rotten area of the floor that extended under the ice box and storage lockers. After the metal drain pan in the ice box was removed, the deteriorated floor was removed and replaced with new flooring. This work took many months to repair.

One of the biggest and most difficult restoration areas on the car was the cupola. Except for two 1½ x 1½ angle irons that form the base of the cupola on the top of the roof, all other areas are wood. The cupola is bolted to the car roof with 16½ inch bolts. The exterior wood siding helps to stiffen the cupola. The sides of the cupola were in very bad condition. Due to the missing 8-inch-wide cupola visors, water from the cupola roof ran down the sides of the cupola causing the windows and cupola base to rot. Water also infiltrated the body and deteriorated the X bracing and side sills under the cupola. Once the old siding on the cupola was removed, the base of the cupola literally fell apart. Once a new base was made for the cupola, new siding and windowsills were quickly installed.

The ends of the cupola were in good condition. This was due to the roof overhang, which protected the cupola frame ends and the windows. The windows on the cupola ends were in good enough shape to be restored and reused. The side windows were too deteriorated for restoration. Four new cupola windows were fabricated, and new flashing was cut and installed along the base of the cupola ends and sides. Cutting the siding in the cupola ends was a little tricky. At the center of the roof, the wood siding is cut at 90 degrees. Near the roof ends, the siding needed to be cut at 82 degrees, at both the top and bottom of each board. We set up a chop saw on the cupola roof to eliminate many trips up and down the ladder. After the siding was installed, new windowsills were milled and installed. The final cupola restoration project was the two facia boards. Two 10-foot x 12-inch boards were band sawed in the wood shop, then transported back to Barn 10 where the restoration was taking place. After priming and painting, the two facia boards were installed on the cupola roof.

The key problem faced in restoring the interior of the car was the absence of interior photos. Many interior restoration decisions were based on existing nail holes or painting differences (i.e., painted vs. raw wood). This especially was true for the installation of the air gauge and vent hole in the cupola. Holes were found in the closet where the piping from the brake pipe to the cupola had been located. The last use of our cabin car by PRR was as a yard office at Cresson, Pennsylvania. Alterations by PRR included removal of the brake pipe branch to the air gauge and replacing it with electrical conduit. Also, holes were cut into the closet walls for electrical boxes and two of the benches were removed to install desks. COVID, which shut the Museum down for over 4 months, also delayed the project.



The interior of the cupola, showing the site of the former air gauge and the replacement gauge and piping.

During Spring 2021, we ordered a 36 x 12-foot piece of heavy canvas for covering the roof. The first job was to cut the canvas into three 12-foot square sections. Each section was thoroughly soaked with water to remove the sizing. When dry, it was put on the roof. Clamps were attached around its perimeter and tension applied to the clamps to stretch the canvas and eliminate wrinkles. The tension was increased several times as the canvas stretched. After several weeks, the canvas was trimmed of excess material, then tacked down to the tack molding on the sides and facia boards. Because the cupola and flashing rest on top of the canvas, the cupola was moved several times during the canvas installation and painting. The cupola was only moved 6 inches each way each time. It was still a daunting task, as the cupola weighs about 400 pounds. Three coats of black canvas paint were rolled on the left car roof, right car roof, and cupola roof respectively. After the canvas was installed and painted, installing the saddles and roof walks went quickly. When built in 1906, the car did not have roof walks or ladders to the roof. After 1912, all Class ND cabin cars got ladders and roof walks when the cars were upgraded to conform with the United State Safety Appliance Standard. As built the cars had minimal roof support, as it was not intended for anyone to be on it; however, when the 1912 work was performed and roof walks added, it was necessary to reinforce the carlines inside the car with props to reduce the chance of the carlines being broken by increased roof weight. The next job was to install the cupola braces. The four braces connect the cupola with the main body of the car. Getting all four braces to line up with the existing holes was a trial-and-error exercise. Eventually all the braces were bolted in place. The last roof work involved installing the two visors over the cupola side windows.

Several PRR era cabin car windows were found in the car's storage lockers. These window frames were painted in the late 1940's or early 1950's and were the only example I could find of PRR era exterior car paint left on or in the car. Most of the windows were in poor condition and could not be used. All the car's exterior siding was replaced in 1972 by the former owner, the Pennsylvania Trolley Museum (PTM). Using the old paint on the stored windows, 2 gallons of matching paint were mixed. During August 2022, the siding, windows, and door were painted PRR deep red/brown. Also painted black were the railings, steps, ladders and grab irons.

Before the car was painted, it was time to clean up the under frame of the car. It wasn't as bad as I expected. Very little grease or dirt was there, only peeling paint. Most areas were easy to clean, except over the two axles. One interesting fact discovered on the car was the air brake tank and piston. The "K" brake parts were cast for freight cars and had cast dates of 8-12-96 and 4-14-99 (that would be 1896 and 1899!). Since our car was built in 1906, either the PRR had a large inventory of air brake parts, or they came off earlier Class NC cabin cars that had been scrapped. While cleaning and painting the underframe, I found a broken brake beam on the "B" end that explained why the brakes weren't working properly. It looked like damage from a PRR era derailment. Other areas of the car that exhibited damage were the end beams and the body bolster. Fortunately, an exact replacement brake beam was found in the "bone pile," half buried in the mud. The bent hanger that supports the brake beam was straightened and the new replacement brake beam was cleaned, primed, and painted. Installing the new brake beam and testing the car's brake system will be the last step in the car's restoration. This will be completed sometime in 2023, maybe before this article is published. The last time the car's brakes worked was almost 75 years ago!

In September 2022, the exterior paint was dry, and it was time to letter the car. The last time the car had any lettering was in 1972 when PTM re-sided the car and applied a non-PRR red, but left it unlettered, without curved grab irons. When I saw the bobber in 1988 at PTM most of the paint had peeled off. Before IRM volunteers moved the car to IRM they painted it in white primer. George Morrisette created and laid out the stencils on the car following a PRR lettering diagram. After painting, the stencils were removed and some touch up was needed, especially on the lettering on the chamfered edges of the siding.

The very last job in 2022 was the completion of the coal stove portion of the project. When we acquired the car, all the stove equipment (stove, chimney, wall heat shield, coal bunker and stove pipe) was missing. Only a hole in the roof indicated a stove once existed there. IRM was fortunate that an actual PRR caboose stove had been donated many years ago and was in storage. That was a starting point, as none of the other missing equipment existed. So, I designed and had all the other missing pieces fabricated. The stove pipe shroud was the most difficult, but in the end all the parts fit together, and the cabin car cosmetic restoration was completed.

Only the stove plate on the floor was with the car when it arrived at IRM. All the other items were donated, bought or fabricated.

Part of the interior restoration included the sink, wash water tank and an authentic PRR first aid kit.

My research recently revealed a photo in *Trains Magazine* (August 1956) of our bobber being ramped onto a truck trailer in a railroad yard in Pittsburgh on its way to PTM (at the time known as Arden Trolley Museum). For them it was an orphan, as it was standard gauge. Their operation is on the Pennsylvania trolley gauge of 5 foot 2 ¼ inches. They sold it for $1500 to an IRM member and it was trucked to Union. It is possible that the brake beam was damaged during those moves. When the Freight Car Department started working PRR 476199 in 2014, I never thought we would still be working on it eight years later. At every turn we found more restoration that was needed, but with the dedicated help of Dave Rogan, Bill Peterson, George Morrisette, Rich Witt, and me, we did it!

THE LATEST GOOSE NEWS

By Joe Becker, Galloping Goose Historical Society

Goose #5 in front of the replica Dolores Rio Grande Southern depot.

On February 13, 2023, the Town of Dolores passed a resolution transferring ownership of Rio Grande Southern Goose No. 5 to the Galloping Goose Historical Society. The Town's Board of Trustees unanimously decided that "good governance requires that the Board of Trustees consider the burdens, risks and potential liability of its continued ownership, especially when the Goose operates on railways elsewhere in Colorado and in New Mexico." The transfer of ownership agreement has conditions that are totally in agreement with our society's mission and are less restrictive than our prior lease agreement. Among these conditions are display, maintenance and insurance requirements and transfer of ownership restrictions that guarantee that RGS Goose No. 5 will always remain part of Dolores. Ownership of RGS Goose No. 5 has been an unstated goal of our organization since its beginning in 1987.

During the 1930's, the RGS home-built seven rail-buses at their Ridgway CO roundhouse. These "Motors" were built to carry local passengers, baggage, and mail. They replaced the scheduled passenger steam train service. Three Motors had two trucks with a rigid frame (No. 1, 2 and 6). Four Motors (No. 3, 4, 5 and 7) were built with an articulated frame. (The cab and trailer sections pivoted on the center power truck.) Pierce Arrow limousine automobiles were used to power the articulated Motors. Motor 6 had a flatbed instead of a freight box and was used for track repair and other maintenance. For all the Motors, power was transmitted to the first axle of the power truck using a drive shaft into a Ford Model A truck differential. The second axle was linked to the first axle by external agricultural chains.

The front truck had a foot brake while the power and rear trucks had hand-operated mechanical brakes. In 1939, air brakes were added to the center and rear trucks and the front foot brake was removed. The electric horn was also replaced by a louder air horn. In the late 1940's, they were re-motored with GMC 361 cubic inch six-cylinder truck engines. The Pierce Arrow limousine cabs on Motors 3, 4 and 5 were replaced in 1946 with Wayne bus bodies. These all-metal bus bodies, with a look of a school bus, came equipped with two doors, providing access to both sides. In 1938, air brakes were finally added at the insistence of railroad inspectors and air horns were added.

In 1950, an attempt was made to attract summer tourists. The RGS officially recognized their three-trucked Motors (No. 3, 4, 5, and 7) to be "Galloping Geese", their local commonly used nickname. They painted a running goose moniker on the articulated rail bus and started to use a "Galloping Goose" in advertisements. The freight boxes on the "Geese" were reconfigured with windows and Denver streetcar seats were added to carry additional passengers. A streetcar bell was added in the cab with a rope running back into the passenger box for communication. After less than two years of summer tourist operations, the railroad was abandoned.

Today all seven of the RGS Motors exist (at least in spirit) and all are in running condition. Motor No. 1 was parted out by the RGS early on to build the other Motors but an exact replica was re-created by Karl Schaefer in Ridgway, Colorado. Geese No. 3, 4, 5 and 7 see somewhat occasional service. RGS Goose No. 5 provides special full day excursions on the Durango & Silverton and the Cumbres & Toltec. Motors 2 and 6 operate on special occasions at the Colorado Railroad Museum. Motor 3 runs at Knott's Berry Farm in California.

	Current Owner	Motor Location
Motor No. 1	Ridgway Railroad Museum	Ridgway CO
Motor No. 2	Colorado Railroad Museum	Golden CO
Goose No. 3	Knott's Berry Farm	Pasadena CA
Goose No. 4	Telluride Volunteer Fire Department	Ridgway/Telluride CO
Goose No. 5	Galloping Goose Historical Society	Dolores CO
Motor No. 6	Colorado Railroad Museum	Golden CO
Goose No.7	Colorado Railroad Museum	Golden CO

The Galloping Goose Historical Society was created to help preserve Rio Grande Southern Railroad RGS Goose No. 5, built in 1934. An iconic piece of local narrow gauge railroad history, it was purchased by five residents from Dolores, Colorado for $250. In 1953, it was displayed in Flander's Park downtown. During its years on display, it fell into complete disrepair. In 1987, the Galloping Goose Historical Society (GGHS) was established by area residents to save it. With volunteer support, the society built a replica of the RGS Dolores train station. It houses the GGHS museum, gift shop and offices. In the late 1990's, the Society completely restored the "Goose" to running condition with a grant from History Colorado. It is now open to visitors and runs on a short track in front of our museum.

Goose No. 5 was operated by the railroad for 19 years, sat in the park displayed for 47 years and has again operated for 26 years as a restored vehicle. When in scheduled rail service on the RGS, it travelled almost 1,000 miles every week. As a restored historic vehicle it now travels less than 1,000 miles a year on local narrow gauge railroads. It operates occasional full day "living history" excursions on the D&SNG and the C&TS.

Our volunteers are a mix of both part-time and full-time resident retirees and local multi-generational families. Many are not railfans but folks who want camaraderie and enjoy meeting people. Our organization has an annual budget of just less than $100,000 with almost 400 members. We get about 1,500 visitors per year, plus those that ride our "living history" excursions annually on local narrow-gauge railroads.

Since the "416 Forest Fire" near Durango Colorado in 2018, liability insurance for "Goose" excursions has skyrocketed. It has doubled in less than five years from $8,000 to over $16,000 per year. The GGHS share of excursion revenue has managed to cover these increases by increasing ticket prices. These prices are now becoming unaffordable. Museum operations of the "Goose" in Dolores are enabled by insurance coverage included with the host railroad excursion insurance coverage. Cancelling excursions on host narrow gauge railroads would have a negative cascading effect on the future of our organization.

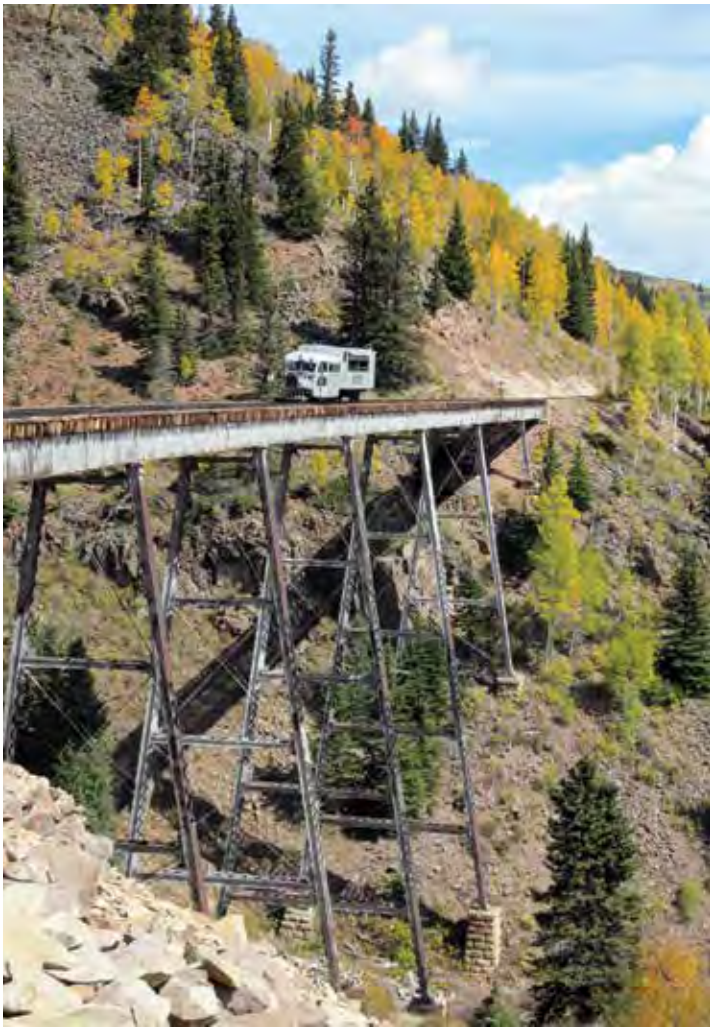
GGHS has maintained excellent relationships with Durango & Silverton Narrow Gauge, Cumbres & Toltec Scenic Railroad, Colorado Railroad Museum, Denver South Park and Pacific Railroad Historical Society and the Ridgway Railroad Museum. We have worked together on many projects during the past years. Full day excursions are scheduled on both the DSNG and C&TS railroads this September. Please check the railroad websites for more information.

Running a Goose

The dashboard dials left to right across the top indicate air brake reservoir pressure, oil lubrication pressure, battery charging, engine temperature and engine rpm. The toggle switch on the left edge is the ignition switch. Next to it is the manual choke. It was added when RGS Goose No. 5 was re-motored with a 1947 GMC truck engine during the second upgrade.

It is interesting to look at vintage car collector websites and see the dashboard similarities and explanations for things that are now missing. The hole partially hidden by the choke housed a primer for the original Pierce Arrow carburetor. (It had no choke.) The Pierce Arrow motor had two plugs for each cylinder. The knob with the arrow (no longer used) allowed the motorman to switch from one set of plugs to the other set of plugs or to run with both sets. The Pierce Arrow had no gasoline pump. The threaded hole on the right housed a manual pump to pressurize the fuel line to get the fuel to the syphon from the gasoline tank. The knob next to it perhaps controlled the cabin heater.

Note that there is no speedometer. An experienced motorman can estimate his speed by looking at the engine rpm and knowing the transmission gear. In top gear (5th) at maximum rpm (2200), the speed is 25 mph. Another way is to clock mile posts or count/listen to rail joints. Speed limits are set by DSNG and C&TS for all sections of track. The maximum track speed at both railroads is 20 mph.



Goose 5 flies high on the Cumbres & Toltec (left) and the Durango & Silverton (right).

Goose No. 5 has two 25 gallon gasoline tanks, one left, another right, but no gasoline gauges. Motormen must be mindful of their fuel consumption. Standard practice is to always start a daily run with two full gasoline tanks and empty one tank before switching to the other.

In the forefront in the center, hanging over the gear shift lever, is a blue bag. Wooden wheel chocks are kept in this bag under the motorman's seat. When the "Goose" is stopped, the wheels are chocked and the bag is empty. It is hung over the gear shift lever, signaling both visually and by feel to the motorman, that the chocks are down. Similar to an aviation "red sock" on plane controls, this blue bag also mimics the standard railroad "blue flag" rule. This rule prohibits any movement of any kind with a train that has a blue flag. Many times, a railroad pilot will tell the "Goose" motorman that you are "Good to Go", not knowing the "Goose" is still chocked.

The RGS Motors were notorious for overheating with their radiators boiling over, even in the winter. A bucket of water from a nearby stream was poured into the radiator and the hood sides were propped open to help air circulation. These sides "flapped" going down the track, making them look like wings. Adding river water exacerbated cooling problems. Sand in the river water slowly collected in the bottom of the radiator, reducing its cooling efficiency. When the radiator core on RGS Goose No. 5 was replaced during restoration, the old core was found to be half-filled with sand. RGS Goose No. 5 has never had overheating problems since its 1998 restoration.

The "Motors" have no anti-sway devices (shock absorbers) on their articulated bodies. The front cab section will sway independent of its rear box section, especially on rough trackage. It looks like it is waddling down the track.

THE G5 TANK ENGINE. THE REBIRTH OF AN IDEAL LOCOMOTIVE FOR UK HERITAGE RAILWAYS.

By Paul Symonds and Tim Taylor of the Class G5 Locomotive Company , Shildon County Durham UK

The United Kingdom preserved railways are significant tourist attractions and generate a multi-million pound turnover. The members of the Heritage Railway Association had a combined revenue of £130 million ($170 million) in 2016 and operated 562 track miles with 562 stations. Owing to their obvious popularity, most of the lines rely on steam locomotives and there is an increasing shortage of available and suitable engines as even the youngest of the former British Railways fleet are over 60 years old

A number of groups are building new steam engines. They tend to be express passenger engines such as the A1 Pacific "Tornado " which has been shown capable of 100mph. These locomotives are unsuitable for most heritage railways which are largely branch lines 10 to 15 miles long with short or medium length trains and a speed limit of 25mph.

In contrast to these large express engines, the ideal heritage railway engine is the G5 tank engine which is economical to run and maintain with a high route availability, low axle weight and ability to take tight corners.

One hundred and ten of these engines were built by the North East Railway between 1894 and 1901 and worked branch lines and semi fast expresses in Eastern England and the North East of Scotland and were capable of speeds of over 60mph. In the late 1950's, they were largely replaced by Diesel Multiple Units. Unfortunately, none were preserved. The G5 locomotive company began a "New Build "of this robust, reliable and versatile engine in 2007 and the pace of construction has increased in the last year. The engine was designed by Wilson Worsdell and the company is using over 130 of the original drawings. Where appropriate, modifications have been made owing to advances in materials and techniques and to comply with new regulations for mainline running.

The boiler was manufactured in Darlington (the place where G5 locos were built) and is the largest all welded standard gauge boiler to be built in the UK for 60 years. The frame is fully erected as is the rear bogie. The aim is complete a fully rolling chassis with fully connected motion by the end of the year. A re-machined cylinder block is currently being re-installed into the frame. The connecting rods and eccentrics have been forged and machined during the last month.

One of the reasons for slow and sometimes very frustrating progress of construction is the difficulty in finding suitable suppliers of what are by necessity bespoke components. Three of the four driving wheels, the crank axle and coupling rods are complete. The production of the fourth driving wheel has been fraught with problems. This wheel has been either badly cast or machined on two occasions and both wheels had to be scrapped. A new order has been placed with a different supplier.

Over a million pounds have been spent so far. It is estimated that a further £500,000 ($650,000) is needed to complete construction. It is predominately funded by monthly super friend donations, buying of shares and dedicated fund raising. To be a super friend email friends@g5locomotiveltd.co.uk.

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