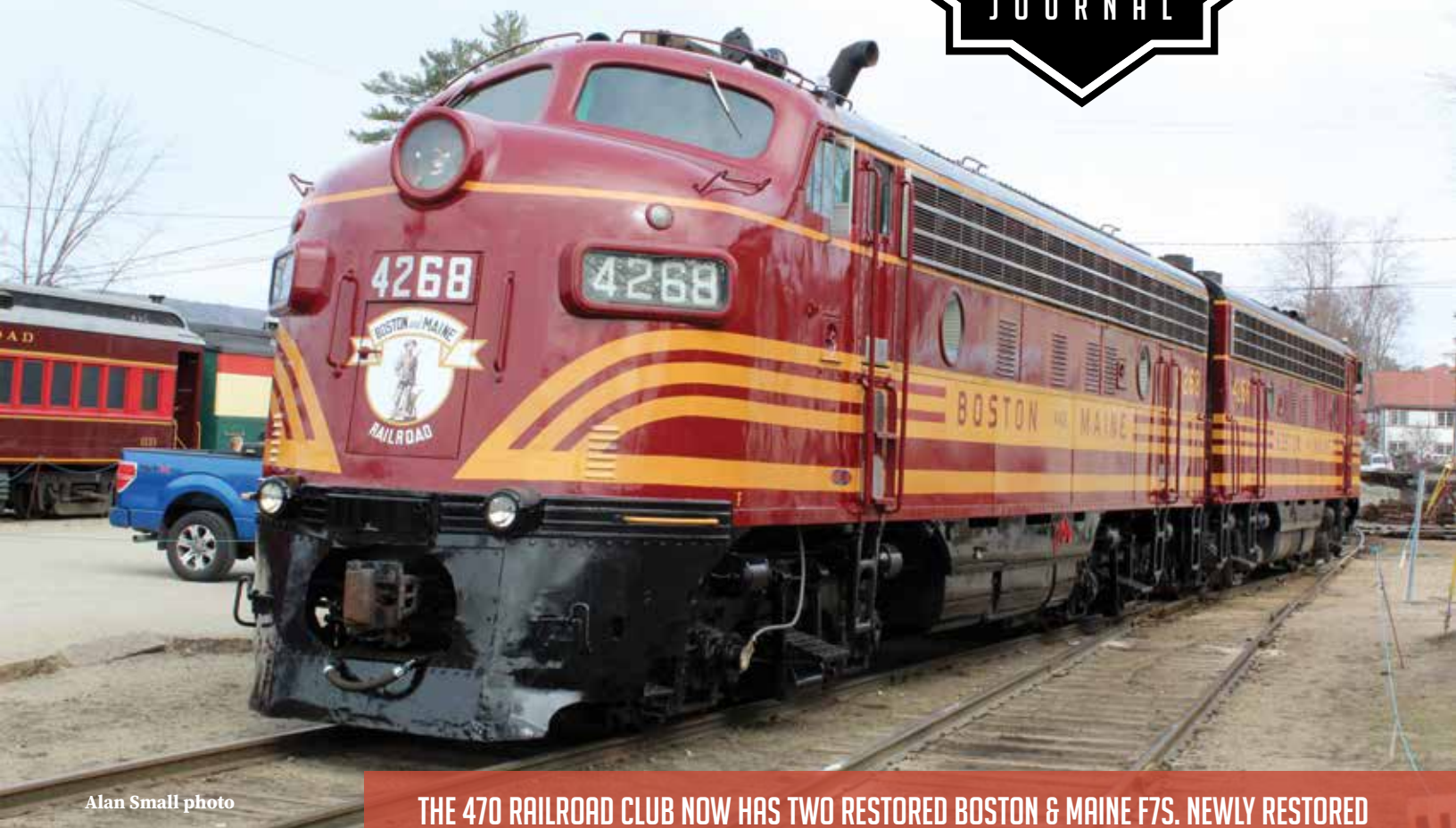


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## HeritageRail Journal

July 2022

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# FROM THE HEAD END

By HRA President G. Mark Ray

It's time to catch everyone up on what's been going on at the HeritageRail Alliance. So here's a brief update on the major activity.

**Board of Directors:** The board has conducted two virtual meetings (one was split over two evenings). Officers elected for 2022 are G. Mark Ray, President; Bob LaPrelle (Vice-President United States); Robbie Robinson (Vice-President Canada); Ellen Fishburne, Secretary; and Rick Burchett, Treasurer. A balanced budget for 2022 was approved but this was immediately challenged by the cancellation of the Spring Event.

**Spring Event:** For the better part of three years, HeritageRail worked with the Boy Scouts of America to develop a Youth Engagement Workshop. The goal was to present a program to address one of our fundamental needs. Part of the attraction of this event was to conduct it at the Philmont Scout Ranch in New Mexico because of the Metcalf Station Project. The pandemic forced continued postponement of this event until this Spring. It appeared the time was right. Evidently time wasn't right. Only four persons registered and I was one of them. Two of the other four planned to attend to discuss an upcoming spring event. Cancelling this event does impact our budget but my concern is not income. My concern is the lack of interest in the event.

**49CFRPart232.717:** Earlier this year, HeritageRail petitioned the Federal Railroad Administration to allow our Air Brake Maintenance Guide (RP-001-21) to modify the air brake maintenance rules in the Code of Federal Regulations, Title 49, Part 232. The required public comment period closed on May 6. FRA approval is expected soon. This is a huge accomplishment for the industry and represents the first joint effort between two alliances – ours and the Railway Passenger Car Alliance. Following this effort, both alliances focused on the second effort – Pipe Fitting Single Car Test Device (RP-002-21).

**49CFRPart219:** In February, the Federal Railroad Administration issued changes to Part 219, Control of Alcohol and Drug Use. This change adds mechanical employees into the program. As soon as this happened, many of you reached out with questions. I also heard from RPCA and our second joint effort is in progress. We are creating a guidance document to help everyone understand what mechanical tasks are covered by this change. In addition, we are working with Spark Testing Services to address the elephant in the room. What about that contractor you hired to do a quarterly inspection on your lone Alco diesel? Or the company that sent your air brake valves to be cleaned and washed? Do they need to be drug and alcohol tested (yes on the first question, no on the second). Understanding how this impacts contractor

services is a large impact to everyone, so make sure you understand it.

**Spring Webinar:** With the cancellation of the spring event and several ongoing hot topics, the Alliance conducted a free two day webinar to address current ongoing issues – Board Governance, Risk Management, Part 219, and Part 232.

**Advocacy Day:** The 2022 Museum Advocacy Day was attended virtually by several members of HeritageRail. Key messages delivered focused on Covid relief (such as the Shuttered Venues Operators grants), limits on charitable contributions, and continued funding of the Institute of Museum and Library Services (a funding source for many of you).

**Fall Conference** – It's time to meet in-person again. Conference Committee Chair Terry Koller has assembled a great set of speakers to go with five field trips. This unique event will be held in Connecticut September 7 – 11, 2022. Registration and hotel reservations are open now. Go to our website for all the details.

## Passing the steam torch

Smoke & Cinders is the official mouthpiece of the Tennessee Valley Railroad Museum. In 1989, I wrote a small story about a recent successful mainline excursion behind a certain green 2-8-2. In the story, I thanked Paul Merriman for buying the 4501. Then I wrote something to the effect that “the second generation has arrived.” *Trains Magazine* picked up on this and published it in the next issue.

Steam as a source of motive power was gone by 1960. Many of those who worked on steam locomotives back in the day stuck around long enough to teach a generation who wanted to keep steam alive. The teachers were the first generation – those who actually did it for a living. By the 1980's the second generation was getting more and more involved in steam preservation.

The previous generation did well teaching us. Many in the second generation were able to hone our skills out on the mainline with locomotives such as 1218, 611, 4501, 765, 3751, 4449, 614, 2101, 4070, and 4960. With these skills, some of the second generation chose careers of keeping the dream alive.

Time does march on now we've reached the 2020's. The second generation is now in our 60's and 70's. Names like Bensman, Conrad, Karhan, Lee, Lindsay, McCormick, Moedinger, Withun, Yuill, and many others are now fading into history. The second generation is also the generation  
*continued on page 6*



# 2022 FALL CONFERENCE & ANNUAL MEETING

## SEPTEMBER 7-10, 2022

### Sheraton Hartford Hotel at Bradley Airport 1 Bradley International Airport, Windsor Locks, CT, 06096

Step off the plane and walk to the conference! The 2022 Fall Conference and Annual Meeting will be held in person at the Sheraton Hartford Hotel at the Bradley Airport this September! Registration information and pricing will be available this summer.

The conference will open on the evening of Wednesday, September 7 with the opening night reception & Annual Meeting. Plenary and breakout sessions will take place at the hotel on Thursday, Friday and Saturday mornings, followed by visits to local member museums and railways in the afternoons: Essex Steam Train and Riverboat (Thursday); Danbury Railway and the Railroad Museum of New England (Friday); and the Connecticut Trolley Museum and Shoreline Trolley Museum (Saturday). The conference will end with the Saturday

night banquet and awards ceremony. All meals and transportation will be provided.

Plan ahead: The Sheraton is currently accepting online reservations at conference rates for overnight stays from September 3 through September 15 at \$159 per night. To reserve your room online go to the conference page of the HeritageRail website ([www.heritagerrail.org](http://www.heritagerrail.org)) and click on RESERVE FALL CONFERENCE ACCOMMODATIONS. When reserving your room online, click on the drop-down menu to select your specific arrival and departure dates.

Planning on driving? Parking at the Sheraton is FREE for conference attendees.

## TENTATIVE AGENDA

### Wednesday, September 7th

Opening Night Reception

#### Time

6:00 PM to 8:00PM

Annual Meeting

8:00 PM to 8:30 PM

### Thursday, September 8th

Breakfast with Vendors

#### Time

7:00 AM - 8:00 AM

Plenary Session #1 *Industry Issues and Challenges*

8:00 AM - 9:00 AM

Coffee Break with Vendors

9:00 AM - 9:30 AM

Plenary Session #2 Special Topic - *Approaches to Project Management* with Shaelyn Amaio Public Engagement Manager Connecticut Landmarks

9:30 AM - 10:30 AM

Board buses to Essex Steam Train and River Boat

10:45 AM

Depart for Essex

11:00 AM

Arrive Essex Steam Train and Riverboat

NOON

A day of activities at Essex including lunch, train rides, riverboat excursions, a lecture on "*Getting along with your museum's neighbors*"

Buses depart for Sheraton Bradley

8:00 PM

Arrive Sheraton Bradley

9:00 PM

### Friday, September 9th

Breakfast with Vendors

#### Time

7:00 AM - 8:00 AM

Plenary Session #3 *Succession or Secession* - The purpose and perpetuation of a Museum Board of Directors.

8:00 AM - 9:00 AM

Coffee Break with Vendors

9:00 AM - 9:30 AM

Plenary Session #4 Special Topic - *AASLH Standards and Excellence Program* with Scott Wands, Director, Grants and Programs Connecticut Humanities

9:30 AM - 10:30 AM

Parts Committee Roundtable Meeting

9:30 AM - 10:30 AM

Canadian Council Meeting

9:30 AM - 10:30 AM

Board buses for afternoon field trips

10:45 AM

Depart Sheraton for afternoon field trips (Box Lunch on Bus)

11:00 AM

Afternoon field trips to Railroad Museum of New England and Danbury Railway Museum

NOON - 5:00PM

Board Buses for Sheraton Bradley

5:00 PM

Depart Danbury Railway Museum (1 hr 30 min )

5:15 PM

Arrive Sheraton Bradley

6:45 PM

Buffet Dinner followed by Show and Tell

7:00 PM - 9:00 PM

*continued on page 6*

## TENTATIVE AGENDA CONT'D

### Saturday, September 10th

Breakfast with Vendors	7:00 AM - 8:00 AM
Breakout Sessions	8:00 AM - 9:00 AM
Coffee Break with Vendors	9:00 AM - 9:15 AM
Breakout Sessions	9:15 AM - 10:15 AM

*Marketing your Museum*, Rene Mack President  
Percepture Marketing and Public Relations.

*Historic Preservation 101*, Mary Dunne Connecticut  
Deputy State Historic Preservation Officer.

*Exhibit Design and Case Studies at NYC Transit Museum*,  
Jodi Shapiro Curator New York City Transit Museum  
and Polly Desjarlais Education Manager New York City  
Transit Museum.

*Customer Service and Engagement*, Brian Messinger Essex  
Steam Train.

*Partnering for Special Events*, John Proto Executive  
Director Branford Electric Railway Association and

*FRA / Regulatory Update*

Coffee Break with Vendors	10:15AM - 10:30AM
Board Buses for afternoon field trips	10:30 AM
Depart for afternoon field trips (Box Lunch on Bus)	10:45 AM
Afternoon field trips to Connecticut Trolley Museum and Shoreline Trolley Museum	11:00AM - 5:00PM
Board Buses for Sheraton Bradley	5:00 PM
Depart for Sheraton Bradley	5:15 PM
Arrive Sheraton Bradley	6:15 PM
Cocktail Hour	6:30 PM
Annual Banquet and Awards	7:30 PM - 9:30 PM

that lived through the Gettysburg event in 1995 and we lived through the aftermath of that event. This aftermath saw updated regulation, resurrected boiler codes, and the realization that we cannot survive another Gettysburg.

With the second generation slowly fading away, where do we go from here? Is there a third generation? Is this generation ready? Have we prepared them for the path that lies ahead? How can we tell? Do they really understand why we can't have any Gettysburg-level event? More bad news: the mainline steam programs that initiated much of the second generation no longer exist!

What has replaced the steam programs is a vast network of heritage railroads whose mission is to keep the dream alive. This is where we find our third generation.

It is said that good judgement comes from experience and experience comes from bad judgement. We can pass along knowledge but experience is something that must be learned. When dealing with steam locomotives, our tolerance for bad judgement better be damn near zero. Before the second generation completely fades into history, the third generation must know how to do it right.

If this industry is to continue to teach future generations to come about what a steam locomotive is, then it is incumbent upon us to not only pass along our knowledge, it is imperative to drive home the message that we cannot tolerate another Gettysburg event. Only then can we assure our dreams will live on. The second generation must set the standard and hold the third generation accountable. We cannot tolerate those who cannot comply with standard

practice or choose to cut corners if it will save time or money. We must have the courage to question non-compliance or non-standard practice. If we don't, then we won't survive the inevitable catastrophe.

There is something else that we can do. Scattered throughout North America are vast libraries of technical books, volumes of standard railroad practices, and the engineering standards for all the major builders. No, I am not talking about the California State Railroad Museum Library or the DeGolyer Library. I'm talking private collections tucked away on bookshelves in garages or dens. This is material that needs to be scanned and stored in the HeritageRail Alliance Technical Library. If you have such a collection or know of someone who does, please reach out to the Alliance so we can work on a plan to scan the material.

Also, the Heritage Rail Association (UK) has a series of Recommended Practices for steam locomotives. We will develop a similar series of Recommended Practices for use in the USA.

Finally, let me close with this. There are many organizations out there who are doing it right. The third generation is in place and sustaining the passion and traditions of the previous generations. My worry is with the organizations that are not part of the Alliance (or any other trade organization). They might be operating on small maintenance budget (or none at all) and their experience level is either limited or subject to overconfidence/complacency (it's always been this way). It is a place like this that scares me the most. This is a concern that HeritageRail must address.



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# RECOMMENDED PRACTICES FOR RAILWAY MUSEUMS 2.0

By Aaron Isaacs, HRA editor

## Part 5 Programs and Support Activities

The introduction to this section says, *“Museums recognize their role as interpreters of history and social change through the display, demonstration, and interpretation of collections.”*

### This is a train

Static display is the starting point for all museums. Behold, here is a very large artifact. It's not moving or doing anything, but it's clearly a survivor of another era, an interesting rarity. A docent can walk around it, pointing out its features. Or—here's a collection of small artifacts relating to railroads. They are presented out of context, but they're rare and probably foreign to the visitor, so we'll display them in an orderly fashion with explanatory signage. This is interpretation at its most basic and boring, but at too many museums that's the extent of it. It's the recipe for the typical depot museum, plenty of train stuff with a caboose sitting out front.

### This is what a train ride feels like

At the other end of the interpretation spectrum, many museums and tourist railroads have graduated to running trains that carry their visitors. It's a huge step up, creating an immersive experience, and is one of the great strengths of railway preservation. When done well it can be a time machine. There are degrees of quality. A lurching 15 mph ride in a converted flat car with railings and wood benches is not the California Zephyr, but the passenger will come away with some understanding of what a train ride feels like. If the museum can deploy appropriate vintage rolling stock at higher speed, and the crew dresses and behaves with some semblance of historic accuracy, the experience becomes more valuable.

We should admit that if we have a train to run, many of us would rather forget about static displays and other less sexy forms of interpretation. At my trolley museum with its mile of track, we frequently are asked, “Where's the museum?” “You're riding on it”, we respond. That's a valid answer, but it shows that the public has expectations for what a museum should be and we're not satisfying them.

Between static display and immersive train rides are numerous options. Technology is opening up new ones. Some of the best require no visit to the museum at all.

### Amping it up on site

Docents should enhance the experience, but it's tricky. Too many docents are focused on technical trivia only. We've all had to escape from the overbearing docent offering too much information. However, a good docent can make the visit memorable.

There are all sorts of established tricks for creating museum displays. There's the theater where an introductory video is running continuously. Attractive graphics help. Static displays can be enhanced with video and sound. One of the best I've seen is the Pennsy K4 cab at the Altoona Railroaders Memorial Museum with a loud soundtrack of an engine running flat out. Passive but effective. Recent technology for self-guided tours augments signage with narration on cell phones triggered by GPS.

Anything that actively involves the visitor should be more interesting than just gazing at the artifact and reading a sign. Toy train play areas for little kids get their interest started. There are both analog and digital ways to make displays interactive, including video games. Some museums have acquired actual locomotive simulators.

Museums often occupy historic sites that no longer look the way they did. Scale model railroads can recreate the past in three dimensions. Two of the best I've seen are at the Mineral Point Railroad Museum in Wisconsin, and the Hoosier Valley Railroad Museum in Indiana. Both occupy mostly empty land that used to be filled with tracks and structures and the models remind us what was lost.

Although it's a profit center, the museum store should sell items like books, magazines, and videos that give visitors an opportunity to learn more. Visitors want to take something with them. Why not something that extends the museum's reach?

### Away from the museum

Interpretation needn't stop at the edge of the museum grounds. Think about how you can make all that history available off site. Even before the internet, museums could extend their reach through memberships, slide shows, excursions, newsletters and other publications. There are so many more media options nowadays—websites, chat groups, social media, digital archives, YouTube videos, podcasts and Zoom sessions. Indeed, during Covid many museums greatly increased their online footprint.

### Placing the railroad in the larger society

Most railway museums are happy to tell visitors all about the nuts and bolts of railroading. Less common are those that tell how railroads related to the larger society, impacting it and being impacted by it. Railroads did not exist in a vacuum. They shaped much of North America's landscape, including the layout of its cities and towns. They were among the largest employers, and had an enormous economic impact through the hauling of freight and passengers. They were the dominant technology of the 19th and early 20th centuries. They helped win two world wars and the Civil War.

*continued on page 8*

On the other hand, railroads were impacted by the economy, labor history, racism, government regulation and competition from other travel modes, just to name a few. Those stories are told less often, but a maturing museum industry should try.

### Safety and training

Safety and training belong somewhere in the document and RP's authors chose to put them here. That's because

you're welcoming in the public and asking them to move into and around heavy machinery that could kill or injure them. Traditional museums don't have that risk. Section 5.7 is a checklist of the steps to achieve safety and a properly trained staff.

To download a copy of *Recommended Practices*, go to [heritagerail.org](http://heritagerail.org) and log into the Members section.

## REBUILDING THE BIRDS LANDING TRESTLE

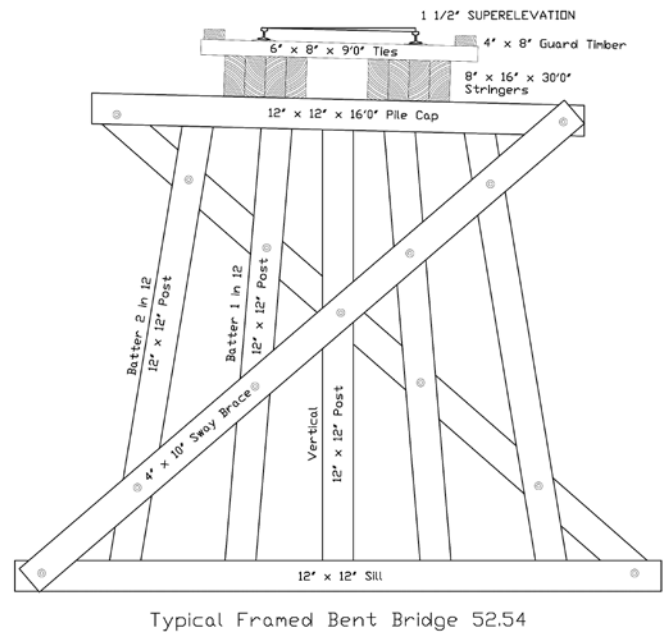
By Joel Cox, Western Railway Museum, photos by Joel Cox.

Reprinted with permission from *The Review* newsletter.



As soon as vaccines became widely available and it was once again safe for volunteers to work together, the Track Crew swung into action to prepare the Western Railway Museum for re-opening. The Crew turned their attention to what had been their main project before being interrupted by the pandemic – rebuilding the Birds Landing Trestle. The Crew picked up right where they left off, working to replace the heavy timbers like sills, posts and sway braces in the lower parts of the bridge. Several of these timbers had date nails driven into them, indicating that they had been installed in 1927. While it was clear that some timbers had been upgraded and replaced over time, that still indicates an exceptionally long lifespan for the wood timbers of this bridge!

The Association has a really fine stable of equipment to help ease the work of replacing these timbers. Nevertheless, each timber required a huge amount of hand labor to lift the bridge as needed, remove the deteriorated timber, cut the new timber to fit, and install it. Even the bolts that hold the bridge together were a fight – all were rusted in place, and some were so swollen with rust that they refused to budge after the nuts were removed.



A typical trestle bent.

This bridge has timber sills sitting on concrete foundations. All of the concrete was serviceable, but many of the timber sills were rotted beyond use. A typical day's work to replace a sill went like this. First the sway braces were removed by turning the bolts holding them in place. Each post was held in place by a drift pin driven into the sill, so these were removed to release the sill. Next the bridge was lifted by using two 25-ton bottle jacks lifting on an adjacent bent. The goal would be to lift the bridge including the pile cap and posts, so in many cases it was required to first brace the connection between the cap and posts using temporary plywood gussets. The top of the posts are fixed to the cap with a drift pin, but in some cases this pin was loose, so the plywood was necessary to keep everything together. Temporary wood struts were used to keep the spacing of the bottom of the posts as well. Once the bent was lifted

*continued on page 10*





Client Showcase:

## Western Maryland Scenic Railroad gives back BIG to the community



By Ehrin Harrison for McRail

Desire and drive for history, and a commitment to the community is what it takes to succeed as a heritage railroad, according to Wes Heinz (Executive Director of Western Maryland Scenic Railroad). He believes in “keeping talent in the community” by creating a sustainable network of craftsmen, volunteers and staff that share a passion for the history and the people they serve.

Raised in Tennessee, Wes fondly recalls being surrounded by trains as a child, especially when his grandparents would drive him past the Norfolk Southern Railyard. Later in life Wes moved on from Tennessee, working for large corporations such as Microsoft, P&G, Walmart and Samsung. Eventually he became Executive Director at Maine Narrow Gauge RR, (Based in Portland.) Wes came to WMSR as a project manager for the rebuild of the 1309. After the rebuild was complete, Wes entered into the role of Executive Director on June 8, 2021.

Built by Baldwin locomotive works (Phila PA), the 1309, an articulated Mallet type, H6 (2-6-6-2) steam locomotive was delivered to Chesapeake & Ohio RR in 1949. The 1309 ran for 7 years hauling coal through the mountains of West Virginia and Ohio until being retired in 1956. Eventually, in the mid 70's the 1309 was put up for static display at the B&O museum in Baltimore before it was purchased by WMSR in 2014. Now after 7 long years and nearly \$4 million, the 1309 is ready to grace the rails once again. At a length of 99.7 ft., height of 15 ft. and total weight of 643,100 lbs., the 1309 will be the largest regularly scheduled steam locomotive in North America, beginning in spring.

Founded in 1988 by Jack Showalter (an icon of the industry), WMSR began with 16 miles of track and two (4-6-2) Canadian Pacifics. Jack might have been proud to know that the WMSR has made a \$10 million economic impact on Allegheny County and continues to believe in the history and the culture of this community.



*McRail would like to congratulate Wes, his team, and everyone involved at WMSR on the rebuild of the 1309. Thank you for your commitment to community and heritage. It's an honor to serve you as our client. Godspeed.*



high enough, the bent was swung to the side using a cable hoist. Finally, the old sill could be lifted off the concrete foundation and the anchor bolts that hold it in place.

In many cases, the anchor bolts were wasted with rust at the top of the foundation, so it was necessary to replace them. This was done by cutting off the old anchor, drilling a hole in the concrete nearby and using an epoxy adhesive to set a new anchor bolt in place. Next the spacing of the anchor bolts was carefully measured and the new sill timber was drilled for the bolts.



*After the old timber sill was removed from the concrete foundation, it became apparent that the anchor bolts were too rusted for reuse. Here the old bolt has been cut off and volunteer Mike Winkler is drilling a hole in the concrete for a new bolt. The new anchor, visible in the foreground, will be set in epoxy.*



*What happened to the bent? In this photo, the sill, sway braces, and posts have been removed for replacement. Only the pile cap remains, bolted to the bridge above. Greg Ockander is high on a ladder preparing to cut off the drift pins projecting down from the cap (they used to secure the top of the posts) while Mike Winkler looks on from below. After the pins are cut flush, a new bent will be framed up underneath this cap.*

Using the Association's large all-terrain forklift, the new sill timber was lifted into place and set over the anchor bolts. Now all the preparatory steps could be reversed, with the bent swung back to vertical, and jacks lowered carefully, with the weight of the trestle back where it belonged.



*In order to replace the timber sill that sits on the concrete foundation, the bridge has been raised on jacks. The bent in the foreground has been swung out of the way and the old sill removed. New anchor bolts have been set in the concrete, so the next step will be to install the new sill before lowering the bent back down.*

Before replacing the sway braces, any posts that needed to be replaced were renewed. Every post is a different length, and each had to be custom cut with the proper angled cut at top and bottom. To remove the old post it was frequently necessary to lift the bridge a little. Also, the drift bolt at the head of the posts needed to be cut to be out of the way of the new timber. With very careful measurements, the proper length of the new post was determined and a chainsaw with a special guide was used to properly make the angled cut at each end. The rail-mounted hand-cranked Derrick Crane was used to lift the posts into place. While the big forklift would have meant less manual labor for lifting these heavy timbers, the hand-cranked crane offered the smooth stability needed to finesse the posts weighing many hundreds of pounds into their place.



*On this workday, the Track Crew installed two new posts and both sway braces all on one bent. Here the crew is preparing to lift a 600-pound sway brace up alongside the bent so that it can be drilled and bolted in place. Gary Baker is operating the crane, which is clamped to the rails to prevent tipping. Greg Ockander, Pete Williams and Mike Winkler are finishing up the final preparations below.*





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Once satisfied with the post placement, the Crew pinned them into place with drift bolts and boat spikes at top and bottom. Similarly, the replacement sway braces were lifted into place using the Derrick Crane. After temporarily clamping them in place, they were drilled and bolted using a total of thirteen ¾” bolts per bent. Even drilling the holes was a challenge, as this step required using a ¾” wood auger over three feet long driven by a gasoline drill, all while balancing on a ladder high on the side of the bridge. Gary Baker, Dave Balestreri, Joel Cox, Karl Lukaszewicz, Greg Ockander, Pete Williams and Mike Winkler all participated in this work.

Given the labor-intensive nature of this work, the pace proceeded at the rate of one to two timbers replaced per workday. By the fall, 33 of the heavy timbers had been

replaced, with just 11 more to go. As soon as the heavy timber replacement is complete, the Crew will turn its attention to the top deck. While the stringers are generally in good shape and don't need renewal, all of the ties and timber guard rails need to be replaced. As the ties are replaced, it will be necessary to pay close attention to the track alignment. Once the rail is spiked to the ties, the alignment is fixed and can't be adjusted easily, so we will need to be sure to get the track curvature just right at this step.

As of early 2022, the trestle project had spent \$24,000 on timber, \$10,000 of railroad ties, \$3000 on nuts and bolts and \$5000 on special tools for a total of \$42,000. That is enough material to complete the restoration.

## CABLE CAR 8 REBORN

By Rick Laubscher, Market Street Railway

*Reprinted with permission from the Inside Track newsletter*



*VICTORY LAP – Some of the crew that made Powell Cable Car 8 arise to a new life pose at the Aquatic Park turntable on the first test run of “Great 8”.  
Jeremy Whiteman photo*

**M**uni's Cable Car Carpentry Shop has worked its magic many times in bringing sagging and spent cable cars back to life. Powell Car 8, just completed, may be its greatest accomplishment yet.

The story starts in early 2017. The author was at Muni's "boneyard" helping evaluate the condition of unrestored PCC streetcars. Off in a corner, a wooden frame caught his eye. The number '8' was scrawled on it. He recognized it

as all that was left of Powell Cable Car 8, originally built in 1893 by Carter Brothers as 508, and partially renovated at Muni's decrepit Eltkon Shops in 1958. (At that time, Muni had not yet begun full renovations of cable cars.)

The forlorn frame of Car 8 was all that remained after the cable car carpentry shop crew had started removing rotten pieces from the car as the first step in rebuilding it. And even the frame had problems. So, they trucked it off in 2009 and started work on another car.

In doing so, they overlooked the fact that the cable car fleet is federally protected as a National Historic Landmark (like the St. Charles streetcar fleet in New Orleans). The full roster of cars must be maintained. No 8? Not great, especially when the car had already been missing from service for more than a decade.

The author contacted the then head of cable car operations, Ed Cobean, and informed him of the dilemma. Cobean responded that he already had a list of cable cars that needed rebuilding and could only schedule Car 8 after those were done, which he expected would be in about ten years.

The author wasn't alone in his concern. Both the head of cable car maintenance, Arne Hansen, and the newly-installed supervisor of the carpentry shop, Andrew McCarron, had also discovered the skeletal frame of Car 8 and urged Cobean to move it to the top of the rehab list. He did, and on June 11, 2018, the remnant of Powell Car 8 made the seven-block trip from the Boneyard to the Cable Car Carpentry Shop in Dogpatch to begin its resurrection.

### **Up from rock bottom**

The frame of Car 8 turned out to be pretty solid, McCarron says. A few pieces of the frame blocking needed replacing, but the rest was retained, and reinforced on the perimeter with 5/8"-thick steel straps, carriage-bolted to the frame, with steel pieces also welded across the frame to the two bolsters, which sit atop the trucks. New trucks, fabricated in Muni's vaunted Special Machine Shop, would be waiting at the end of the job to replace the temporary shop trucks holding up the car.

From there, it was a case of following a well-honed playbook, literally. The shop has a full set of patterns for the component pieces of both Powell and California cars. The master carpentry team set out shaping the individual pieces to specification, using top-quality white oak for the superstructure and Alaskan cedar for the roof.

The team gave thought to functional improvements. For example, the batteries on Car 8 are housed under the seats of the closed section, hidden in a slide-out tray behind a removable kick panel for easy changeout. A tiny socket outside the car allows the nighttime charging cord to be connected quickly. This new standard installation feeds LED lighting that draws less current, important because the

batteries must also power seven onboard security cameras now required by the state, most of them tiny and unnoticeable. The carpenters and painters also added little touches to make the car distinctive, demonstrating their craft.

### **Wood you like to know?**

Cable cars are wooden vehicles of course (with some steel in the framing hidden from view). So the type and quality of wood used matters, for both appearance and durability. Over the decades, cable car companies have used various wood species to build and repair the little cars, depending on what was available and—when companies were struggling financially—affordable. At some times, softwoods like pine were used in some applications (though sturdy oak has always been the rule for the frames).

In the last half-century, Muni's cable car rebuilding program, which always sees two cars in the carpentry shop for rebuilding and several more at a time being renovated at the cable car barn, has evaluated the durability and appearance of various species in real-world operating conditions over decades of use, and has come to embrace oak, cedar, and mahogany for specific parts of the cars.

Powell Car 8 is framed in white oak because of its strength and water resistance. White oak is also used on the seats. The wood strips that form the roof are Alaskan cedar. White cedar, used on some past restorations, turns gray quickly in the elements. For decades, the ceilings of most Powell cars were painted (usually white or cream, with lead paint in the old days). More recently, Muni's builders seal the natural wood with clear protection to let its natural beauty show through. Philippine mahogany was used for the interior door, window frames, the roof letterboards, and some trim.

Covid stretched out the resurrection of Car 8. Staffing shortages and safety protocols slowed the work but certainly didn't compromise the quality. From frame to finish carpentry took three years, with truck and brake rigging installation, finish painting and detailing following at the Cable Car Barn. The car was successfully tested in February, with some final tweaks to be made before its unveiling.

More than a century ago, President William Howard Taft, surveying San Francisco's resurrection from the 1906 earthquake and fire, called it "the city that knows how". You'd get some pretty spirited arguments on that concerning some aspects of San Francisco today, but when it comes to restoring our priceless cable car fleet, it's still true.

*continued on page 14*





*SKELETAL START – The frame of Powell Car 8 rests on shop trucks in the cable car carpentry shop on its arrival date, June 11, 2018. Jeremy Menzies photo, SFMTA*



*STRONGER BASE – Six weeks later, the frame has been strengthened with replacement pieces, and the ends have been cut. Jeremy Menzies photo, SFMTA*



*FRAME UP – By February 2019, the underframe has been topped with a marine-grade plywood floor (now used instead of the original tongue-and-groove pine for durability), and the frame of the passenger cabin is in place. Jeremy Menzies photo, SFMTA*



*ROOF JOB – The roof is the most intricate part of a cable car. By December 2019, it was framed, ready for the clerestory windows. All the while, the same team was also working on California Car 55, background. Rick Laubscher photo*



*CEDAR CHEST – In June 2020, with the Covid pandemic raging, work continued, albeit more slowly. The Alaskan cedar ceiling is now in place. Rick Laubscher photo*



*SKIN CARE – Also in June 2020, sheet metal panels were fitted to the car. Once the fit was perfect, they'd be removed and walked over to the adjacent Woods Motor Coach Division shop for painting before final installation. Rick Laubscher photo*





*HOME STRETCH – By November 2020, Powell Car 8 looked close to being finished, but electrical, truck and brake fitting, and final paint remained. Rick Laubscher photo*



*FINAL TOUCHES – Details make a difference, especially when they result from the creativity of the cable car team: carved wooden ornaments under the clerestory end windows; hand painted brake lever and roof sign control switch. These pair with original designs such as the brass seat railings, made from patterns on file at the carpentry shop. Rick Laubscher photos*



# LISTER HOSPITAL CAR RESTORED



Before and after restoration.

The National Railroad Museum in Green Bay, WI has unveiled the restored Joseph Lister hospital car (Pullman 1930) following a 2 ½ year restoration. It transported patients from Chicago to the Mayo Clinic in Rochester, Minnesota, for more than 30 years on the Chicago and North Western Railroad. Financial support for the project was provided by the David L. and Rita E. Nelson Family Fund (\$83,100), as well as donations from Dr. Paul and Linda Koch, and other smaller donations totaling about \$37,000. Dr. Koch also donated historic medical equipment that will be used in the display once the east end addition is built. The hospital car has been part of the National Railroad Museum's rolling stock since 1988. C&NW

named it the Joseph Lister in honor of the famed English surgeon who is best known as the founder of antiseptic medicine and a pioneer in preventive medicine. The Lister was one of two identical hospital cars manufactured for CNW. The other was dubbed Ephraim McDowell for the former American physician and pioneer surgeon; that car eventually was dismantled and used for parts.

Once the Joseph Lister was removed from hospital car service, its interior was gutted and it finished its career as a bunk car for CNW rail crews. Researchers found more than 100 detailed blueprints, restoration team members fabricated many parts that deteriorated or were missing before the Museum acquired the car. The Lister also received extensive metalwork, new wiring and fresh paint both inside and outside.



Note the overwidth aisle and compartment doorway, to accommodate wheel chairs.

CNW literature describes the Lister as a customized, composite Pullman sleeping car that could hold six patients and medical personnel. The car had multiple private rooms. The car featured three double doors along one side that each opened to 30 inches wide, enough to accommodate a

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stretcher. Two of the doors provided direct entrance into extra wide rooms. The third set accessed multiple open sections located at one end of the car. By using the double doors, patients avoided the numerous turns associated with the usual vestibule entrance. To further aid mobility within the car, corridors were widened to facilitate stretchers and to aid patients moving about with an escort.

The car was equipped with features to reduce noise and vibration. In addition to roller bearings on the axles, a smoother ride was ensured by rubber “shock absorbers” placed between the car body and its trucks. The diaphragms at each end of the car were spring-hung, eliminating much of the noise associated with the between-car walkways.



## HERITAGERAIL NEWS

### Acquisitions

Acquisitions by museums and tourist railroads continue at a brisk pace. Some are new to the preservation world, others are shifting between owners.

Add this to the purchase of the former Rock Island Silvis Shops, the bombshell of 2022 so far. Union Pacific has donated a portion of its heritage fleet to the non-profit Railroading Heritage of Midwest America. The donation includes the following equipment from Union Pacific's Steam Shop in Cheyenne, Wyoming:

4-6-6-4 Challenger #3985 (Alco 1943)  
2-10-2 #5511 (Baldwin 1923)  
DDA40X Centennial #6936 (EMD 1971)  
E9B passenger locomotive shell  
Four 1950s coaches  
Diner-Lounge  
Baggage car  
Caboose

Two business cars: the Selma, previously Western Pacific's Feather River, and the Stanford, originally the 1928 Southern Pacific Sunset

Union Pacific will move the equipment to Silvis later this year.

Fort Wayne Railroad Historical Society has rescued some of the last unclaimed refugees from the Indiana Transportation Museum collection.

- Two Milwaukee Road F Units, no. 72-A, and 96-C
- Milwaukee Road B-Unit no. 68-B
- Pennsylvania Railroad hopper car no. 257784

- Lake Erie & Western/Nickel Plate Road boxcar no. 18013
- Louisville & Nashville boxcar no. 12177
- Wabash Railroad boxcar

Reportedly some of the cars will be offered to other museums.

The New York Transit Museum has acquired recently retired R32 Brightliner subway cars #3352-3353 (Budd 1964). They were the oldest cars in the subway fleet.

The Everett Railroad's fleet continues to expand with Conrail bay window caboose #21038 and a pair of heavyweight coaches from Sierra Northern, the new operator of the Fillmore & Western. They were originally built as a Richmond, Fredericksburg & Potomac café-parlor (Pullman 1928) and Colorado & Southern coach #553 (Pullman 1922). The railroad has also acquired a Pennsylvania Railroad B60b baggage car, Penn Central #7578.

Sierra Railroad 2-8-2 #34 has been donated to the California State Railroad Museum. The locomotive never left its home in the former Sierra roundhouse, now the Railtown 1897 subsidiary of CSRM. Still owned by the railroad, it sat unused for 30 years.

Wabtec has donated GECX AC6000CW diesel #6002 (GE 1998) to the Lake Shore Railway Museum. Originally sold to the Union Pacific, it was soon returned to GE and became part of the engineering test fleet.

The Simpson Railroad has acquired Northern Pacific baggage car #233 (Pullman 1963).

Norfolk Southern has donated the complete collection of historical documents and archives from predecessor company Norfolk and Western Railway to the Virginia Museum of History of Culture. The collection dates back to the 1840s and includes thousands of photographs and glass plate negatives, as well as business records, annual reports, blueprints, plans, bridge drawings, advertisements, portraits and three-dimensional artifacts from predecessor railroads that together provide a look into the growth of rail transportation across the eastern United States. The company will also donate \$750,000 to support the collection in perpetuity, NS officials said in a press release.

Monticello Railway Museum has acquired Illinois Central Gulf SW14 switcher #1407. Originally an SW7, it was rebuilt in 1977. The locomotive was donated by GATX Locomotive Group.

Waterloo Central has acquired ex-Canadian National GMD-1 #1437.

Three Southern Pacific maintenance of way flat cars (#7005, 7035 and 5047) marooned in Gila Bend, Arizona after the Tucson Cornelia & Gila Bend was abandoned have found museum homes. They are going to the Arizona Railway Museum in Chandler and the Arizona State Railroad Museum in Williams.

Duke Energy has donated two cabooses and four depressed-center flatcars to North Carolina Railway Museum. They're being trucked off Duke property, along with four cars isolated there but already owned by the museum. They include heavyweight sleeper Alexandria (Pullman 1916), an Atlantic Coast Line baggage car, a Rio Grande baggage/RPO built in the 1910s and converted to a MOW camp car by the old Norfolk Southern, and a Chesapeake & Ohio high cube 60-foot boxcar.

We're a little late reporting this, but the Sioux City Railroad Museum has acquired Harbinger Lumber 2-6-2 #18 (Baldwin 1920), which had been through a succession of owners. Reportedly the engine had been operational into the late 1970s.

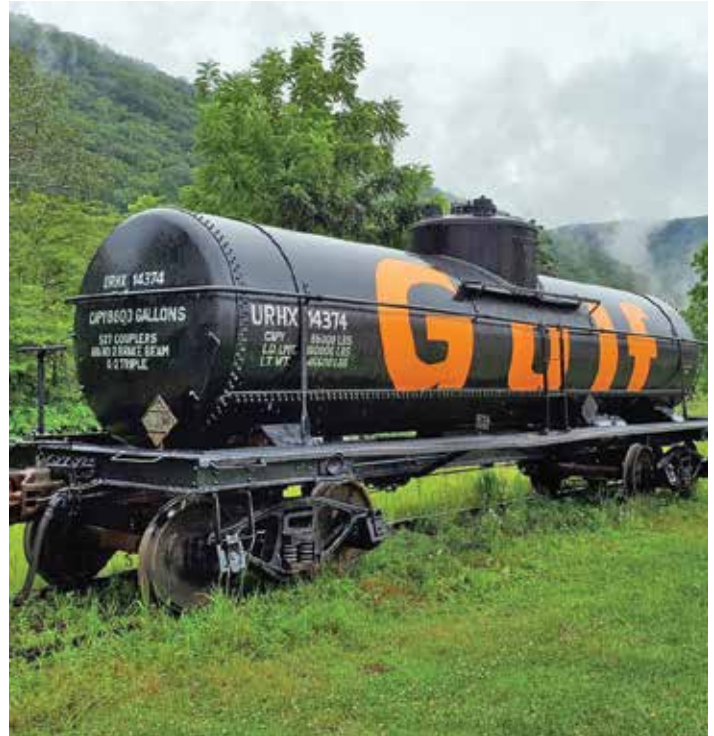
### **Elsewhere in preservation...**

Calgary Heritage Park has installed 164 solar panels on the roof of its car shop and another 138 on the roundhouse roof.

Wood Pennsylvania N6b caboose #981775 (PRR 1914) is now at the Allentown & Auburn shop for completion of a restoration that is reportedly about two-thirds done. It was retired in 1957 and ended up in private ownership in New Jersey, where it came close to rotting away. A small group

calling itself the PRR N6b No. 492406 Restoration Project formed to restore it and moved it to the A&A in March 2022.

Durbin & Greenbrier Valley is restoring Buffalo Creek & Gauley 2-8-0 #4 (Baldwin 1926). It will receive a new boiler. They've also repainted this tank car at Cass Scenic Railroad.



The Timber Heritage Association is on the verge of signing the papers to take ownership of the former Hammond Lumber Company Samoa Shops complex. This effort has been 15 years in the making. It started as a lease from landlord Harbor District Board. The Society paid the rent by rehabbing the buildings. All have been reroofed, had the lead paint abated, and been repainted. There were also a number of structural fixes, new windows and other improvements. The Society's rolling stock collection has been moved into the roundhouse, although it still has no track access. Once the Harbor District decided to let the Society purchase the complex, it first required a million dollar environmental cleanup. That has been completed, thanks to government grants and fund raising. The only question now is when the sale will close.

In a previous issue we reported that the North Coast Rail Authority, owner of the mothballed Northwestern Pacific from Napa through Eureka to Samoa, was getting out of the rail business. It has renamed itself the Great Redwood Trail Agency. Its purpose now is to railbank the line and build a trail on it. The Timber Heritage Society runs motor car excursions on a couple of miles near Samoa, and wants to eventually run full-sized trains to Eureka. It is advocating

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for rail-with-trail on the 16 miles around the north edge of Humboldt Bay. The first step is to prevent those rails from being lifted. They're lobbying, but so far have received no assurances.

The Dining Car Society, previously known as the Erie-Lackawanna Dining Car Society, has relocated its collection from Scranton to the new Port Jervis Transportation Museum. As part of the move, the Society has donated two New Jersey Transit Comet 1 commuter cars to other organizations. #1700, the very first Comet 1, will join the rest of the collection at Port Jervis, but owned by the Port Jervis Transportation Museum. Sister #1705 is going to the New York, Susquehanna & Western Technical & Historical Society in Phillipsburg, NJ. However, Lackawanna Phoebe Snow diner #470 will remain in Scranton, leased to the Delaware-Lackawanna Railroad.

Meanwhile, the Port Jervis Transportation Museum has acquired three identical Seaboard Coast Line insulated 70-foot 1973 boxcars from CSX. #199025 has been painted boxcar red and will house the Tri-State Railway Preservation Society's small artifacts collection. Also located in Port Jervis, the Society is relocating from a city-owned building to the new museum site. Boxcar #198936 is being repainted into its original Fruit Growers Express scheme.

The new Saratoga, Corinth & Hudson tourist railroad is taking over Iowa Pacific's former Saratoga & North Creek. Trains will only run on the south 11 miles between Corinth and Greenfield. They will not access the Canadian Pacific trackage rights to reach the Saratoga Springs depot.

The Lake Superior Railroad Museum is creating a narrow gauge display track. On it will be placed Quincy & Torch Lake copper ore car #54 and boxcar #321 from southeastern Minnesota's little known Caledonia Mississippi & Western. The CM&W was purchased by the Milwaukee Road in 1880, standard gauged in 1901, and remained in service until 1976.

The Monticello Railway Museum has begun the restorations of modernized heavyweight Wabash coach #1238 (ACF 1927) and Burlington wood caboose #14042 (CB&Q Aurora Shops 1891). Already underway is the restoration of Wabash outside braced wood automobile boxcar #47947 (ACF 1927). The museum has also received a \$50,000 donation toward the design and construction of a water tower and water treatment system for the steam locomotive.

National Capital Trolley Museum has received a \$35,000 Heritage Montgomery grant for the truck rebuilding of DC Transit #1470 and 1430 trucks.

The Maryland & Pennsylvania Railroad Preservation Society has completed the improvements and repairs needed to transform an existing building into the High Rock Shop. It now meets all local building codes and an occupancy permit has been granted. A siding has been laid off the main line. Volunteers have completed the move-in of all the equipment, machine tools and repair projects. The shop and siding are important because they lie above the Muddy Creek flood plain.

The Mad River & NKP Railroad Museum has entered into a joint admission agreement with the nearby Sandusky Maritime Museum and Liberty Aviation Museum. Branded as Ohio's North Coast Transportation Trail, a family of up to eight can buy a pass to all three for \$60.

The Simpson Railroad has experienced an unforeseen setback. It owns several miles of the former Simpson Timber railroad, but not the two miles within the city limits of Shelton, Washington. Those were purchased by the City of Shelton in 2019. Shelton was intended to be the boarding point for a new tourist train operation. It's also the railroad's connection to the general rail system. For two years the railroad has told the city it wanted to negotiate a lease to use the city's portion of the line. No response was received until late 2021 when the city manager informed the railroad that there would be no lease. Then on February 14 city crews began removing the track. The railroad objected and the removal was stopped, but its future is unclear as this is written.

Reading & Northern carried a record 225,000 passengers in 2021, 75,000 over the pre-pandemic high. For 2022 R&N has announced that it will run Reading-Jim Thorpe year round. Iron Horse Rambles behind Reading 4-8-4 #2102 will begin this year. According to Railpace magazine, excursions will begin later this year out of the Scranton-Wilkes Barre area, but as this is written they don't appear in the online timetable.

The Reading Technical & Historical Society has received a \$100,000 state grant to build yard track and extend tracks into the new Rail Car Protection Building. The Society is also building a replica switch tower to give visitors an elevated view of the collection.

Gold Coast Railroad museum has restored Florida East Coast wood side door caboose #715 (Magor Car 1924).

Thanks to a \$1 million anonymous donation, Seashore Trolley Museum's oldest trolley storage building, the Burton B. Shaw South Boston carhouse, will be replaced.





The 66-year old carhouse is showing its age. The building is leaning and structural components are showing deterioration; replacement is the only viable option.

The replacement will be somewhat larger. It currently houses six trolleys—if one car on each track is shorter than normal. The front of the carhouse is wide open, subjecting the first car on each track to weather damage. The new building is being sized to hold nine full-size trolleys, three on each track. Roll-up doors will provide full weather protection on each track. The interior will feature a

concrete floor up to rail height and the design will be clear span with no poles between the tracks.

The origin of the South Boston name refers to the yard track that feeds into the current carhouse, sourced from North Point Carhouse in South Boston, MA. After streetcar service to South Boston was abandoned in 1953, Seashore volunteers bought the nearly-new track from the contractor demolishing North Point. They reassembled the track at Seashore in 1955. As part of this building project, this historic track from South Boston will also be preserved and used in the yard leading up to the new carhouse.

It is anticipated that the new South Boston will house primarily operating fleet cars; the trolleys that operate for the public each day the museum is open. To help preserve these very important trolleys, the building will be insulated to slow temperature and humidity changes, and installation of heat/air conditioning units is being investigated. The concrete floor will make walking through the building easier for both visitors and volunteer trolley operating crews.

The new carhouse will be a pre-engineered Butler building with a sturdy steel frame and corrugated steel sheets for siding and roof. The new building is currently in the pre-construction phase, with the goal to begin construction in September 2022.



*A Canadian Pacific freight passes the relocated Newport Tower south of St. Paul, Minnesota. The tower guarded the junction of the Rock Island and the joint Burlington-Milwaukee Road main line. It was restored by the Greater East Area Model Railroad Club. Jeff Terry photo.*

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