



The

Milepost

Volume 41, Number 9 – September 2021

The official newsletter of the Pikes Peak Division

Rocky Mountain Region – National Model Railroad Association.



NEXT MEETING:

Thursday, September 9th, 2021 at 7:00 PM

Classic Homes Corporate Office 2138 Flying Horse Club Drive

(See Map Inside)

Colorado Springs, Colorado

Calendar of Events

January 8th, 2021 (Friday) – Cancelled but Zoom

NMRA-PPD monthly meeting held on Zoom.

February 12th, 2021 (Friday) – Cancelled but Zoom

NMRA-PPD monthly meeting held on Zoom.

March 12th, 2021 (Friday) – Cancelled but Zoom

NMRA-PPD monthly meeting held on Zoom.

April 9th, 2021 (Friday) – Cancelled but Zoom

NMRA-PPD monthly meeting held on Zoom.

May 14th, 2021 (Friday) – Cancelled but Zoom

NMRA-PPD monthly meeting held on Zoom.

June 11th, 2021 (Friday) – Cancelled but Zoom

NMRA-PPD monthly meeting held on Zoom.

July 9th, 2021 (Friday)

NMRA-PPD monthly meeting.

August 13th, 2021 (Friday)

NMRA-PPD monthly meeting.

September 9th, 2021 (Thursday)

NMRA-PPD monthly meeting.

Contest: Freight cars

Program: {to be determined}

October 8th, 2021 (Friday)

NMRA-PPD monthly meeting.

Contest: RR Structures

Program: {to be determined}

November 12th, 2021 (Friday)

NMRA-PPD monthly meeting.

Contest: Anything Xmas RR

Program: {to be determined}

December 12th, 2021 (Friday)

NMRA-PPD monthly meeting.

Program: Xmas Party

P.P.D Staff Members

OFFICERS

Superintendent:

Joe Costa — joe_costa@hotmail.com

Assistant Superintendent:

Mark Fuerstenberger — (719) 491-1291
markf1014@gmail.com

Secretary:

John Emmot — (719) 380-8421 jemmot@comcast.net

Treasurer (And Door Prizes Chairman):

Tony Pawlicki — (719) 687-2694
tonypaw1650@gmail.com

CHAIRPERSONS

NMRA Achievement Program:

Jack Sousa — (719) 576-7017 jackfrw@pcisys.net

Contest:

Kristin Phillips, and Jack Sousa

NMRA Membership:

Mike Maline

Milepost Editor:

David Bristow — dave@bristow-family.org

Module Group (HO-Scale):

Mark Fuerstenberger — (719) 491-1291
markf1014@gmail.com

Members Aid:

John Emmot — (719) 380-8421 jemmot@comcast.net

Monthly Meeting Programs:

Mark Fuerstenberger — (719) 491-1291
markf1014@gmail.com

Public Relations:

Kristin Phillips — kristin.phillips7099@gmail.com

Swap Meets:

Kristin Phillips — kristin.phillips7099@gmail.com

Webmaster:

[Open]



The Milepost, Volume 41, Number 9, September 2021, is published monthly, as an electronic document (Adobe PDF file), by, and under the authority of, the Pikes Peak Division (Rocky Mountain Region), of the National Model Railroad Association. Our meetings are usually held on the second Friday of each month at the Sand Creek Police Station, 950 Academy Park Loop (northeast of the intersection of Fountain and Academy), in Colorado Springs, Colorado, at 7:00 PM. Please come to one of our meetings. We would

love to meet you. All scales are welcome. Besides our monthly meeting, we have swap meets, train shows, and other model railroads (and railroad) activities. All content in this journal is copyrighted to its respective owner unless otherwise noted. Please do not use content from this newsletter in other publications, newspapers, magazines, books, websites, etcetera, without explicit case-by-case permission. The editor of *The Milepost* is Mr. David Bristow. He can be contacted at the e-mail address of: dave@bristow-family.org Thank you.

Editor's Thoughts

I found the September NMRA magazine to be quite interesting. It started with the editor's praise of the 2021 NMRA National Convention, which was held virtually. Cynthia seemed surprised that such a convention would be such a success. Unfortunately, I didn't attend but the various clinics but it certainly sounded like things went very well. I'm sure it took a large amount of effort to prepare and execute. The second article offered in the President's Car added praise and comments about the Rails by the Bay, the national convention. Gordon brought up the business of whether NMRA should produce a digital version of its magazine. Hmmm, it seems to me we at PPD having been publishing digitally for some time now. The two commentaries bring to light the embracing of technological trends. It seems to be the use of video meetings, while not very personal, does afford access by many to events that are sometimes either inconvenient to travel to or too costly!

In the NMRA magazine, there's a continuing article called "Love Those Loads". This month Bob Frankrone tackled the idea of roof trusses. Something Wade Mountz showed us in the February 2021 Milepost. Instead of struggling with the need to make very accurate cuts he used a multi-ply approach. Both approaches work quite well from the looks of the results in both articles. I imagine the setup of a laser cutter takes some time and effort but if you need to fill many gondolas Bob's approach could become time-consuming and quite tedious. But of course, Wade's approach requires you have a laser cutter or a friend with one who is willing to help!

On September 2, 2021, on one of the busiest CN mainlines two freight trains collided near Prescott Ontario. Four locomotives derailed, including two that ended up on their side, and about 16 cars in total were derailed in various positions. One of the locomotives was reported to have a minor fuel leak. One crew member on a train suffered minor injuries.



The photos were taken by Duane Le Grand, an employee at Northern Cables, located next to the CN Rail tracks.

It seems to be quite miraculous that while there was substantial damage to the rolling stock and tracks very few injuries were sustained. The Canadian Transportation Safety Board is investigating the cause of the accident. To see more about this incident, see the [article posted by CTV news](#).

In the June 2021 Milepost, I had mentioned it looked like CN would be buying KCS for \$33.6 billion. However, the Colorado Springs Gazette on September 1, 2021, reported that the deal is in jeopardy because the Surface Transportation Board (STB) indicated that CN wouldn't be able to use a voting trust while the board reviews the overall deal. A voting trust permits shareholders to be paid before the regulatory board starts its review process, which is likely to be lengthy in this case. In August CP sweetened its offer to \$31 billion. CP feels its bid would be better for KSC as CP believes CN faces a tougher antitrust fight with regulators who will consider the potential for increased rail congestion around Chicago. Initially, before CN offered its larger deal KSC had signed on with CP and the STB had approved the use of a voting trust. If KSC approves the new deal and the shareholders of both

railroads accept there would be a clear path for CP to own KSC. Truly it appears nothing is certain until all of the paperwork is signed and sealed! Stay tuned for the final results.

Joe went to Denver to catch a glimpse of Big Boy and sent these two photos:



David

September Superintendent Notes

Next Meeting on Thursday, September 9

Part of what we do at our normal division meetings is to have a drawing, show and tell, and a presentation. We will be having a slide show by Tom Milam on the Sierra Railroad. All members are welcome to participate.

Thanks to Mark, we are having another in-person meeting this month at:

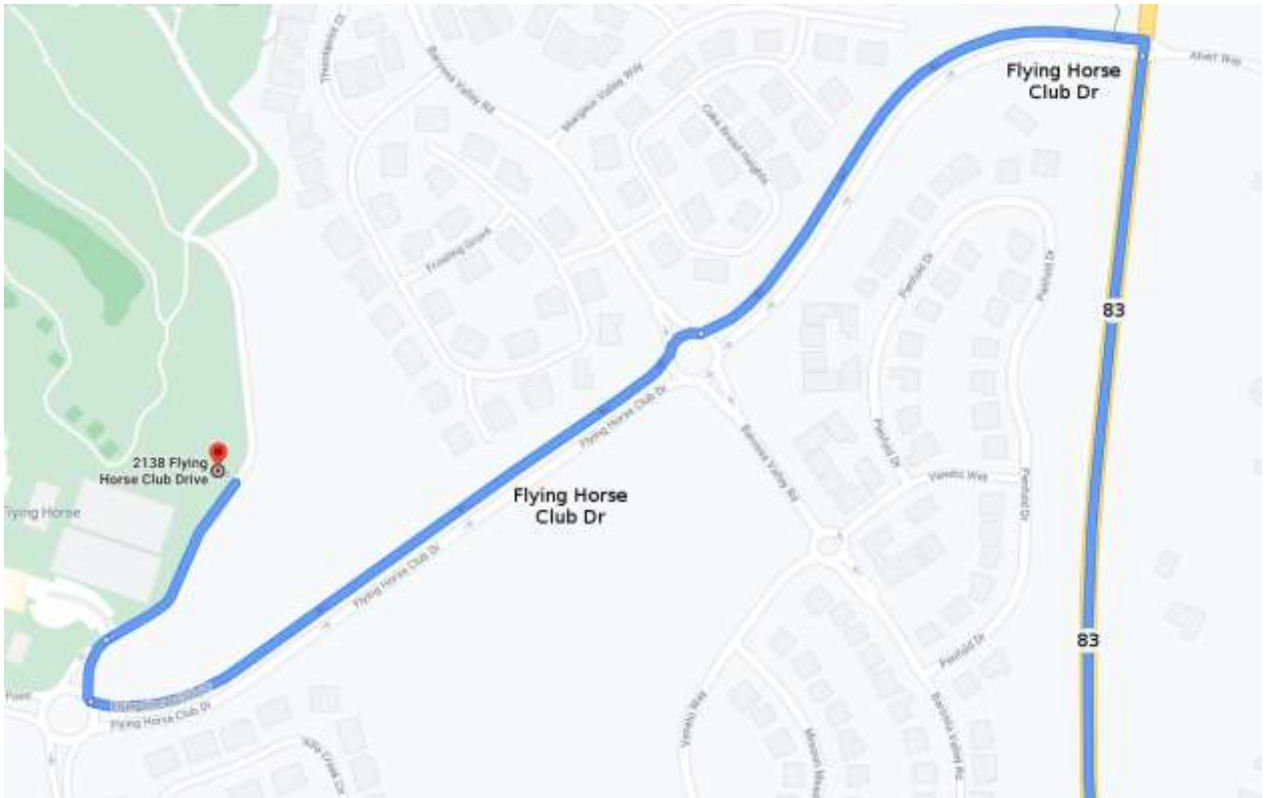
Classic Homes Corporate Office Address: 2138 Flying Horse Club Drive, Colorado Springs, CO 80921

Directions

- Take I-25, Voyager Pkwy, or Powers Blvd, North to Interquest Parkway. Turn right and proceed East.
- Interquest Parkway will then become Hwy 83. Turn left on Flying Horse Club Drive.

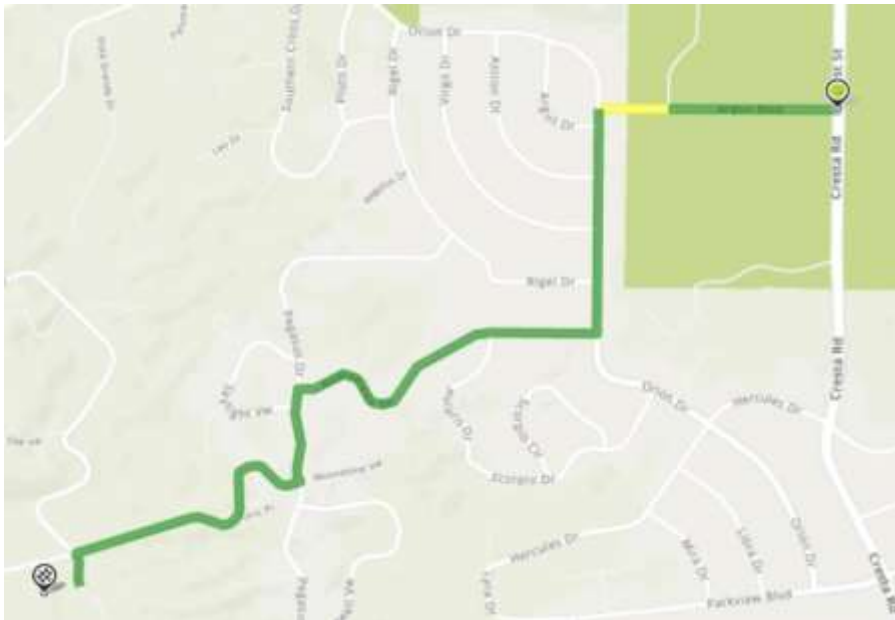
- At the 1st round-about proceed straight, by taking the 2nd exit. At the 2nd round-about turn right, by taking the first right turn. This will lead you directly to the Classic Homes parking lot.

If you get lost or have questions, please call Mark Fuerstenberger on his cell phone. (719) 491-1291



Division Picnic on September 18 at 3 PM!

Directions from Bear Creek Regional Park, Argus Blvd.



At the very end, MapQuest wants you to turn south — WRONG. You continue west and turn left into the grassy area on the east side of the house.



It's a potluck. Bring folding chairs if you can. James Vadeboncoeur has an outdoor natural gas grill if you are bringing hot dogs or burgers. I'll be there early to direct traffic.

Send me an email with a headcount if you are coming.

We'll have a silent auction like last time.

Final details will be worked out at the September meeting.

A YMR Layout Found a New Home at Roy's





The operating layout was installed a few weeks ago.

Swap Meets Held on Saturday, August 14

Both Roy's and YMR had flea markets. Naturally, we went to both. Roy rented space in a storefront near his store at Chapel Hills Mall. YMR had their sale at their Clubhouse near the church. We had never seen their layout before.

The Youth were running their layout. It's a work in progress with a history behind every section.



Incident on Coffee Pothole Road



The headline on the [Garfield County Sheriff's Office](#) release about the bus incident – "What Can Happen When Following GPS" – suggests both a sense of humor and a feeling of exasperation. Shortly after 6 p.m. on August 6, the GCSO was "notified that a Greyhound bus was stuck approximately 22.5 miles up the Coffee Pot Springs Road," the release states. "There were 21 people on board, including at least one elderly female with heart conditions."

The route is described as "a dirt-and-gravel road used to access the White River National Forest wilderness area. The road is generally traveled by four-wheel drive and all-terrain vehicles and is not an alternative route around Glenwood Canyon."

It may not have been the best picture but then again it was not the best route to take.

Time for a Doodlebug in Glenwood Canyon?



Ten years ago, the Vail Daily came up with a partial solution for the chronic closures of I-70 through Glenwood Canyon. Routinely, the rail line seems to get less damage and gets back in service much quicker than the Interstate.

Mother Nature Can Be a Mean Mother

Back in 1899 messing with the railroad was the only game in the canyon for Mother Nature.



Best Disaster on a Model Railroad?

Maybe we should have a contest for best disaster on a model railroad diorama.

It will be hard to beat Mount Vesuvius in Miniatur Wunderland:



Transporting Turnouts Model Railroad Style

Model railroaders invented sectional tracks, especially for turnouts, right? Well, not so fast.

Way back in the 1930s railroads were doing this sort of thing.



This video shows a [Trinity panel track](#) transport car:



Even a battered old gondola can be put in service.



There are even models of this.



RGS20 on the Road Again Visiting Cripple Creek



The smoke and steam were special effects.

The Colorado Railroad Museum was sent the locomotive down to Antonito after its Friday/Saturday visit to Cripple Creek. Originally the engine belonged to the Florence and Cripple Creek Railroad and then the Rio Grande Southern.

It then moved down to C&T for:

Victorian Iron Horse Roundup August 21-29, 2021



<https://www.youtube.com/watch?v=GzC5G6wySHw>

One of the World's Largest Gatherings of 19th Century Locomotives All Under Steam at the Cumbres & Toltec Scenic Railroad's Victorian Iron Horse Roundup. There was a great article in the Gazette that we will bring to the meeting and Division Picnic.

Railroad Bridge of the Month



<https://www.youtube.com/watch?v=Pufz9s3GsHI>

From Wikipedia: Tunkhannock Creek Viaduct (also known as the **Nicholson Bridge** and the **Tunkhannock Viaduct**) is a concrete deck arch bridge on the Nicholson Cutoff rail segment of the Norfolk Southern Railway Sunbury Line that spans Tunkhannock Creek in Nicholson, Pennsylvania, in the United States. Measuring 2,375 feet (724 m) long and towering 240 feet (73.15 m) when measured from the creek bed (300 feet (91.44 m) from bedrock), it was the largest concrete

structure in the world when completed in 1915^[3] and still merited "the title of the largest concrete bridge in America, if not the world" 50 years later.

Back in 2011, Steamtown ran an excursion over the bridge 23 miles away. An attempt to repeat in 2015 was canceled due to insurance requirements from Canadian Pacific.

Testing America's Railroad Bridges with the 4014

<https://www.youtube.com/watch?v=I0GkhLDQIZk>

The 4014 has been running around the country crossing every lake and river bridge it can find. This is not a bridge you want to cross on foot when the train is coming.



Unusual MOW Train Captured in Washington Missouri



Jawtooth was chasing after the 4014 and came across this unusual work train waiting for it to pass.

Winslow Station in N-Scale at Shapeways

Had to share this. It's 11" by 2" by 4" for \$145. This is the classic version before the Winslow Arts Trust added a gallery on the east side.



Kristin's Castaneda Visit

Kristin picked this "notecard" upon a recent visit to the Castaneda.



Arrival of the Super Chief
at

"THE CASTAÑEDA"

Las Vegas, New Mexico

laposada.org • plazahotellvnm.com

Original painting by
DOUGLAS JOHNSON
Gouache on matboard, 9 1/4" x 4"



CESIDIAN MOUNTAIN
douglasjohnson555@icloud.com

Douglas Johnson also did a painting of the Plaza Hotel. Like other towns, Las Vegas had a streetcar system.



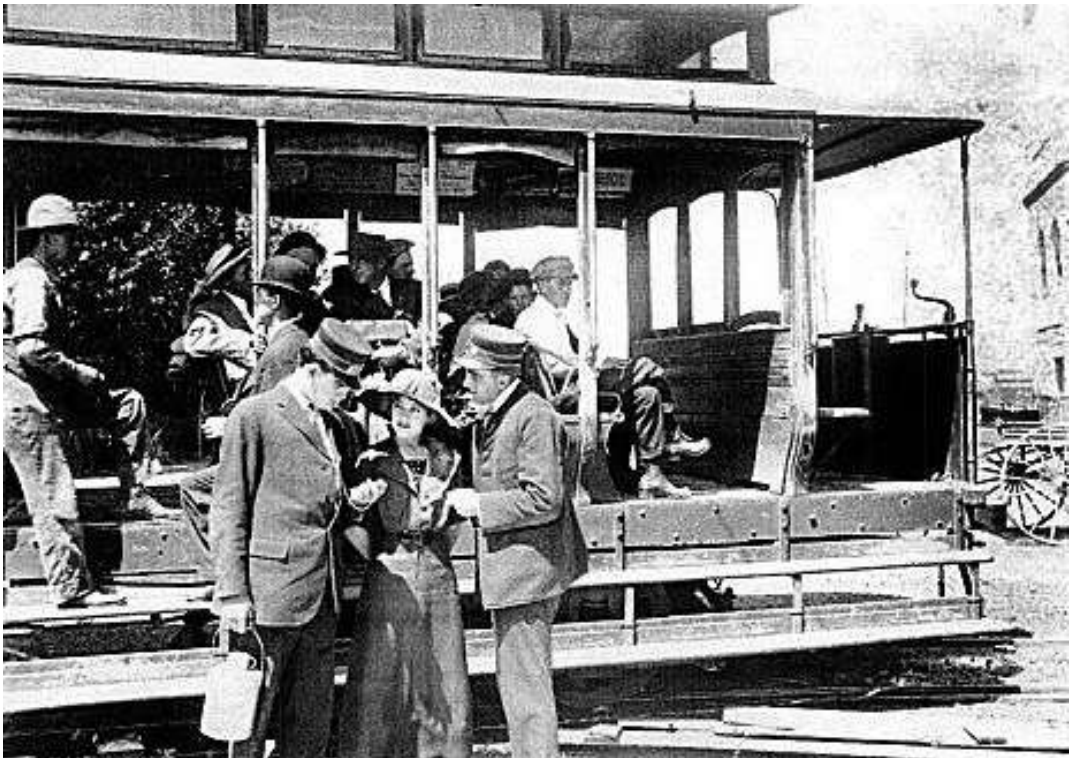
Notice that same dog.

One New Mexico Town Is the Nation's Oldest Continuously Used Movie Location

Movies shot in Las Vegas include: "No Country for Old Men," "Easy Rider," "Red Dawn," "The Astronaut Farmer," and many more.

But who remembers the Harmless One?

From the Santa Fe New Mexican by Marc Simmons, October 25, 2013:



The Harmless One, directed by Romaine Fielding and filmed in 1913, staged a fight on the roof of an electric trolley car in Las Vegas, N.M. Transportation by trolley car in Las Vegas began in 1904 and ended in 1937. Courtesy Walle Landenberger Jess Robinson Fil Collection, New Mexico Film Office.

I have not been able to track down the inspiration for this fantasy painting below ("1948 Chrysler Town and Country"):



The Lighter Rail by Kristin Phillips



Upcoming Division & Local Events

Information on Colorado and neighboring state events is posted on TECOshow.org.

Any events scheduled for 2021 are subject to **cancellation**.

- Sept 10-12: RMR-NMRA convention & Colorado Rail Fair in Pueblo.

2021 COLORADO RAIL FAIR

SEPTEMBER 11 & 12

"THE TRAINS ARE RUNNING ", Pueblo Union Depot



The Tenth Annual Rail Fair presented by the Pueblo Model Railroad Association
And the Pueblo Railway Foundation

ADMISSION:

\$5 / person, Children under 12, Free w/Adult
Saturday 9 am to 4 pm; Sunday 9am to 4 pm

FEATURING

Operating Model Railroads
Swap Tables
Operation Life Saver

Tourist Rail Roads
Vendors with Railroad Models
Door Prizes

Train Rides available by the Pueblo Railway Museum

For further information and registration contact:

John Denny lonecowboy@centurylink.net; Phone: (719) 547-7990



- Sept 18: Division Picnic at James Vadeboncoeur's 3 PM.
- Sept 25-26: Rails in the Rockies at Estes Park.



**ESTES VALLEY MODEL
RAILROADERS PRESENTS
RAILS IN THE ROCKIES**

SEPTEMBER 25 & 26, 2021
SATURDAY 9-5 | SUNDAY 9-4

**ADULTS \$10 KIDS 12 AND UNDER FREE W/ADULT
FAMILY MAXIMUM \$20**

**STANLEY FAIRGROUNDS EVENT CENTER COMPLEX
ESTES PARK, COLORADO**
RAILSINTHEROCKIES.ORG

- November 5, 6, 7: Intermountain Train Expo, Legacy Event Center, Farmington, Utah

NEW LOCATION!
HANDS-ON FUN! **FREE PARKING!**

INTERMOUNTAIN TRAIN EXPO

THE PREMIERE HANDS-ON MODEL RAILROAD SHOW

November 5th, 6th & 7th, 2021
 Thu. 9PM - 9PM • Sat. 9AM - 9PM • Sun. 9AM - 4PM

Legacy Event Center, Buildings 1, 2, & 3
 151 South 1100 West, Farmington, UT

GENERAL ADMISSION \$9.00
 Children 10 and Under FREE!
www.intermountaintrainexpo.com

Entertainment for the Entire Family!
 See Car Races, Hands-on Train Operation,
 Model Railroad Layouts, Vendor Tables and More!
www.facebook.com/intermountaintrainexpo/

For More Information Contact
 Geoff Carter at gbc450219@gmail.com
 (801) 815-6028




- November 13-14: TECO at Chapel Hills Mall Event Center

Information on Colorado and neighboring state events is posted on TECOshow.org.

Check out the Rocky Mountain NMRA Callboard: <https://www.rmr-nmra.org/callboard.htm>



Notes from The Siding

By John Emmot

The summer is coming to its conclusion. I finally got to make a trip to Granby to visit the Moffat Road Museum in Granby. Dave Naples has been busy. New layout building, new two-bay shop, new 1/3 scale water tank (with running water), a shay moved from Canon City, another caboose for parts, and he's unwrapped the 1905 AC&F passenger to begin the long restoration. The 1937 D&SL caboose is starting to be rebuilt. The boiler is out of the 1913 D&SL wrecker crane for testing and refurbishment. The 15" gauge park train is still delayed in California much to the disappointment of the museum.





The new building will accommodate a 1/64 scale, S gauge layout incorporating vignettes of the Moffat from upper Boulder Creek to Craig. The size will allow it to be the biggest S gauge layout in Colorado. The plans look great and include most of the 'high lights' of the route. The water tank has sensors to activate when people pass by, but the splash zone is marked for those who want to avoid the interaction ;>). After a long search for a steam engine, they settled on the narrow-gauge Shay that has sat by the depot in Canon City for many years. It was to be moved this week. The 1923 UP caboose has been restored on the interior. It needed some external hardware (like brake stands). A second caboose was located with the needed hardware. It was due to arrive too and will provide the parts for the 100% restoration of the first. The plastic wrap has been removed from the passenger car and a new roof installed. That will preserve what is left of the interior. The original mahogany is sound, but much of the 'soft' trim will have to be fabricated and replaced. The steel D&SL caboose is also due for attention. The welder is ready to start recreating the walls that were cut away when it was converted to a spray car. The sheet steel is on-site and the old parts are removed to start reconstruction. The 10061 was a homebuilt caboose using salvage from an earlier wreck. It will be another piece of original Moffat equipment. The same can be said of the wrecker. It was ordered new by the reorganized RR after they had handled wrecks on the Hill without one for 9 years. Until then they had used locomotives with block and tackles to right engines and clear the line of wrecks. It was originally built with coal-burning steam power and converted to oil by the D&RGW. It appears that the boiler is sound and may be restored to operation. The park train right-of-way is graveled and the ties and rail are ready for laying. Parts and labor shortages due to CORONA-19 are blamed for the delayed completion of the replica engine and cars. All-and-all, Dave has an ambitious plan for the museum on many fronts. There is much to do and much has been accomplished. It is a worthwhile stop for any serious railroader. And a good place to start for the uninitiated.





In other news, this month's meeting will be one day early on Thursday, the 9th. It's good that we have a meeting, it's unfortunate that it conflicts with the first meeting of the local NRHS chapter following the COVID break. (Some of us belong to both) Hopefully, everyone's schedule will be back on track in October.

Tom Milam, a long-time NMRA member and fairly new resident of the Centennial State will present a slide show on the Sierra Railroad which was near his previous home in California.



Planning is in progress for the November TECO show at the Chapel Hills Mall. Hopefully, nothing will come up to detract from the return after the long hiatus. Make plans to support the event by volunteering or just being present.

Hope to see many of you 'round the roundhouse this week.



August 2021 Minutes

Secretary, John Emmot

The regular monthly meeting was called to order live by Superintendent, Joe Costa at 7:02 in the community room of the Classic Homes offices at Flying Horse. There were 16 folks present with five recent returnees. There was no ZOOM link for this meeting.

The minutes of the July meeting were approved as published in the Milepost.

Treasurers Report

Tony Pawlicki had provided a digital update on activity in the PPD bank account to the officers before the meeting time. There were several hard copies to pass around at the meeting. The Bank statement showed us with \$0.03 interest and the deposit of \$50.00 from the profit share at the May TECO show. Cash on hand was increased by the drawing receipts from the July meeting. The statement was accepted as submitted. (The TECO vendor's fee had been deducted from the PPD profits from the show before they were delivered to the treasurer as reported last month.)

Announcements

Joe began the meeting with a discussion of TECO and reminding everyone that they won't be here for the November show.

There was a discussion of the September contest, which was announced as freight cars.

The meeting room is not available on the second Friday in September. Therefore, it was voted and approved, for one time, to hold the meeting on the second Thursday, September 9th.

Kristin said the new banners will be ready in time for the November TECO show.

Tony described the drawing customs for the new folks.

Joe mentioned Roy's new store in the mall and the layout in the window. It was verified that the PPD does not need to build another layout.

Everyone was reminded of the YMR 'Yard Sale' this Saturday, August 14.

Mark showed the poster and gave the background for the visit of the F&CC #20 to Cripple Creek this week, August 13 and 14.

Mark showed the route and schedule for the U.P. 4014 summer tour to New Orleans with a return through Colorado and Denver. Schedules and routes can be found at:

<https://www.up.com/heritage/steam/index.htm>

Folks were reminded of the Pueblo Train Show and RMR convention from September 10-12 and the Estes Park Train Show from September 25-26.

The departure of the PikeMasters from the City Auditorium was raised. They are seeking a place to store the material and a place to build a new layout.

Dave Bristow was given a virtual ovation in recognition of his work as the newsletter editor. The RMR recently featured the Milepost in their publication.

Chairman Reports

There were no reports.

Old business

Motion passed to plan the PPD picnic for September 18. Time to be determined.

Motion passed to authorize \$100.00 to support the picnic.

New Business

There was no new business.

The break was followed by the drawing.

During the refreshment break, most of the attendees went to Mark's office to see the display track where he shows various pieces of his HO collection on a rotating basis. This month is the U.P.'s MoPac heritage loco.

Contest

There was no formal contest. The September contest will be freight cars.

Program

There was no formal program for this meeting.

Meeting adjourned at 8:18.

Upgrading Athearn Plastic Granules Covered Hoppers Detailing and Teco-Prep

By Tony Pawlicki

Introduction

This article covers upgrading/detailing HO scale Athearn "Blue Box" model kits for 4-bay American Car & Foundry (ACF) covered hoppers in plastic granules service. We describe extensive but simple and basic detail upgrades that can apply to all such models (plus, for contrast, an example of more extensively modeling a particular prototype requiring major modification). Modifications are limited to those that will not make models too fragile for use in trains run for extended periods in TECO train shows; some upgrades specifically aim at making models less fragile. These upgrades are also generally applicable to the same basic models decorated for grain and other services.

Athearn marketed a number of these models decorated for various plastics companies (DuPont, Kodak et cetera). Typical service was storing and transporting plastic granules to manufacturers of finished products (toys, bottles, et cetera). The "storing" aspect reflects the supply chain issue that production of the granules normally occurs at a steady rate, while consumption rates have significant ups and downs. The granule manufacturers use huge rail yards dedicated to inventory stored in covered hopper cars to manage this mismatch between steady production and fluctuating consumption. Such a storage yard associated with one or several southeast Texas "chemical coast" petrochemical complexes could be part of a petrochemical-themed model railroad.

Rule #1: It's your railroad, so make as few or many modifications as you choose.

Rule #2: Prototype photo evidence rules in case of conflict, subject to Rule #1.

Philosophy

These models are to be “layout quality” rather than “contest quality.” This means that the aim is to provide effective illusions of reality when viewed in action on a layout, viewing from top and sides. This *excludes* certain items and *requires* other items.

- This *excludes* delicate details and underbody details that are desirable in contest quality modeling but are too fragile or invisible in extensive layout operation.
- This crucially *requires eliminating* items that practically shout unrealism:
 - Black wheel treads (appearance should resemble shiny, rail-polished steel)
 - Shiny wheel faces and truck side frames
 - Coupler pocket-related holes in the end floors of the ACF hopper models
 - Cast-on grab irons that have no opening between grab iron and car body
 - Pulling loops that have no holes for pulling cable attachment
- This also *includes allowing* items that may be somewhat oversize, for durability, functionality, or visibility, such as:
 - Formed wire details such as eyebolts, grab irons, and uncoupling levers (for both durability and visibility)
 - Couplers (such as Kadee #5) for functionality and functional appearance, though oversized
 - NMRA practice RP-25 wider wheel treads and deeper flanges for reliable operation
 - Thicker truck side frames (for durability)

Occasionally some cleverness is required to develop a compromise between appearance and durability. For example, one may thin (bevel) the edges of cast-on pulling loops to resemble steel plates, while leaving the central area at the durable factory thickness.

References

Available detailed recipes for some upgrades:

- Making the car “TECO-tough” per the article “TECO-Tough Freight Cars” in the July 2020 Pikes Peak Division’s (PPD)-NMRA Milepost.
- Weathering trucks and wheelsets per the article “Dirty Up Those Wheelsets (And Trucks)!” in the November 2020 Pikes Peak Division’s (PPD)-NMRA Milepost.
- Appropriate eras for certain details per the article “Timelines For Various Freight Car Details” in the August 2019 Pikes Peak Division’s (PPD)-NMRA Milepost.

Available prototype photos (ACF practice was common to 2-, 3- and 4-bay products):

- ATSF 314493 photo on www.railcarphotos.com shows the triangular reinforcement of the right-side stirrup step and shows the top brace for the short end ladder as well as the oval hole in the pulling loop.
- GN 170260 photo on www.rr-fallenflags.org shows the triangular reinforcement of the right-side stirrup step and shows the top brace for the short end ladder as well as the oval hole in the somewhat damaged pulling loop.
- MP 75781 photo on www.railcarphotos.com shows the triangular reinforcement of the right-side stirrup step and shows the top brace for the short end ladder as well as the oval hole in the pulling loop.

Modification Descriptions - General

This section provides descriptions of the upgrade and detail modifications applicable to nearly (i.e., unless contradicted by prototype photo, as rarely happens) all of the Athearn models. The details of interest have been identified from numerous photos of prototype railcars. Athearn “Blue Box” models upgraded include:

- Columbian Plastics (SHPX 53259)
- Diamond Plastics (SHPX 5250)

- DuPont (DUPX 36028) [DUPX = DuPont private owner]
- Kodak (ACFX 54030)
- Sinclair-Koppers (KCIX 143) [KCIX = Koppers Chemical Industries private owner]
- W. R. Grace (SHPX 52199)

Notably, most are in leased service (SHPX and ACFX road names).

The five cars receiving the general modifications are shown in the photo ACF Standard Mods.



ACF Standard Mods

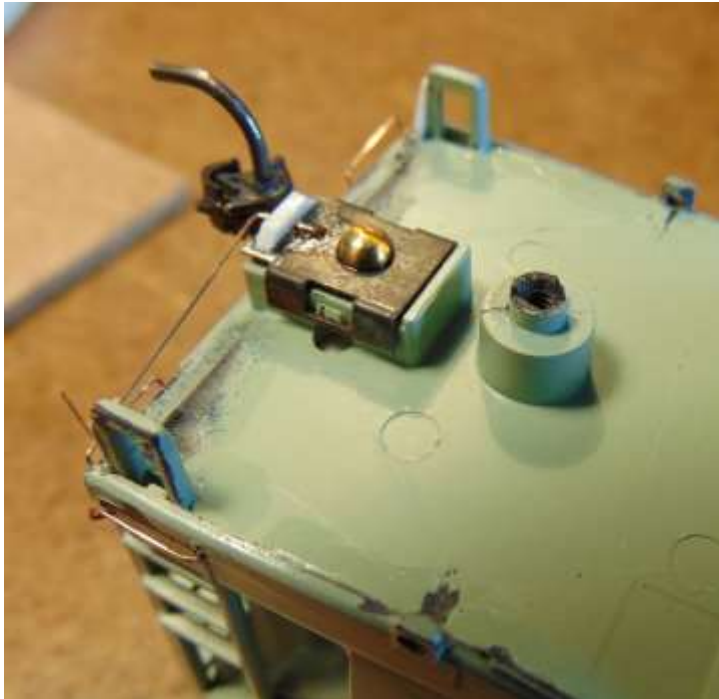
A note on finish: Consistent with the goal of simplicity, the kit paint job, road mark, and road number are preserved with touch-up only on modified/added parts. Weathering is limited to trucks, wheelsets, and (optionally) couplers (flat paint and Bragdon powders).

Specific Modifications:

- Weight: Before assembly, weight the car to an ounce or more above the NMRA recommended weight. (This promotes reliable tracking when traversing inter-module joints in train show modular layouts.)
- Truck Mounting:
 - Drill and tap the truck mounting holes for 2-56 machine screws.
 - Replace factory truck mounting screws with brass 2-56 machine screws secured with a dab of Walthers "Goo". (This prevents the screws from unscrewing and dropping out during extended operation, with resultant derailments.)
 - As needed, adjust coupler height to match Kadee coupler height gauge.
- Truck and Wheelset Finish:
 - With wire brush (use face and eye protection!), remove paint from treads of wheels of 4 Kadee 36" (100-ton) wheelsets. This simulates the shiny rail-polished steel appearance of regularly used prototype wheels. (Some commercial metal wheelsets do not need this step.)
 - Replace factory 33" (70-ton) plastic wheelsets with shiny-tread 36" (100-ton) metal wheelsets.
 - Weather trucks and wheelset faces (flat paint and Bragdon powders).

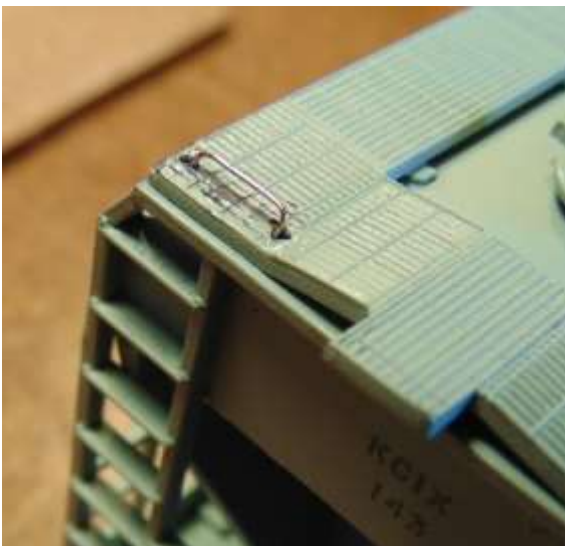
- Couplers:

- Replace factory horn-hook couplers with Kadee #5 with associated brass centering spring. (A dab of super glue keeps the spring from dropping out of the coupler pocket and getting lost; guess how that bit of wisdom was acquired.)
- Secure couplers with drilled-and-tapped 1-72 brass machine screws (more reliable attachment than just the factory metal clip that tends to pop off and cause the coupler to get lost; guess how that bit of wisdom was acquired). See photo ACF Bottom View.



ACF Bottom View

- Uncoupling Levers (aka Cut Levers): Provide uncoupling lever and bracket at each end of the car (see photo ACF Bottom View):
 - Glue 0.040" square styrene strip to the bottom of coupler box, drill 0.020" hole to retain the end of uncoupling lever.
 - Glue to the left side stirrup step and frame a 0.020" x 0.060" styrene strip to support the uncoupling lever swivel.
 - Drill 0.018" hole in the above support and insert and glue eye bolt swivel for uncoupling lever.
 - Form and install the uncoupling lever from 0.010" bronze wire.



ACF Top Grab

ACF Half Drop Grab



ACF Floor Before

ACF End View

- Grab Irons: Replace cast-on (a) roof straight grabs (see photo ACF Top Grab), (b) half-drop grabs under side ladders (see photo ACF Half Drop Grab) and (c) drop grabs under end ladders (see photo ACF End View) with hand-formed wire (or commercial parts, if available).
- Pulling Loops (see photos ACF Bottom View and ACF Half Drop Grab):
 - Add oval holes in solid cast-on pulling loops (#61 (0.039") drill – after drilling, use a drill as a crude file to longitudinally enlarge the hole).
 - Thin (bevel) the edges of cast-on pulling loops to resemble steel plates. (This is for an illusion when viewed from the side while running on a layout - for TECO-toughness, it is NOT sensible to thin the entire casting.)
- Miscellaneous Structural Modifications (see photo ACF End View):
 - Glue to each right side stirrup step and frame a narrow triangular support of 0.020" x 0.100" styrene strip.
 - Add a square of 0.015" sheet styrene to each end floor to cover up the openings associated with the coupler box.
 - Add horizontal brace (0.010" styrene strip) from top of short end ladder to angled portion of main body end support. (Scrape away factory paint from attachment areas and use Plastruct Bondene to weld styrene to body casting.)
- Decals:
 - Add Automated Car Identification (ACI) placard decals (Microscale) (unless prototype removed or painted over them) if era-appropriate (if the prototype was new or rebuilt in 1964-1977 time frame)
 - Add Consolidated Stencil decals (Walthers) if era-appropriate (1972-2015)
 - Add yellow reflective stripes (Microscale) if era-appropriate (post-2003)
 - Optionally, to prevent decals from falling off, apply a coating of a dull transparent finish such as Testor's DullCote
- AEI Transponders: Add AEI transponder castings (A-Line) if era-appropriate (post-1994).

Touch up paint as needed.

Modification Descriptions – Dupont (DUPX 36028)

This section provides descriptions of the additional modifications made to the DUPONT model. They are based on prototype photos. There are two major changes and several refinements.

Major Changes

Modification: Number of Hopper Bays: Change from 4 to 3 hopper bays (ALL these DuPont cars were 3-bay). **Method:** Cut out center 2 hopper bays; replaced with 1 bay centered between 2 outer bays. See photo DuPont 3 Bay.



DuPont 3 Bay

Modification: Tackboard Location: Add distinctive standalone tackboards between body and right-hand side ladders (present on all these DuPont cars and never seen on any other covered hoppers). **Method:** Added commercial tackboard casting and brass angle uprights. See photo DuPont Tack Board.



DuPont Tack Board



DuPont End View

Refinements

Photo DuPont End View shows a mix of standard and refinement modifications.

Modification: Crossover Grab: Replace crossover grab iron plastic castings with formed wire. **Method:** Drill attachment points in thin plastic ladder castings, insert the hand-formed bronze wire.

Modification: Stirrup Steps: Replace cast-on plastic stirrup steps with A-Line brass type A steps. **Method:** Drill holes in end floors, insert brass leg extensions.

Modification: Horizontal Brace Attachment: Model attachment of horizontal brace (from short end ladder to angled portion of main body end support) to main body support. *Method:* Drill holes for and insert nut-bolt-washer castings (Detail Associates).

Modification: Crossover Platforms: Improve the model of crossover platforms. *Method:* Carve off plastic casting, install perforated stainless steel (Detail Associates).

Modification: Brake Lever: Add brake lever hardware. *Method:* Scratchbuilt "B" end brake lever hardware details (styrene strip and brass wire).

Modification: End Corner Reinforcing Plates: Unusual lower-end corner reinforcing plates (not the usual tapered plates supporting the stirrup steps). *Method:* Added styrene strip of appropriate shape.

How I Do It – My Way – and Why

By Wade Mountz

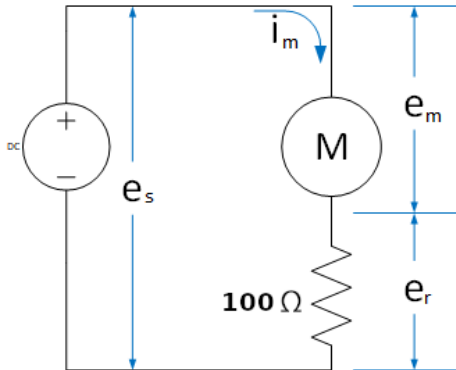
The assembly of a revenue car can take as little as a fraction of an hour or several hours, depending on how well you expect the car to look, track, and couple. I make no plans on ever entering one of my cars into a regional model contest; but when I finish one of my cars, they look used, run and track well and couple properly (most of the time)!! I never finish a car on the first night because I always try to do the following steps and take my time on ANY car I am assembling whether I bought it used at a swap meet or new from a retailer.

- Wheels – They all will get dirty over time, but metal wheels get dirty a lot more slowly, seem to roll easier, and come in various diameters. I have tried to standardize with 36" wheels whenever I can for my equipment. I only use plastic wheels on cars that don't move much. Never forget to check your axle spacing after the wheels are set into the trucks. I have both a 1/72 and a 2/56 tap for mounting both couplers and trucks with screws, plastic pins, and self-taping screws give me more trouble in the long run. These screws are easily available at many hobby shops as well as hardware stores like ACE. Nylon screws are harder to find but are cut easily.
- Couplers – I have owned every brand of coupler ever made. Most people will agree with me that Kadee couplers give you the least amount of trouble whether it's their #5 or their new "whisker" spring models. I always file the shank smooth to remove any burrs and will hand paint the coupler head after final assembly. Many operators will cut off most of the uncoupling arm. Always check the coupler height when the car is finished. Just being close is not as good as "dead on"!
- Weight – My track (and most others) is never "perfect". I add weight to almost every car that I have ever built. The NMRA standard for a 40' boxcar feels like a sparrow feather to me, but don't go overboard with your weights. Anything looks OK if it is hidden inside a boxcar or the underside of the frame.
- Painting – Few cars on my layout came out of their factory yesterday. A dirty car has been well used by the railroad. I like to paint the underside of my cars and trucks some sort of rusty brown. Cast iron trucks never looked glossy black. I even hand paint truck springs a slightly different color than the tucks to differentiate the two different metals. If separately applied- I leave the triple valve, brake cylinder, and air reservoir unpainted just so you could see the contrast in color if you look under the car. These are often replaced during regular maintenance. Make sure the brake cylinder points toward the "B" end of the car where the hand brake wheel sits.
- Weathering – If you have never tried to weather a car before, use your worst car for the first try. Your second attempt will be much, much better. With dust, grim, and rust – LESS is more. A "heavily" weathered car takes a lot of practice to look natural.
- Finally - Double check your wheel spacing and coupler height. Test run when no one is watching. Nothing makes you look more like a "rookie" than poor tracking & coupling.

A Safe Way of Measuring Motor Stall Current

By David Bristow

Jack Sousa brought to my attention a [blog item](#) on how to safely determine the maximum current a motor will draw when it is stalled. Initially, I didn't get it as the original author did what many of my professors way back when I was a student would put a formula on the board and simply left it to the student to figure out how that formula was reached. The circuit is very simple a motor in series with a resistor and a power source as seen in the figure below.



The current through the motor is the same as the current through the resistor. Assuming when a motor is stalled the motor's resistance is just the resistance of the motor's windings. Thus, one can calculate the resistance of the motor by knowing the resistance of the resistor in series with the motor and the voltages across the motor and the resistor.

$$\text{Ohm's Law } i = e / r$$

It is probably easiest if one were to remove the motor from the locomotive. Connect the motor to a nominal 100 Ohm series resistor then connect the power source as shown in the circuit diagram above. Lock the motor shaft so that it will not turn. Then measure the voltages e_s , e_r , and e_m with a voltmeter. One should also measure the resistance of the resistor as it is unlikely it is exactly 100 ohms.

I used an old motor I had removed from an Athearn when I had upgraded the model to using a Sagami can motor. In taking the voltage e_m I found it varied depending on the position the armature was in probably because the windings in less expensive motors are not identical, the range I found was between 0.95 to 1.05 volts. So, be sure to slowly rotate the armature to find the lowest voltage as that will be the winding with the least resistance hence the highest stall current.

The author of the blog states "Divide twelve volts by the measured motor-voltage. Divide the voltage across the resistor by 100. Multiply these two numbers together and you have the full load stall current measured in Amperes in a safe way" That is what the math shows!

However, be sure to measure your power source, mine was rated at 12 volts but measured 11.92 volts. The resistor I used turned out to be only 96.6 ohms.

e_s measured 11.92 volts, e_m measured 0.95 volts, e_r measured 10.97 volts, and r_r measured 96.6 ohms

$$i_{m\text{stall}} = (10.97 * 11.92) / (0.95 * 96.6) = 1.425 \text{ Amps}$$

Probably not the best motor to install a DCC decoder with!

The Math

$$r_m = e_m / i_m \text{ motor resistance}$$

$$i_m = e_r / r_r \text{ motor current}$$

$$e_s = e_r + e_m$$

$$i_{m\text{stall}} = e_s / r_m \text{ stall current}$$

$$i_{m\text{stall}} = (e_r + e_m) / (e_m / i_m)$$

$$i_{m\text{stall}} = (e_r + e_m) / (e_m / (e_r / r_r))$$

$$i_{m\text{stall}} = e_r * (e_r + e_m) / (e_m * r_r)$$





CONVENTION REGISTRATION FORM

September 10 thru 12
Pueblo Convention Center

Primary Registrant (Must be over 18) _____

Address: _____

City: _____ State: _____ Zip Code: _____

Email: _____

Phone Number: _____

NMRA Member: (Y/N) _____ NMRA # _____ Non-NMRA add fee _____

Names of all family members attending, please include age for those 12 and under:

Primary Fee: Including Train Show Admission \$50.00/Ea _____

Spouse and Family Members (Over 12) \$10.00/Ea _____

Primary Fee for Non-NMRA Primary Registrants \$60.00/Ea _____

Greg Long Operating Session (Refundable Deposit) \$5.00/Ea _____

John Denny Operating Session (Refundable Deposit) \$5.00/Ea _____

Bob Foltz Operating Session (Refundable Deposit) \$5.00/Ea _____

*****Deposits Returned at Session Upon Attendance**

TOTAL FEES: _____

All Registrations are **FULLY REFUNDABLE**

Make check payable to: Rocky Mountain Region, NMRA

Mail to: Denny Krausman, 9609 Silver Hill Circle, Lone Tree, CO 80124

Thursday, Sept 9			
9 AM – 6 PM	Operating Sessions -Greg Long, John Denny		
Friday, Sept 10			
Convention Center Room 1			
9 AM – 5:30 PM	Contest Room Open/ Model entry		
6 PM – 10 PM	Layout Tours – Greg Long, John Denny, Bruce Barrett, Steve Phillips		
Friday, Sept 10			
Convention Center Room 2			
9 AM - 5 PM	Clinic #	Clinic Title	Clinician
9 AM – 10 AM	Clinic 1	Scratch Building made Easier	Denny Krausman
10:30AM –12:00PM	Clinic 2	TBA	TBA
12:00PM- 1:00PM	Lunch		
1:00 PM – 2:00 PM	Clinic 3	Resin Cars	
2:30 PM – 3:30 PM	Clinic 4	TBA	
4:00 PM – 5:00 PM	Clinic 5	History of the South Denver – Bragdon Joint Line	Bruce Barrett
5:00 PM – 7:00 PM	Free Time and Dinner		
7:00 PM- 8:00 PM	Presentation	TBA	
Saturday, Sept 11			
9:00 AM - 5:00 PM	Train show – Pueblo Union Station		
9:00 AM -5:00 PM	Contest Room Open/ Model entry Convention Center Room 1		
5:00PM – 8:00PM	NMRA Judging – Convention Center Room 1		
Saturday Clinics			
Convention Center Room 2			
9:00 AM –10:00 AM	Clinic 6	Santa Fe RR in Pictures	Bruce Barrett
10:30AM –12:00PM	Clinic 7	TBA	TBA
12:00 PM – 1:00 PM	Lunch	TBA	TBA
1:00 PM – 2:00 PM	Clinic 8	TBA	TBA
2:30PM – 3:30 PM	Clinic 9	TBA	TBA
Saturday Clinics			
Convention Center Room 3			
9 AM – 10 AM	Clinic 10	TBA	TBA
10:30AM –12:00PM	Clinic 11	Scratchbuilding A Styrene Depot	Denny Krausman
12:00 PM – 1:00 PM	Lunch		
1:00 PM – 2:00 PM	Clinic 12	History of the South Denver – Bragdon Joint Line	Bruce Barrett
2:30PM – 3:30 PM	Presentation	TBA	TBA
3:30PM - ???	Free time and Dinner		
Sunday, Sept 12			
9:00 AM – 4:00 PM	Train show – Pueblo Union Station		
8:00 AM – 10:00AM	Model Pick Up Convention Center Room 1		
8:00 AM – 10:00AM	Contest Awards w/coffee & pasties Convention Center Room 1		
1:00PM – 5:00PM	Bob Foltz Operating Session		

Pueblo Convention Schedule

Things to do while in Pueblo, Colorado

Convention

Pueblo Convention Center (320 Central Main Street)

- Registration (9 AM Friday/9 AM Saturday)
- Clinics on the Hour
- Model Contest
- Door Prizes
- Sunday Breakfast

Rail Fair – Pueblo Union Depot

- Many vendors with models
- Pueblo Railroad Museum (next to Depot)
- Train rides in cabooses

Other Stuff to see in Pueblo:

- Steel Mill Museum
- El Pueblo Museum
- Pueblo County Historical Museum (across from depot)
- Rio Grande Freight House Museum
- Rosemount Museum

Restaurants

- The Clink
- Brues Alehouse
- Angelo's Pizza
- B St Café (across from depot)

Hotels

There are many motels/hotels, not counting Bed & Breakfasts and campgrounds, RV park



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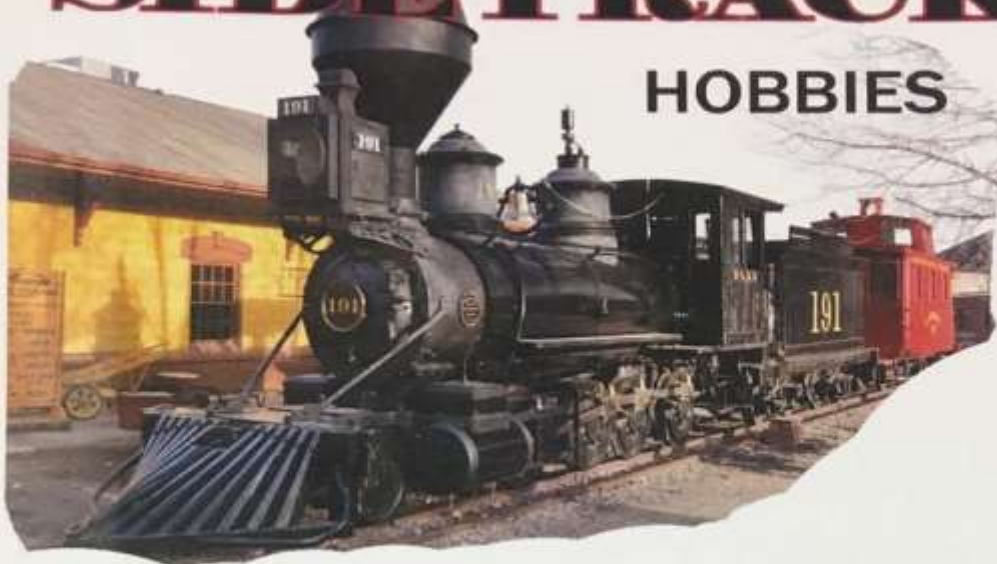
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