YouTube Model Builders eMag

A Free YouTube Model Builders e-Magazine
Produced by YouTube Model Builders.

Be Part of the Community
YTMB Live! Shows
YTMB Hangouts

VOLUME 2 www.YouTubeModelBuilders.com SEPTEMBER 2016

ARTICLES YOUTUBE CHANNELS COMMUNITY TIPS & TRICKS

ALL ABOARD UNION PACIFIC!

INSIDE THIS ISSUE:

Be Sure To Check Out Columns From Jack Hykaway, Geno Sharp, The Track Planner, and Harry M. Haythorn

Cover Photo: Geno Sharp
Engine Curtesy of Robert Sacco

Be Sure To Check Out
YouTube Model Builders Live!
Join Us Live Every Month

Welcome YouTube Model Builders!

We are excited to present this special “Union Pacific” issue of the **YouTube Model Builders eMag** to the community. The YouTube Model Builders “Team” is committed to putting the “eMag” together with the assistance from the model railroading community at large.

We deliver a useful and informative publication for model railroaders who travel this vast net of information. In this publication, we include many informative, tutorial-based articles, information on happenings in the community, listings of up-and-coming YouTube channels, information about the **YouTube Model Builders LIVE!** show, **Hangout Presentations**, along with general information that is inspirational in building of our model railroads.

Our Vision:

To establish free, online resources as a primary source for model railroad techniques and inspiration in an ad-free, selfless service environment.

Our Mission:

The mission of YouTube Model Builders is to inspire individuals for sharing model railroad building techniques through the use of YouTube and other free online resources. Our goal is not only to share knowledge in a community but also assist individuals who are learning or looking for inspiration through the online model railroading community.

— The YouTube Model Builders Team

Editor's *Note...*

Once again fall is upon us and we are ready to hibernate into our basements for the "model railroading season" until spring next year. Some of the things that always take me back, in my mind, to that nostalgic, golden era of train travel, are the simple things such as the crisper, cooler weather, the smell of burning firewood in the distant air, and those colorful sunsets with a "V" formation of migrating birds in the sky.

It is that same nostalgic feeling that inspired us to produce this special issue focused on the Union Pacific railroad. Union Pacific as a railroad, given its size and history, in itself, is a topic of great depth and breadth that could take years and volumes of books to cover – oh, yea, books have already been written. So, in our special YouTube Model Builders eMag style, we chose to focus on a few vignettes of the UP.

We begin with a pictorial essay of images that represent UP's past golden history of passenger service, with all its style, luxury, and opulence.

Harry Haythorn, who is our resident Union Pacific expert (in fact this issue could easily have been labeled the "Harry M. Haythorn issue" because of his invaluable contributions), has three articles discussing three distinct aspects of Union Pacific. Harry discusses how he models Union Pacific's passenger trains 52 and 57 in his article "The Denver to Cheyenne Local." In his UP-Hub column, Harry introduces us to the standard "Harriman" depots deployed by UP. In his third article "From the Ranch to the Rails," Harry discusses Union Pacific's role in the shipment of livestock and the growth of the meat industry. It is a topic close to Harry's heart and I am confident that you will enjoy reading this wonderful essay.

Geno Sharp, in his "Corner" shows us how adding simple roofing details, to an otherwise wasted space, can quickly increase the level of realism on our layouts. Jack Hykaway, in his piece entitled "Rollin' Coal," writes about Union Pacific's experimental, coal-chewing behemoth, number 80 (8080). Darrell Medley shows us step-by-step how he custom-built a display case for his locomotives. Andy Crawford continues his discussion on prototype modeling and the trend in the hobby towards more "prototype fidelity" by asking the question, "Is Prototype Modeling for You?"

Also, be sure to check out the Community Collage, featuring Harry Hayhorn's 1950s era, Union Pacific based layout, and the Pick-3 featuring three YouTube channels you need to check out.

Now, before you head down to the basement with your cup of java, grab this copy of the YouTube Model Builders eMag to read on your favorite device in the comfort of your favorite chair.

We hope you enjoy reading this special Union Pacific issue of the eMag.

Happy Model Railroading!

– **Loggin' Locos**
Editor-In-Chief

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The Mainline

About the Cover

A Union Pacific GP-30 #829 leads the daily local across the Crystal Creek Bridge as the sweet smell of fresh honey fills the air.

Cover Photo: Geno Sharp
Engine Courtesy of Robert Sacco

The Staging Yard

The Branch Lines

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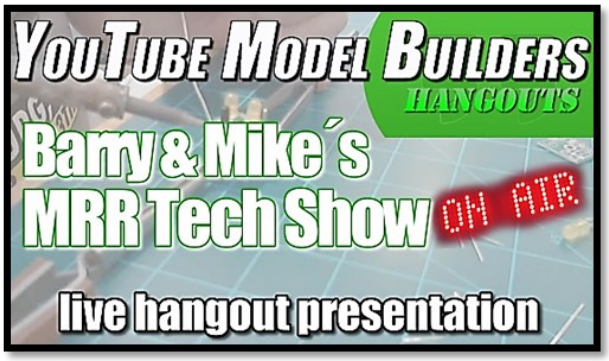
Harry M. Haythorn - UPHS #4043
Geno Sharp
Andy Crawford

We have three different types of Hangout Presentations each month!

For the latest schedule updates please go to www.YouTubeModelBuilders.com.

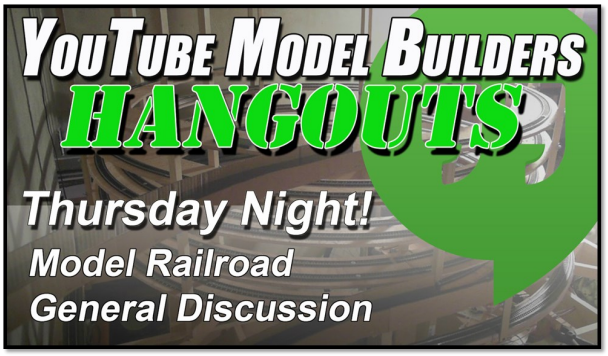
Geno's Tuesday night show is all about structures, weathering, scenery, and more. The show includes guests such as Miles Hale and Bill Beranek (The Track Planner).



The Tuesday night MRR Tech Show is hosted by Barry Rosier and Mike Dettinger.

The MRR Tech show is all about the technology of model railroading. Covered topics include DCC, JMRI, animations, 3D-printing, and much more.

Calling all geeks!

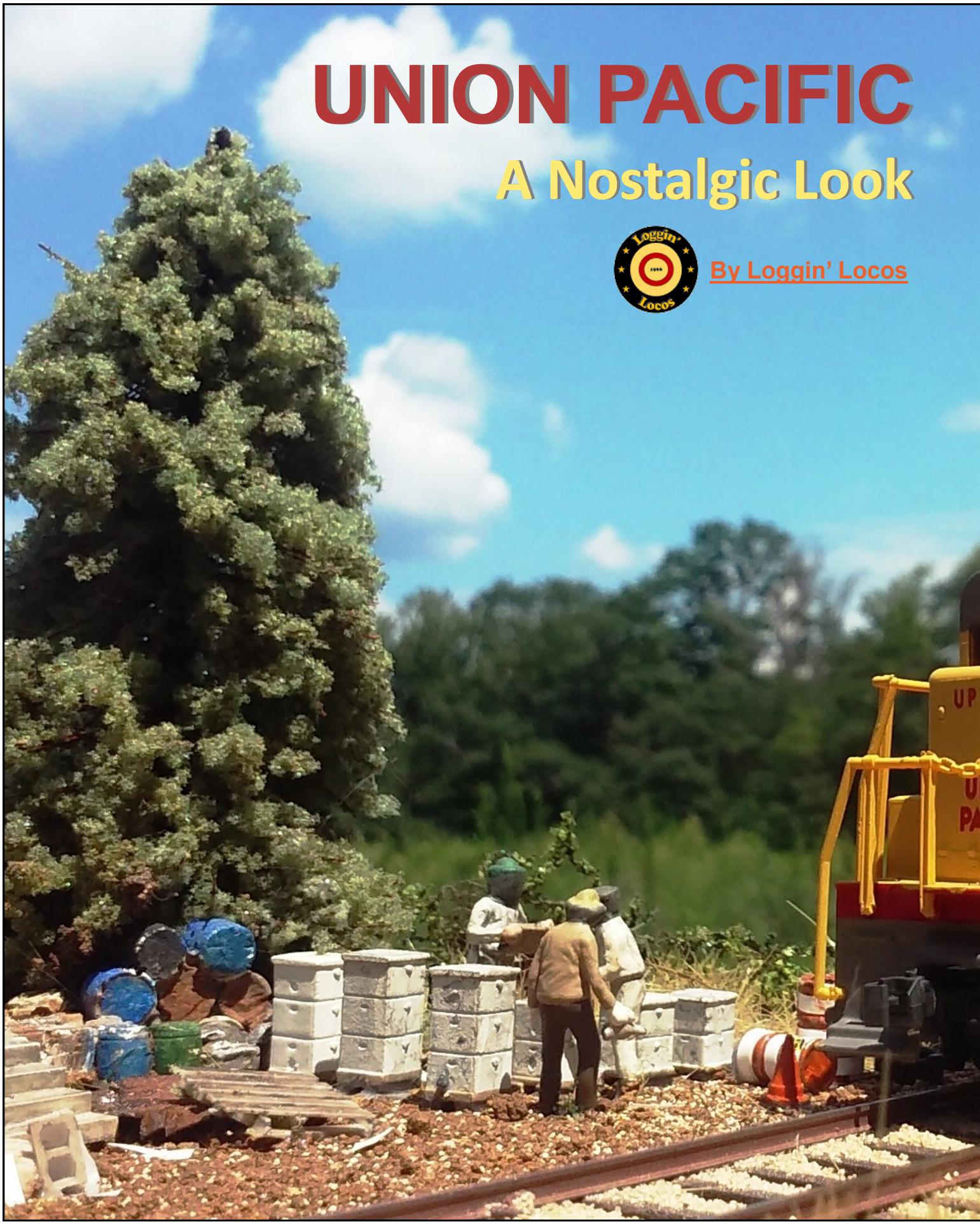


During this Thursday night show, open presentations are topic driven and fellow YouTube modelers join in to discuss various model railroading topics.

UNION PACIFIC

A Nostalgic Look

By Loggin' Locos



The Union Pacific network is the largest freight operating railroad network in the United States and is considered one of the world's largest transportation company. When I think of Union Pacific, many aspects come to mind, but majority of my thinking is a nostalgic view of this prolific railroad; a view of the golden era of railroad travel—from the late 1890s to the late 1950s, when the UP had passenger service. On the following pages, we present images of some historical maps, nostalgic posters, brochures, and postcards. We hope you enjoy this nostalgic look at Union Pacific.

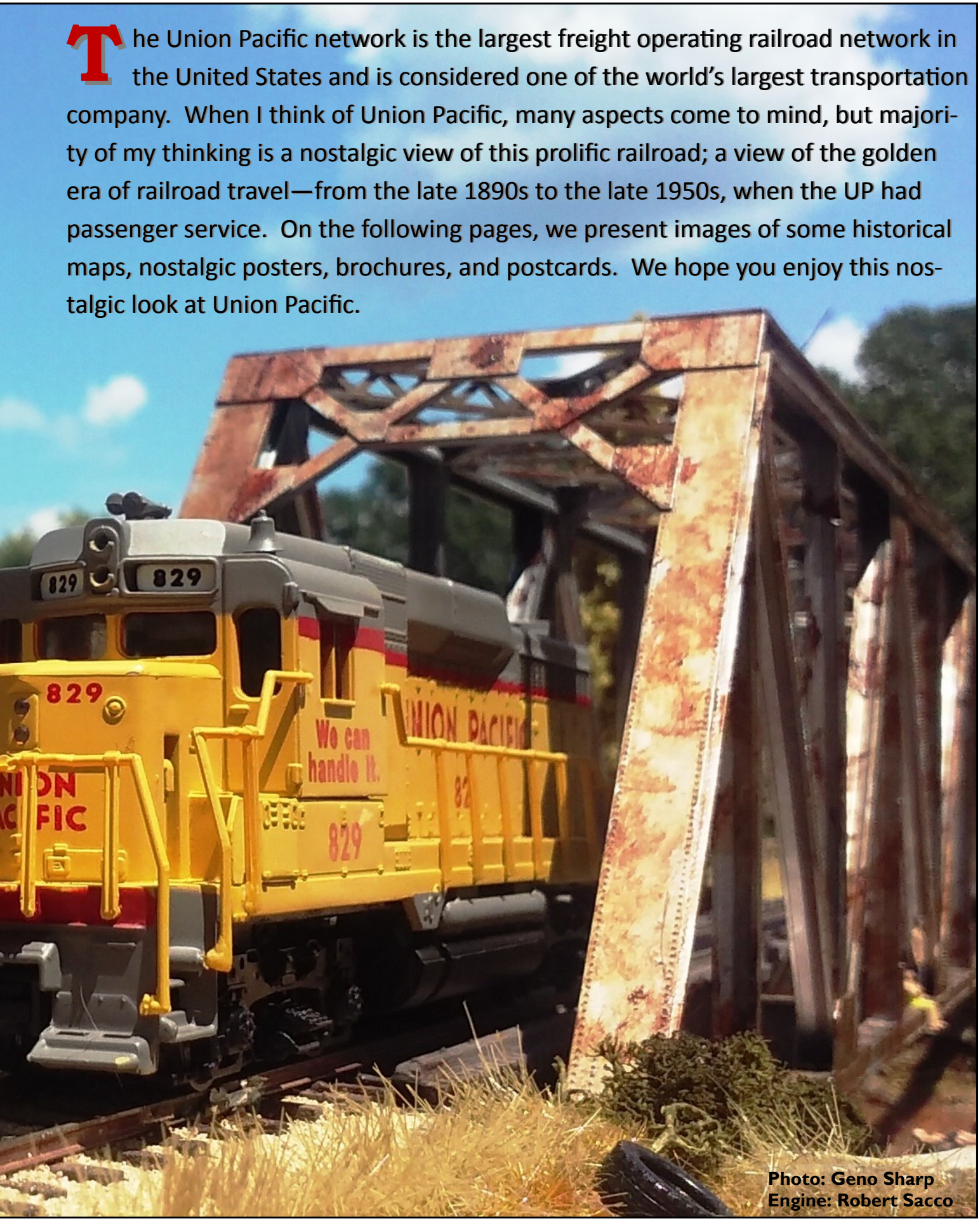
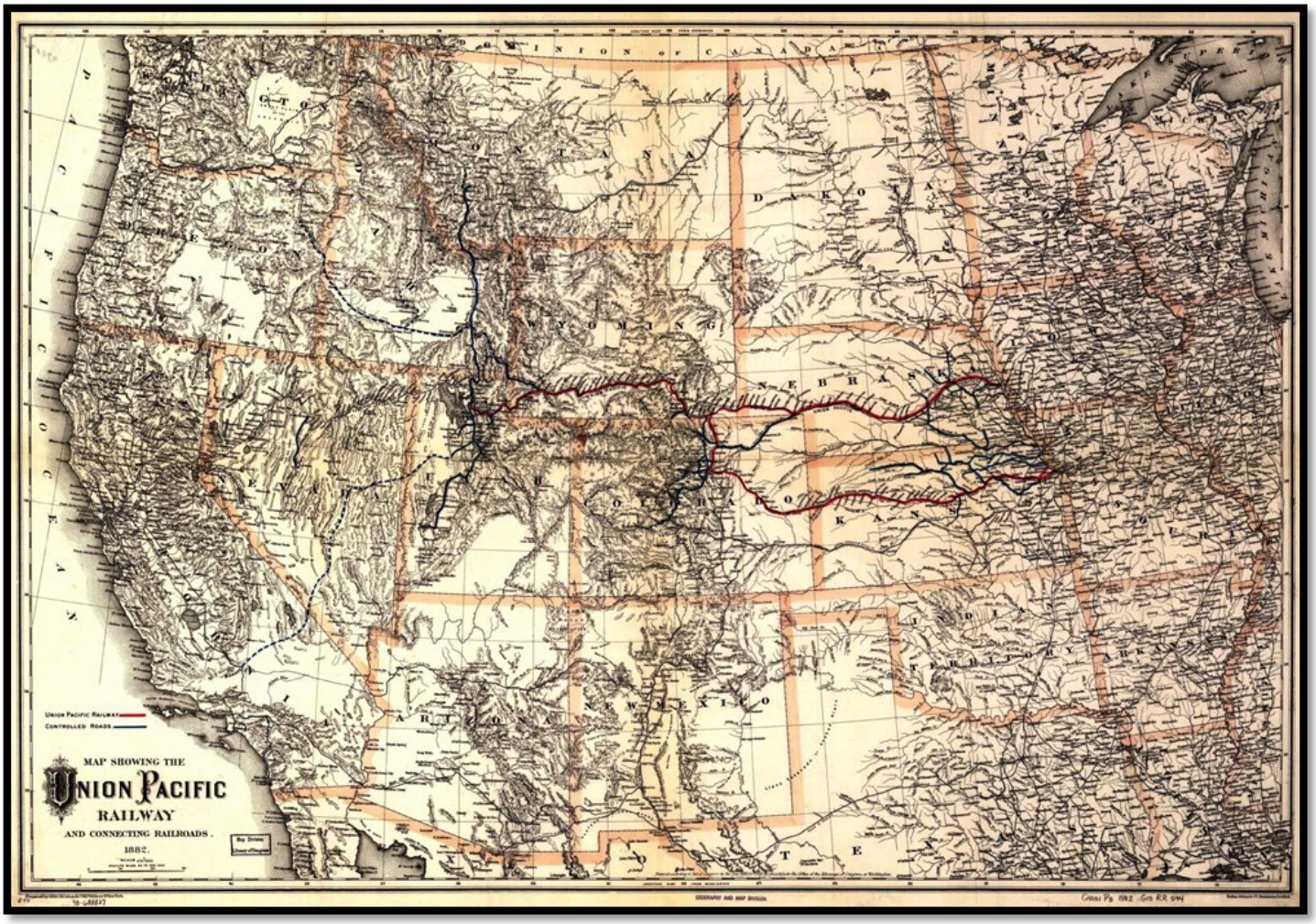
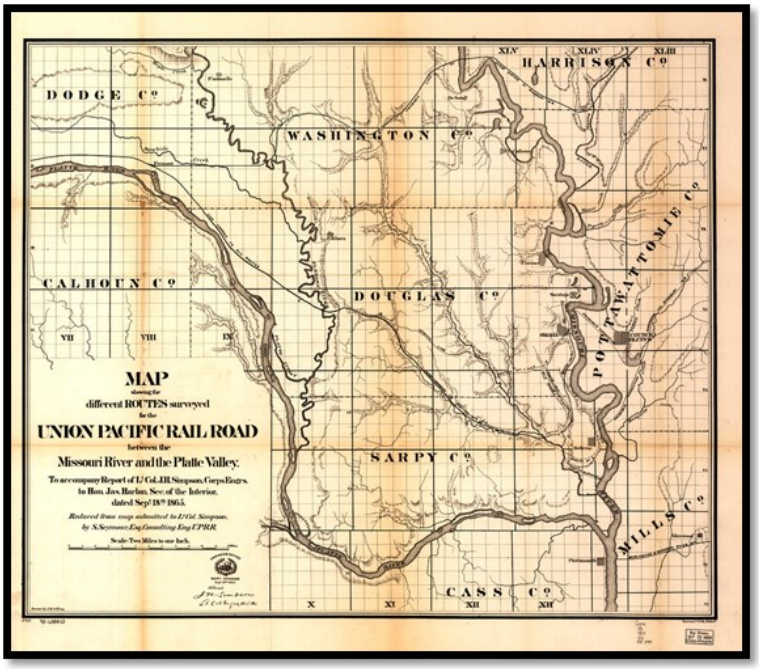


Photo: Geno Sharp
Engine: Robert Sacco

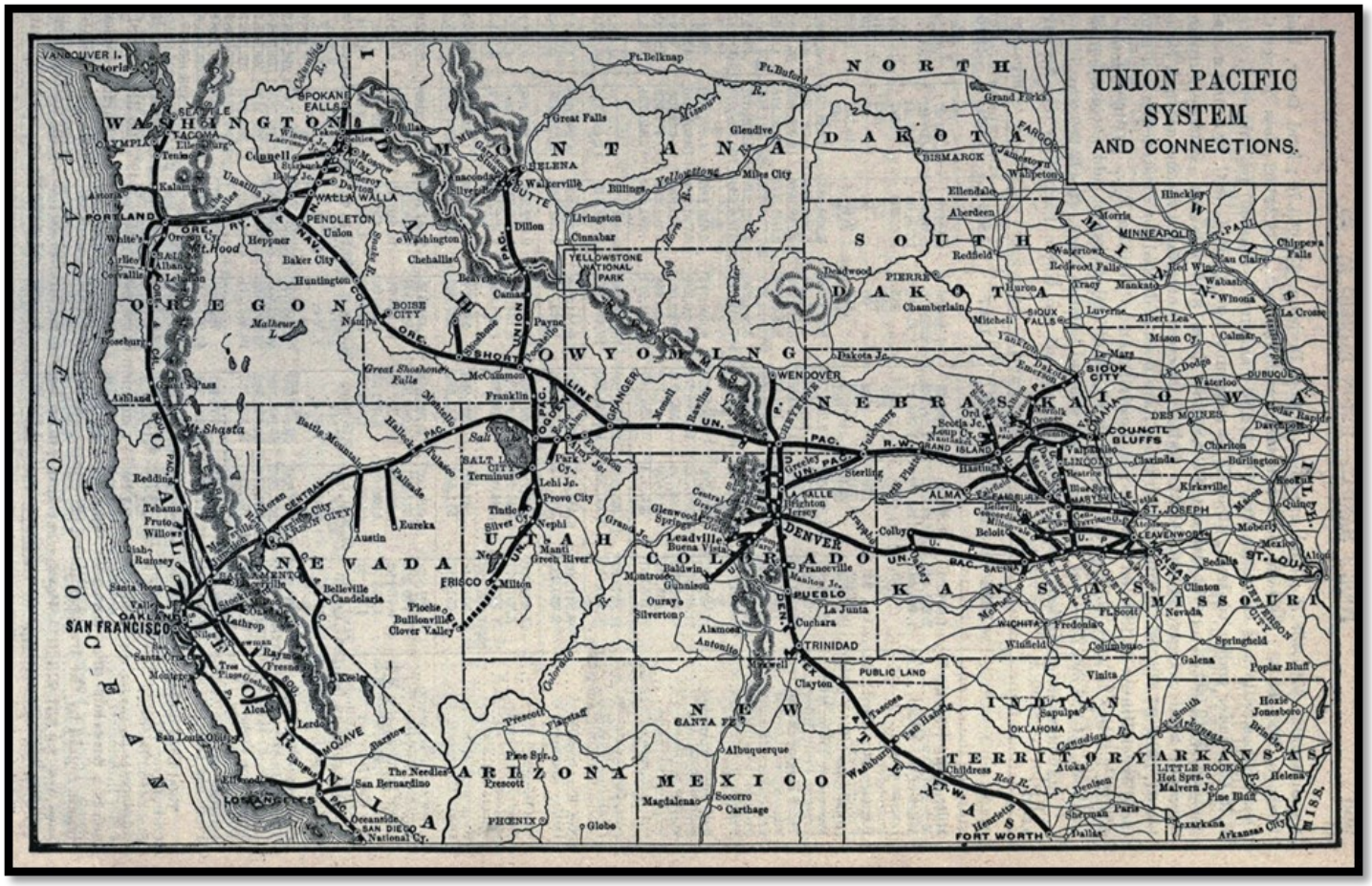
HISTORICAL MAPS OF THE UNION PACIFIC





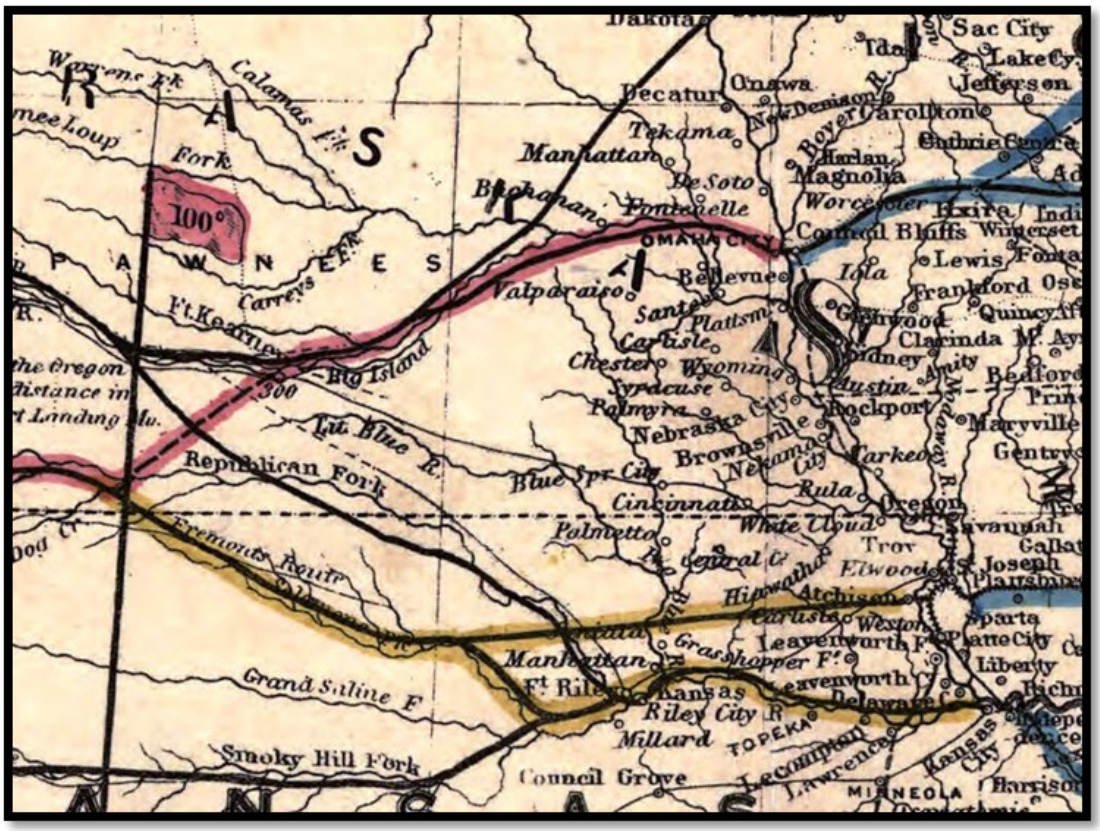
Above: A [detailed map of the Union Pacific network](), circa 1882. The UP's mainlines are emphasized. Image available for use via public domain.

Left: UP surveyed two [routes]() over the hills between the Missouri and Platte Rivers. Today, both lines are still in operation. The southernmost route (via Omaha, NE) handles eastbound traffic while the northern line via Fremont, NE handles the westbound trains. Image available for use via public domain.

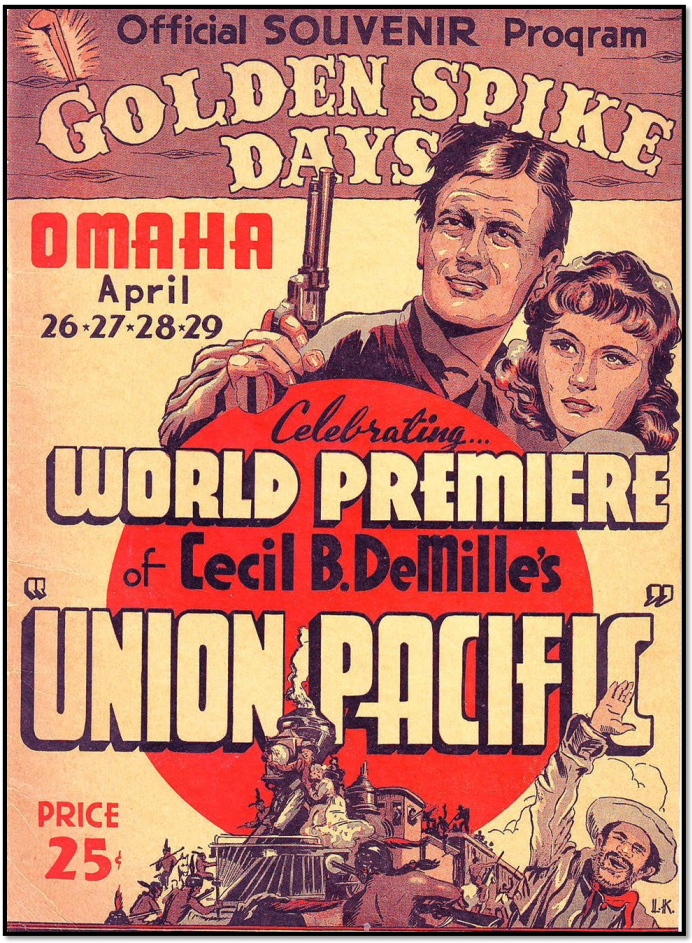


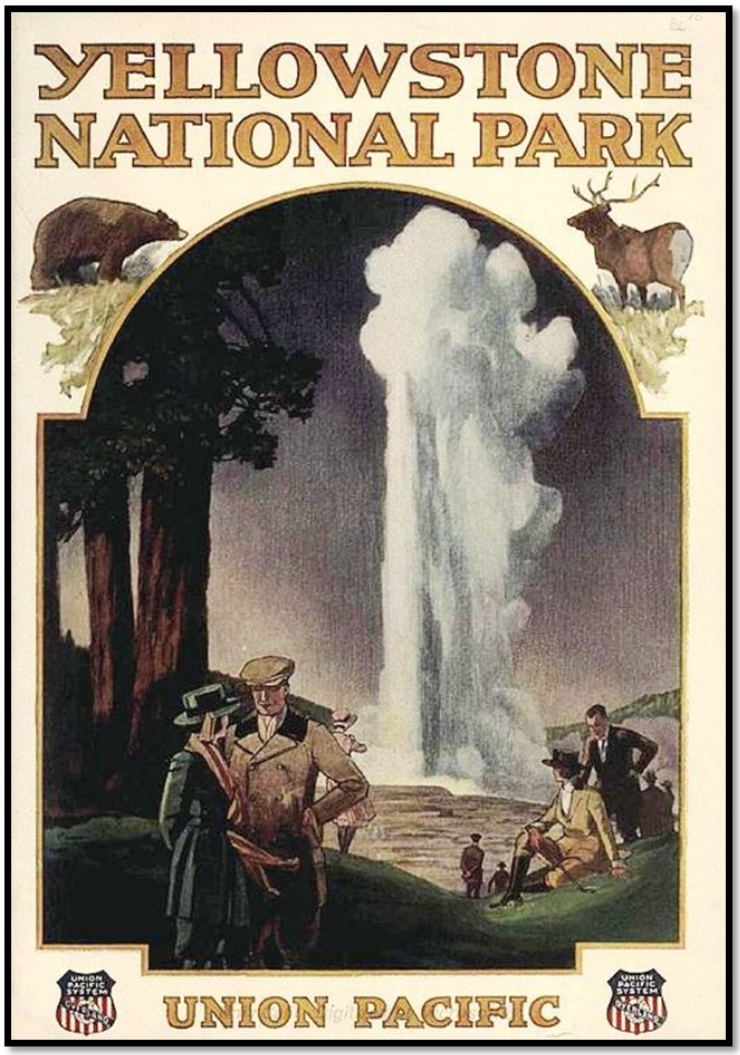
A map showing UP's network and connecting railroads. Circa 1891. Image available for use via public domain.

This map shows the proposed routes for the western, central, and eastern divisions of the Union Pacific Railroad. Image available for use via public domain.



POSTERS

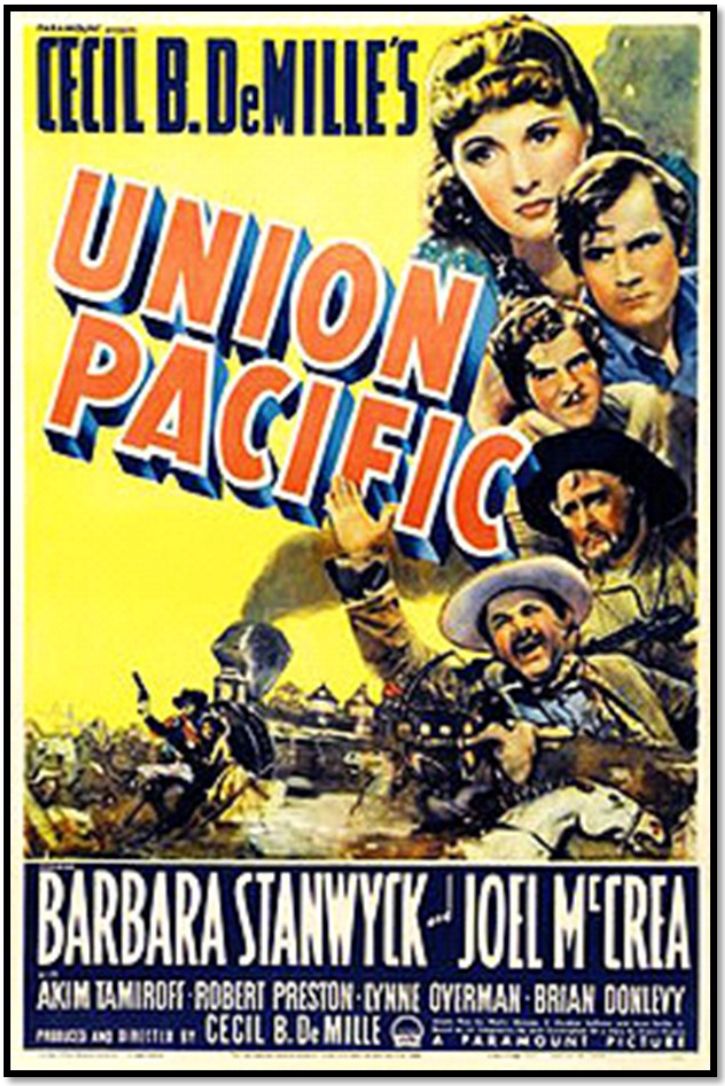




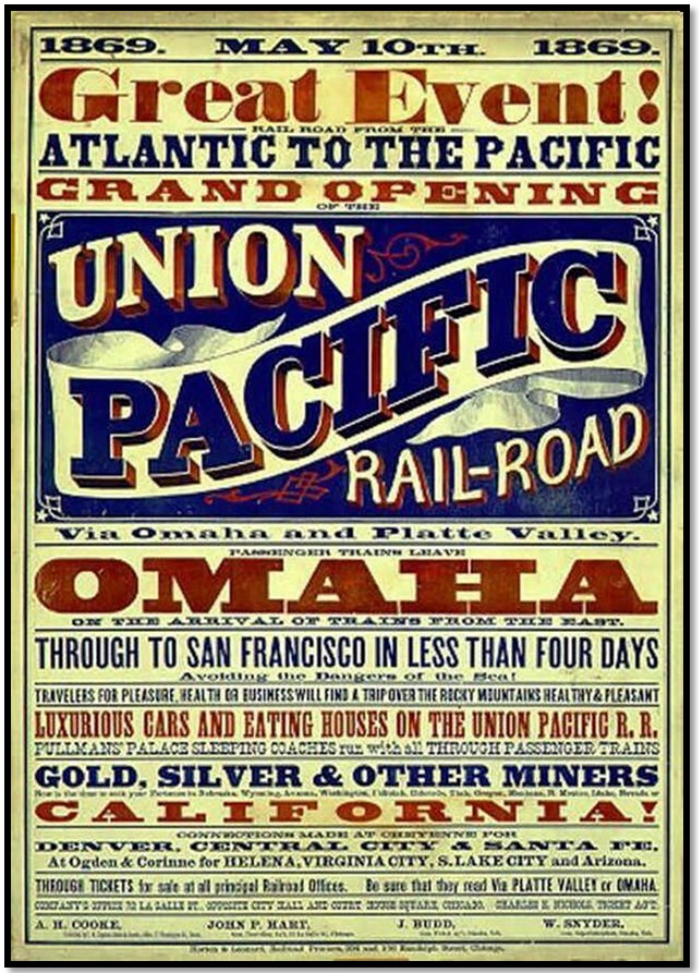
Above: A poster advertising the world premiere of the motion picture Union Pacific, making its debut in Omaha, NE from April 26-29, 1939. Image available for use via public domain.

Left: Yellowstone National Park is still a popular destination for tourists today – unfortunately not too many still take the train to get there. Image available for use via public domain.

Image courtesy of Microsoft Clipart..



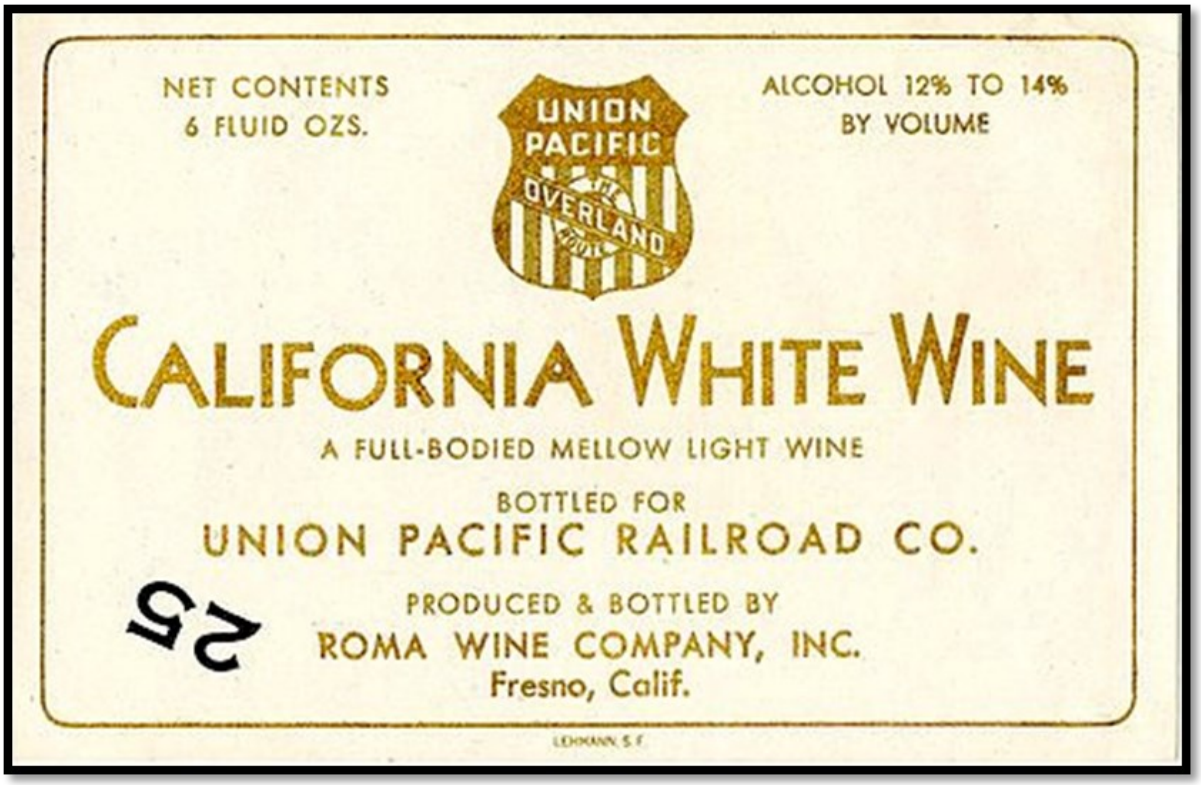
Another nostalgic poster advertising Cecil B. DeMille's motion picture Union Pacific*. Image courtesy of Microsoft Clipart.*



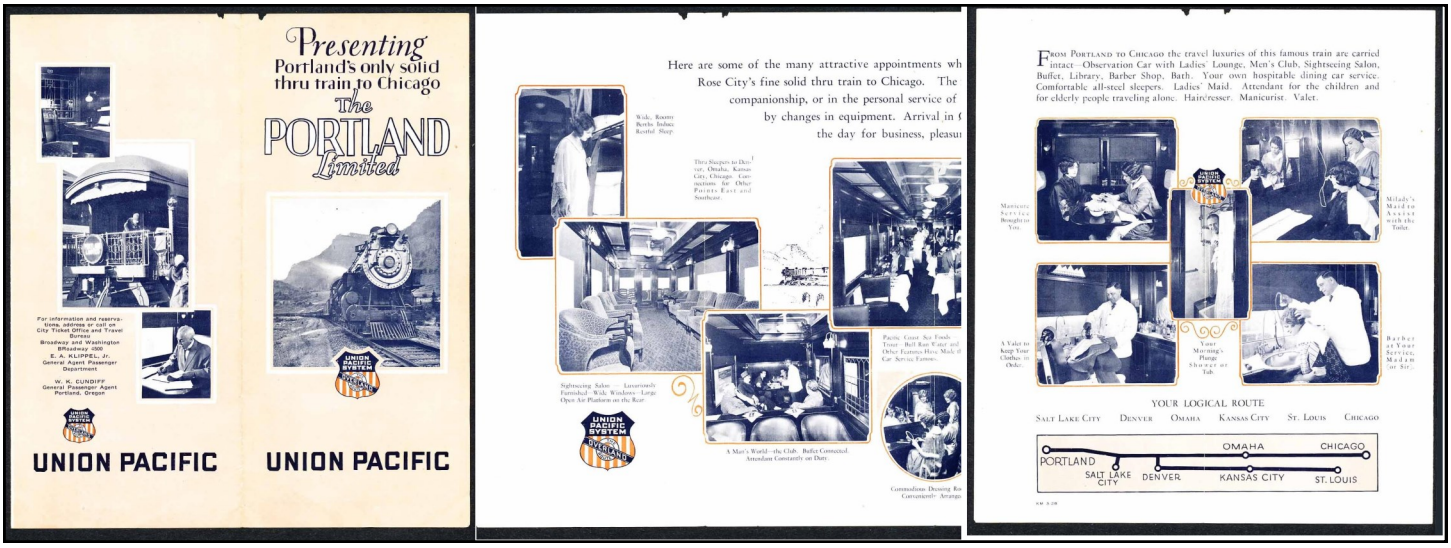
The Union Pacific promoted its grand-opening to the public using ***posters*** *such as the one pictured here. These posters advertised the Union Pacific's "pleasant, quick and healthy" trips over the Rocky Mountains to California. Image available for use via public domain.*

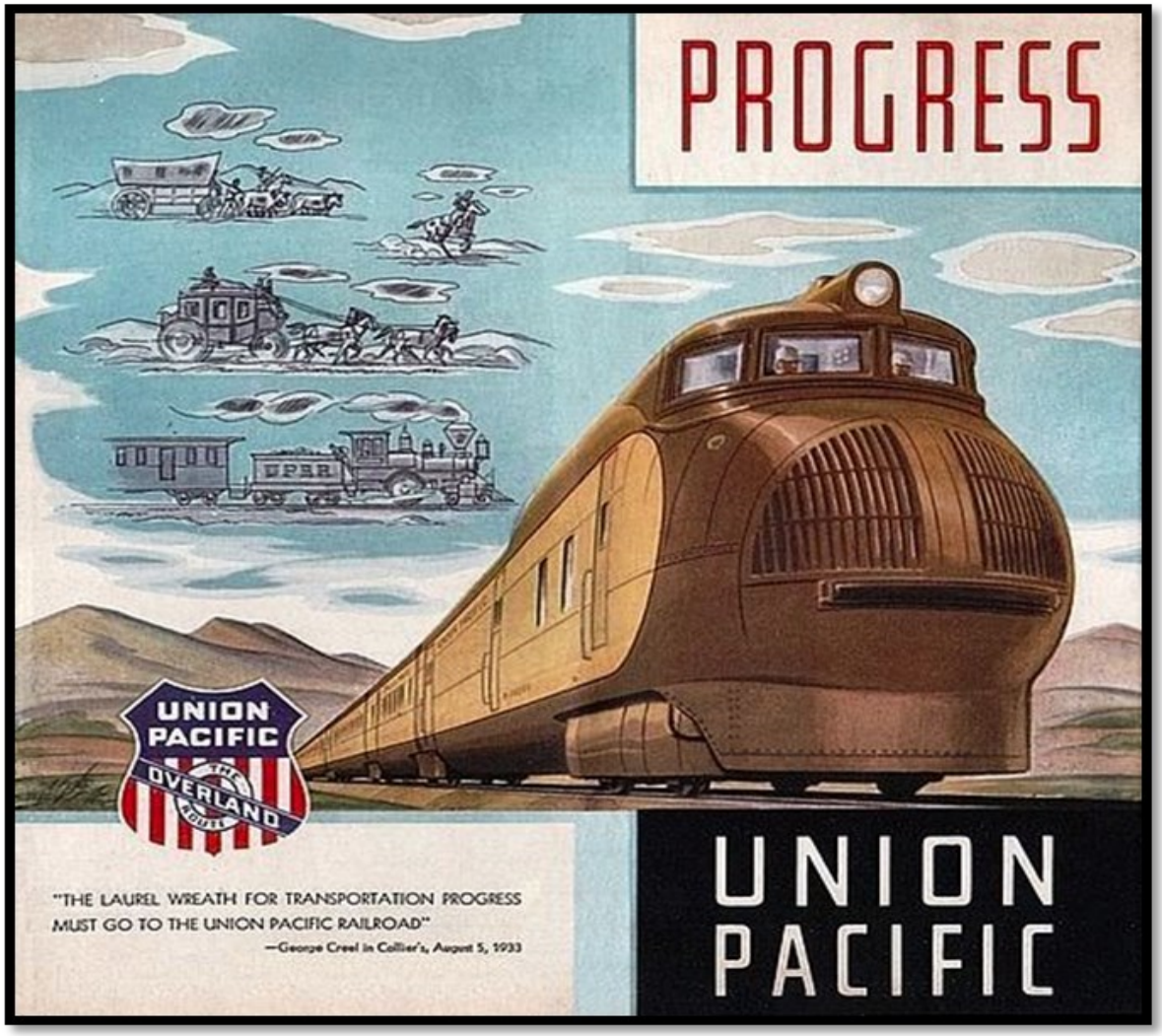
Labels and Brochures

A label for white wine bottled for (and most likely transported by) the Union Pacific Railroad Company. Image available for use via public domain.

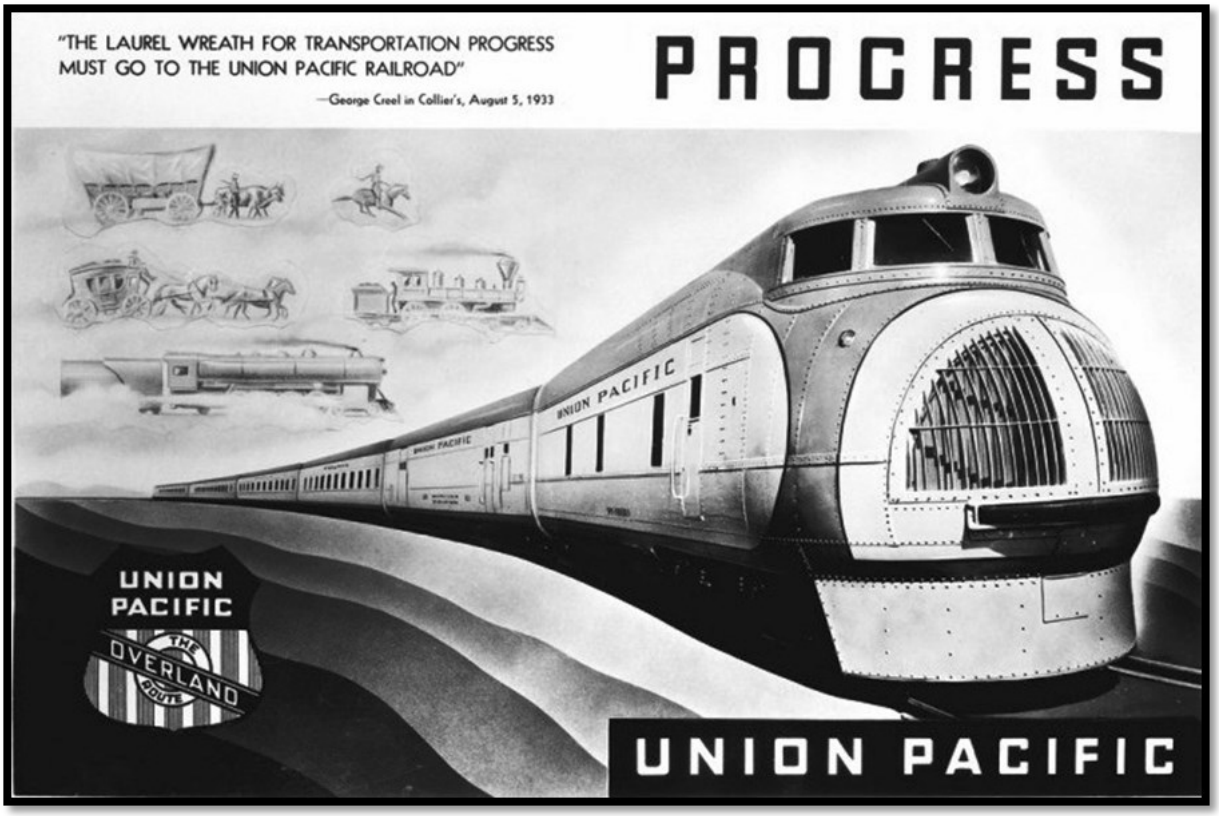


According to this Union Pacific train brochure, passengers could enjoy many amenities while on board UP's Portland Limited passenger train. Image available for use via public domain.





The M-10000 was once the finest in passenger transportation that UP had to offer. The railroad promoted these modern marvels in brochures such as the one pictured here. Image available for use via public domain.



The streamlined M-10001 trainsets were used exclusively on the Chicago – Portland, City of Portland passenger trains. Image available for use via public domain.

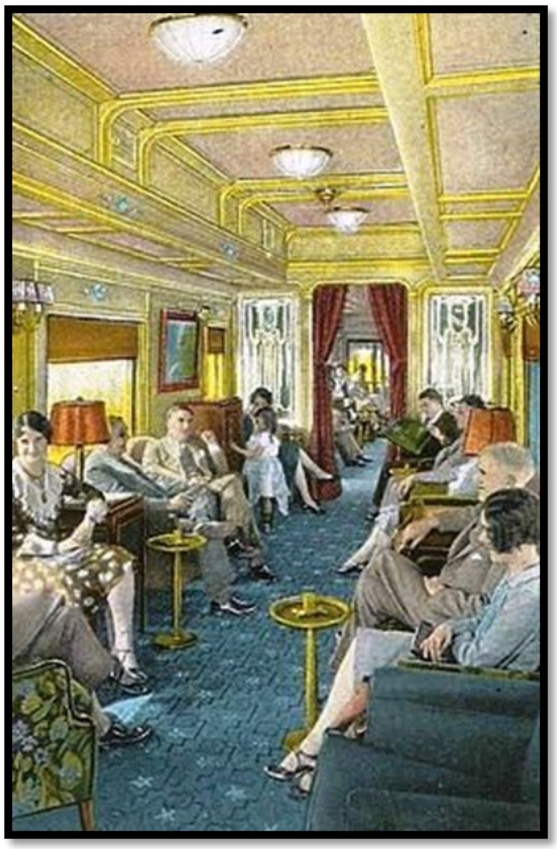
Traveling in Style and Luxury!

Previous page: Union Pacific passenger trains offered the traveler all the amenities including luxurious and stylishly decorated dining cars and lounges. The Pullman coaches provided comfortable seating with plenty of legroom while dome cars provided great views of the passing scenery and landscapes. This was the golden age of railroad travel.

*Left: Many important decisions were made, no doubt, in the **buffet and smoking lounges** such as this one on the Union Pacific train Los Angeles Limited (1909). Image available for use via public domain.*

Below, left: In the latter part of the 1950s, the Redwood Lounge was modern and comfortable for UP passengers. Image available for use via public domain.

*Below, right: The **lounge** of Union Pacific's Chicago – Denver Columbine passenger train, which made its first revenue runs during the 1920s. Image available for use via public domain.*



The Opulence of the Overland Limited

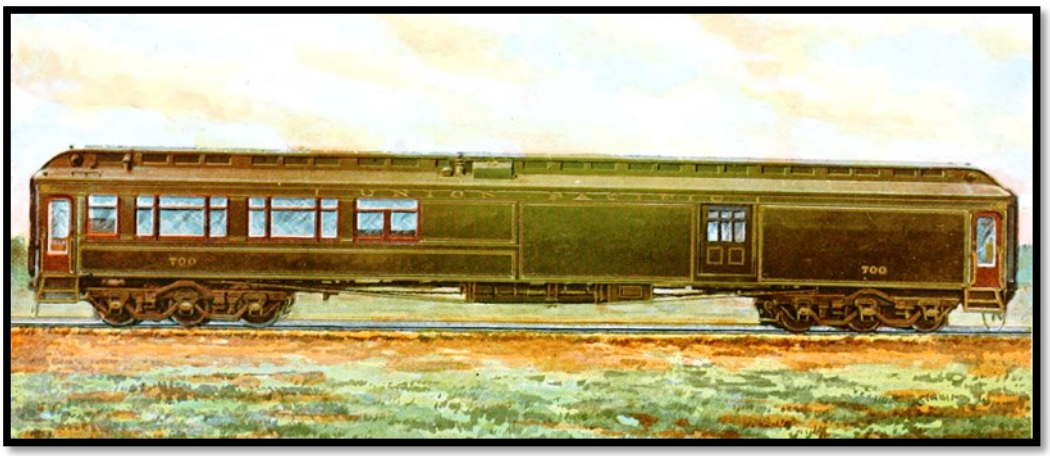
Even the outside of the passenger coaches were good looking in the early days (1896). This is an exterior view of a reclining chair car. Image available for use via public domain.

Here we see the broad vestibules of two adjoining UP passenger cars, a buffet and smoking car and a sleeping car (1896). Image available for use via public domain.

*Even in the 19th century, the UP had luxurious passenger cars as shown in this interior view of the Salt Lake and Chicago **buffet, smoking, and library car**, found in the souvenir booklet from the Overland Limited in 1896. Image available for use via public domain.*

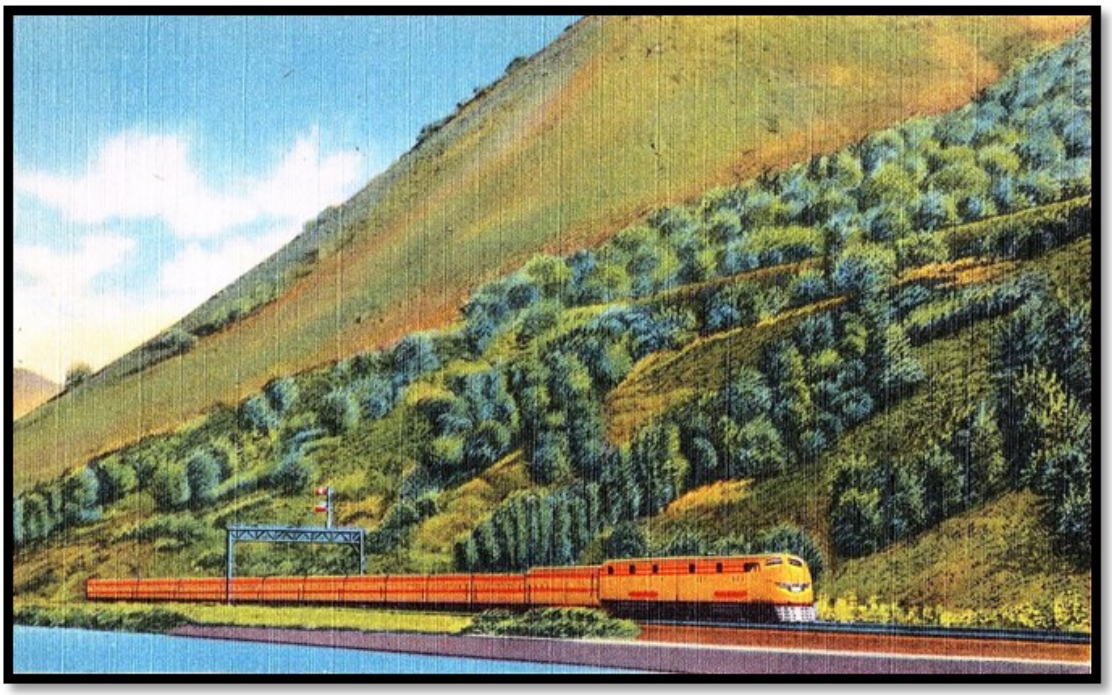
*The baggage compartment of the Salt Lake and Chicago **buffet, smoking, and library car** stands ready for the passengers' bags (1896). Image available for use via public domain.*

*A great profile painting of the Salt Lake and Chicago **buffet, smoking, and library car** found in the Overland Limited's **1896 souvenir** booklet. Image available for use via public domain.*



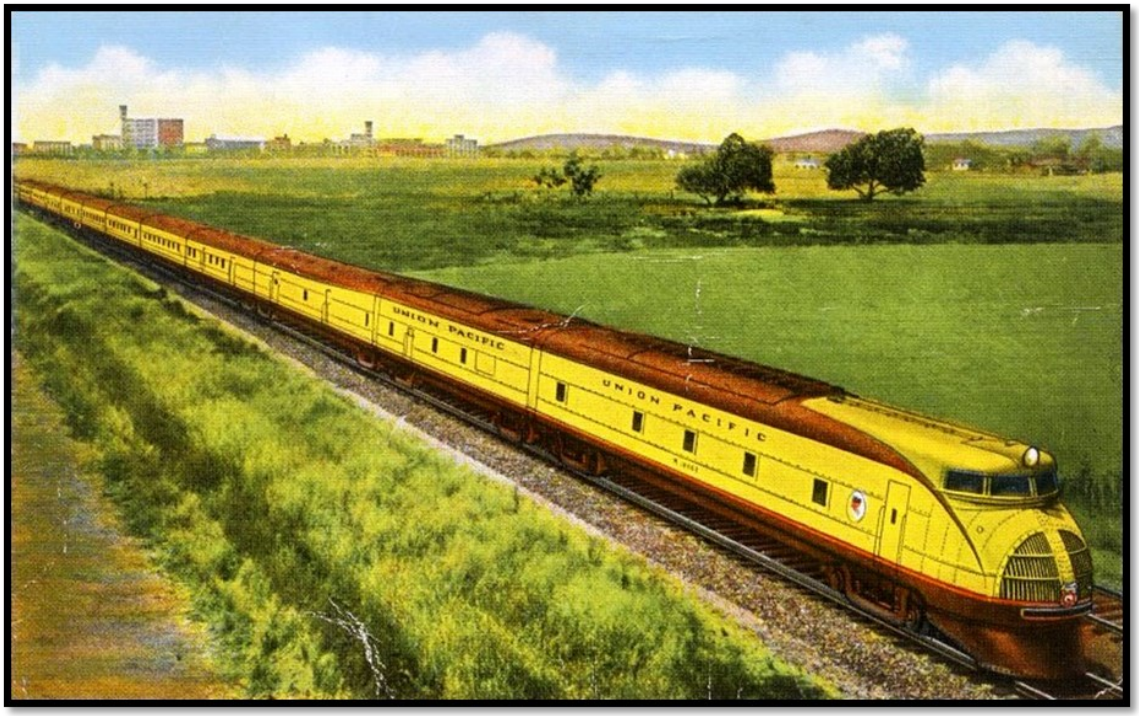
STREAMLINED TRAINS...

A great front-shot of the streamliner City of Los Angeles as it makes a run, in this postcard dated between 1930 and 1945. Image available for use via public domain.



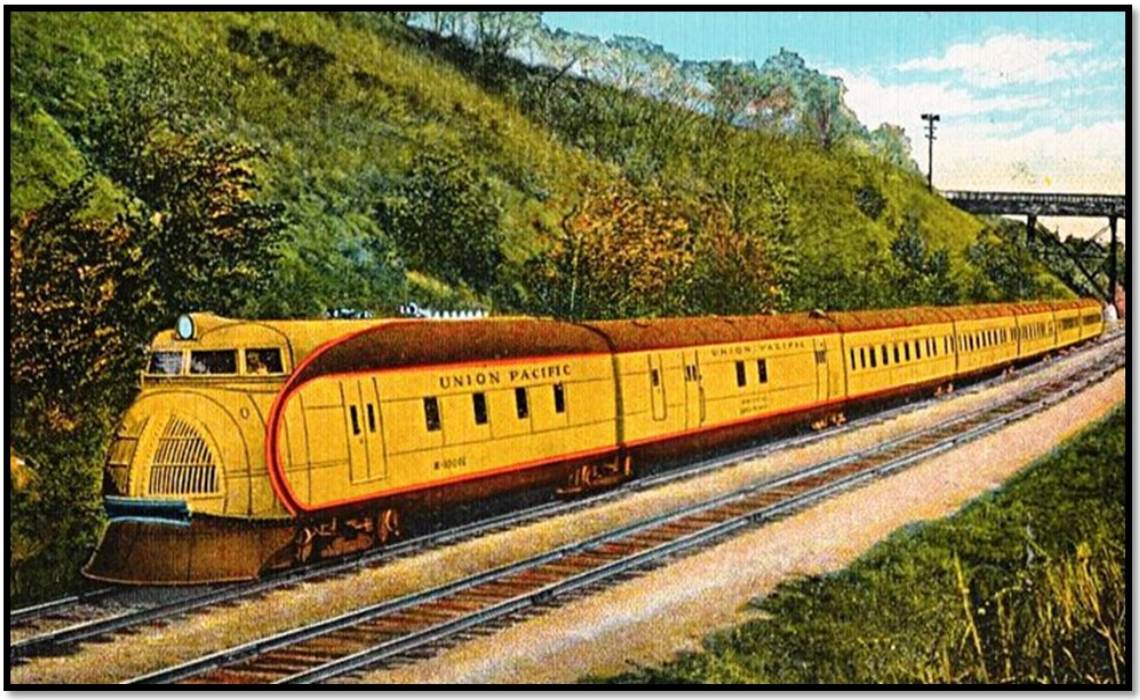
A UP streamliner makes its way through Weber Canyon, UT on this postcard dated between 1930 and 1945. Image available for use via public domain.

...AND COLORFUL POSTCARDS



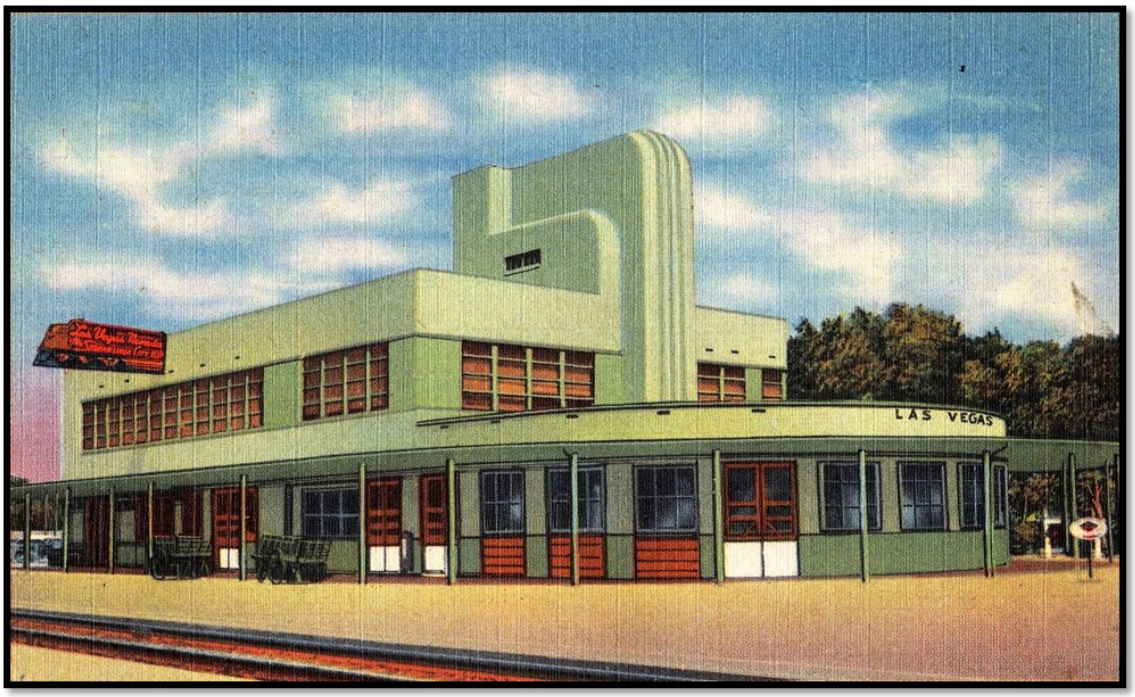
This postcard from 1936 shows the new M-10002 UP streamliner City of Los Angeles as it streaks through the open countryside. Image available for use via public domain.

Using M-10001-series trainsets (and later M-10002 trainsets), Union Pacific's City of Portland passenger train was one of the road's premier trains. This train operated on a 39-hour 45-minute schedule on C&NW and UP tracks. Image available for use via public domain.



Union Pacific Structures and Stations

The Seattle, WA terminals (sometime in the 1930s or 1940s) for the Northern Pacific; Great Northern; Chicago, Milwaukee, St. Paul, & Pacific; and Union Pacific Railroads. Image available for use via public domain.



A postcard depicting Union Pacific's station in Las Vegas, Nevada. Image available for use via public domain.

Right: UP's former [corporate headquarters in Omaha, Nebraska](). UP has since constructed a new building in Downtown Omaha to house its headquarters. Image available for use via public domain.

Below: A view looking west on Fremont Street towards the [UP station in Las Vegas, NV]() as printed on a postcard from sometime between 1930 and 1945. Image available for use via public domain.

The Denver to Cheyenne Local

By Harry M. Haythorn, UPHS

A Passenger Train You Can Model

Figure 1. UP train #52 is southbound to Denver.

Nowadays, we don't think much of jumping into our car and driving 100 miles. However, in the first half of the 20th century that was not the case. Whether it was across the country or from one city to the next, you went by train. Those big beautiful trains were the way to travel.

Union Pacific trains 52 (southbound) and 57 (northbound) were the Denver to Cheyenne locals, and for people traveling between the two cities, it was the best way to travel. You could hop on in the morning and ride down to Greeley or to Denver to visit friends or do some shopping, and then catch the return train that evening and go back to Cheyenne. The total time to cover the 106 miles between the two cities was 2 hours and 45 minutes; the trains left at 8:00 a.m., averaged 38.6 MPH, and made scheduled station stops at Greeley, La Salle, and Brighton before terminating at 10:45 a.m. for the morning trip. They made their return trips starting at 7:00 p.m. and arriving at 10:05 p.m.

Modeling Trains 52 and 57

Many of us want to model at least some kind of passenger service on our layouts, but not everyone has the space to model an 8-car (or longer) train; or, even if you do have the space, all these trains may do is run through and then be gone. However, modeling a short local train makes having passenger service that serves the population of your miniature empire a manageable task.

The equipment used on trains 52 and 57 was identical each day in both directions; in the 1950s the motive power was a P Class Pacific (4-6-2) with 77-inch drivers. There always was a 60-foot 3000 series arched-roof (Harriman) baggage car in the 60-B-1 or 60-DB-1 class, and a rebuilt 500 series heavyweight, 48-seat coach in the P-13-4 class, with an additional coach added on occasion during the holiday rush.

How I Model Trains 52 and 57

I use locos 2905 and 3217 for the P-Class locomotives. Overland Models imported these brass P-77 class lo-

Figure 2. Pacific Class #3217 prepares to pick up its passenger cars before heading north to Cheyenne.

comotives in the 1970s and 80s. They can be found online for reasonable prices, usually under $350 painted, and even less when not painted. They are easily converted to DCC (and even sound if you so choose), and are equipped with can motors and smooth gear boxes.

If you can't find the brass locomotives, a good stand-in is the Mantua Classic 4-6-2 based on the USRA prototype, available in both black and graphite or in the two-tone gray paint schemes. These are available in either DC or DCC and sound configurations.

The 60-DB-1 baggage is #3008, which is an Athearn/Roundhouse arch-roof baggage car (part RND86532); these are long-since sold out but may be available online or at local train shows. Older Harriman baggage cars are available from MDC Roundhouse and can be found for reasonable prices online and at train shows.

My other car will be a 60-B-1; it is a resin kit produced by Southern Car and Foundry (part #1003). Right now, it is in my pile of "projects to be completed."

Other options include brass Harriman baggage cars made by The Coach Yard, Precision Scale, Ken Kidder, and many other importers over the years.

Figure 3. Harriman baggage car #3003 and rebuilt, heavyweight coach #500 make up the southbound train.

The rebuilt heavyweight coach I'm using is by Nickel Plate Products. These coaches also are produced by The Coach Yard.

To see trains 52 and 57 in action at the club layout, check out this video on my YouTube channel.

Adding passenger service to your layout does not have to be a daunting task. Long distance runs, numerous passenger cars and locomotives are not necessary. Passenger service with shorter trains is prototypical: the Union Pacific's Denver to Cheyenne Local is a great example!

About the Author

Harry is a rancher in Nebraska who works with his father and grandfather to help run their 22,000-acre, 1500-head of mother cow, ranch. Harry has been model railroading for over 20 years and models the Union Pacific Steam era from the 1930's to the 1960's, in central and western Nebraska. Harry is a Sustaining Member of the Union Pacific Historical Society and a member of the UPHS Streamliner 100 club. He is a National Model Railroad Association member currently working on his Master Model Railroader Certificate. Harry regularly posts videos on his YouTube page. You can follow Harry as he works on his 7th layout at https://www.youtube.com/channel/UC6-MPHmYU3Cc2uEVfjZDIcQ.

Figure 4. Leaving Cheyenne behind.

We want your YouTube inspired articles!

Contact us at YTMBeMag@gmail.com

A Perspective On Track Planning

By William (Bill) J. Beranek —The Track Planner

Allen McClelland – Ahead of His Time

When reading layout articles in publications like Model Railroader or Model Railroad Craftsman, it is not unusual for the owners to mention how they got into the hobby. The most common response being: "When I was "x" years old, my parents gave me a train set for Christmas."

Whenever I hear that, I always wonder, what kept them interested in the hobby over the years? What other factors influenced them to stay in the hobby? When you're a child, getting a train set for Christmas is a wonderful and memorable experience, but was that experience alone enough to make model railroading a lifetime endeavor?

For me, it wasn't a train set under the Christmas tree. There was no reason to give me one. Why, you ask? While growing up, my older brother (by 11 years) had a medium size HO scale layout in the attic, if I wanted to watch or play with trains, all I had to do was go upstairs. Growing up with a layout in the house probably had some influence, but it wasn't enough to make me want to pursue model railroading as a lifetime endeavor. Back then, it was all about sports (mainly baseball), cars, and eventually girls! Today it's golf, travel and enjoying my retirement.

During the 70s and early 80s, I "dabbled" in model railroading, building a couple of very non-descript layouts. Compared to my brother, I was a dreadful modeler and my interest would wane for extended periods of time. In the mid-80s and all of the 90s, life got in the way, requiring me to spend eighty hours a week running the family business. Obviously, life did not leave me a lot of time for hobbies.

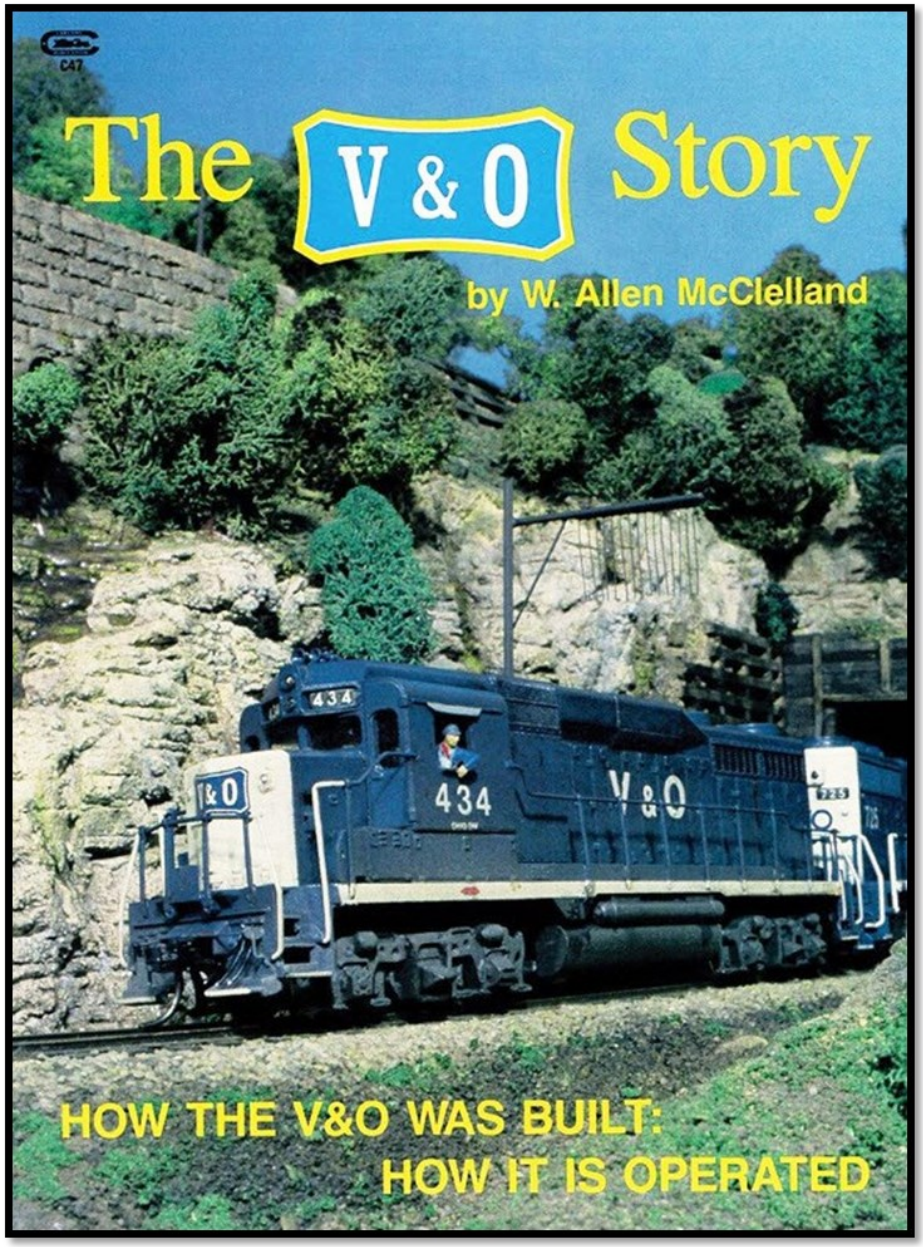
Through magazines (remember back then there was no YouTube), I tried to keep up with what was happening in the model railroad industry. In the late 80s, an event happened that would have a profound impact on my interest in model railroading (it was really four interconnected things: a book, a story, a person, and one truly amazing model railroad), so much so, that today, thirty years later, people pay me to design track plans.

One Amazing Model Railroad

In 1984, Carstens Publications, Inc. (at the time, publishers of Model Railroad Craftsman) published a book called "The V & O Story (How the V & O Was Built: How it is Operated)" by Allen McClelland. The book was the culmination of a series of articles Allen had written for MRC. One day, while standing at the magazine rack of my local hobby store, I was drawn to "the book", mainly because of its cover photo (more on that later). I spent the next few months reading, then re-reading, almost every chapter in the book. What interested me wasn't the author's modeling skills (which were excellent and had been well documented in other publications), it was the "story" that peaked my interest.

Starting on page 6, Jim Boyd (in Chapter 1 of Allen's book), who later went to work for MRC, tells the story of four teenagers in a blue 1951 Plymouth setting off from the

Google+ Hangouts! If you like real time video chat with other model railroaders, watch for these LIVE Hangouts to join. Ask questions, help others with their modeling videos, or just join in live chat and simply "Hangout!"



I was drawn to "The V & O Story (How the V & O Was Built: How it is Operated)" by Allen McClelland, mainly because of its cover photo. Photograph courtesy of White River Productions.

Midwest to get a last look at steam on the Virginian & Ohio RR. As I read the story, I constantly had to keep reminding myself "this story is fictitious!" The V&O is a model railroad, existing in Allen's basement. The combination of storytelling and the accompanying pictures brought the railroad to life. That's it…that's how I got hooked.

As I read, and reread, the V&O story, other things started peaking my interest, even more than Jim Boyd's storytelling. It was Allen's thought process in designing the V&O. Allen treated almost every aspect of the V&O not as a model railroad, but as a real-world transportation system, interconnected to a nationwide rail system. I also noticed Allen very seldom referred to the V&O as a model railroad. I realized it was Allen's thought process that was/is the missing link for most modelers, myself included. I and countless others were trying to build model railroads; Allen had built a transportation system.

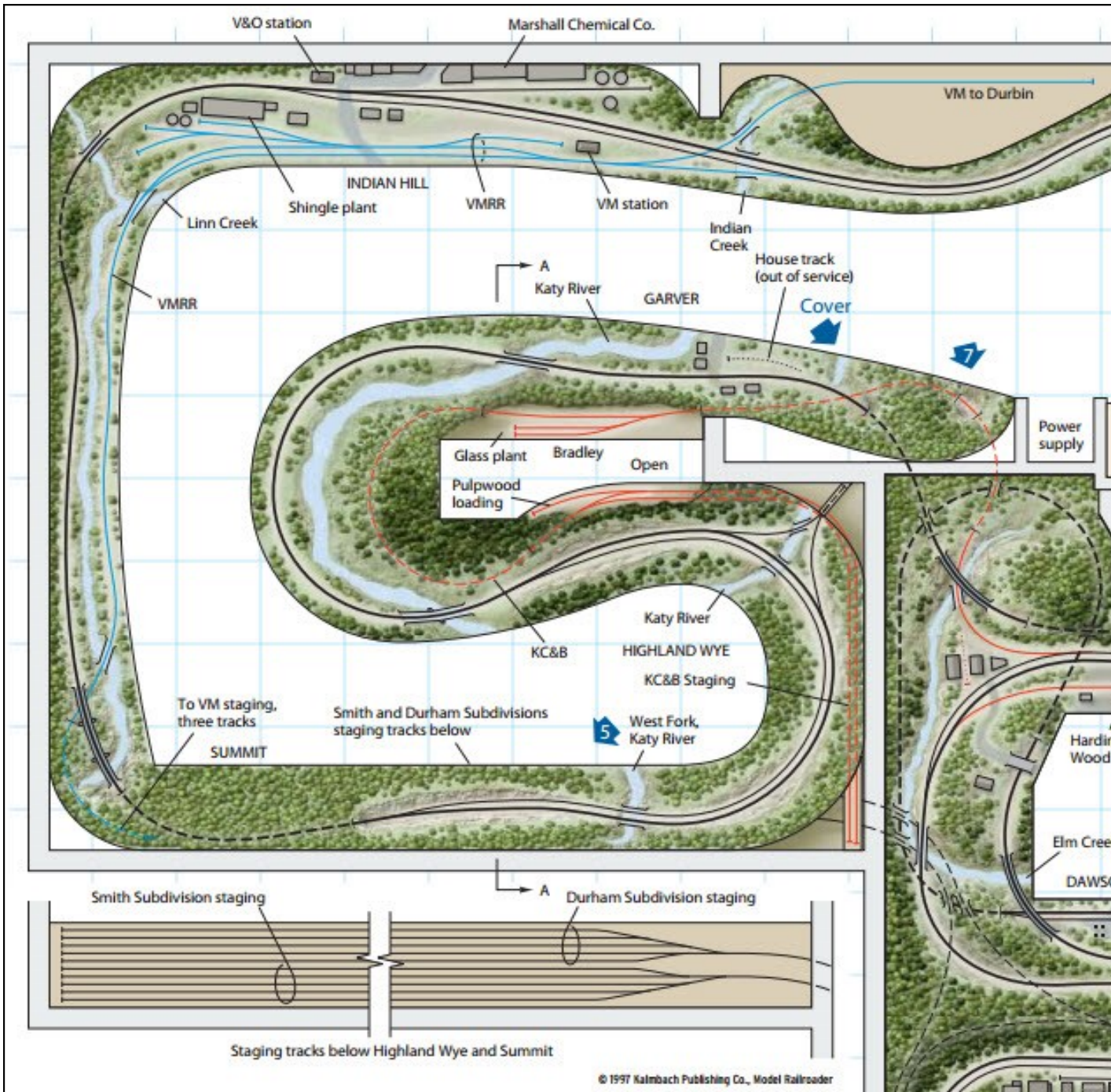
Getting back to the book's cover - the cover had a photograph of a HO scale GP30 on the point of an eastbound freight en route to Clintwood, VA from Dawson Springs, VA. What captured my attention was not the super-detailed GP30; it was the complete scene surrounding the train. You knew the picture was a model, but somehow, the picture looked like it was taken by someone out for a day of rail-fanning. The scene on the cover was totally believable, and at a glance, it could pass as a photo taken of a real train in the real world.

Allen had taken a fictional model railroad, and designed and built it in a way that made you want to believe it was a real railroad. The V&O was a transportation system.

Coal-Hauling Bridge Route

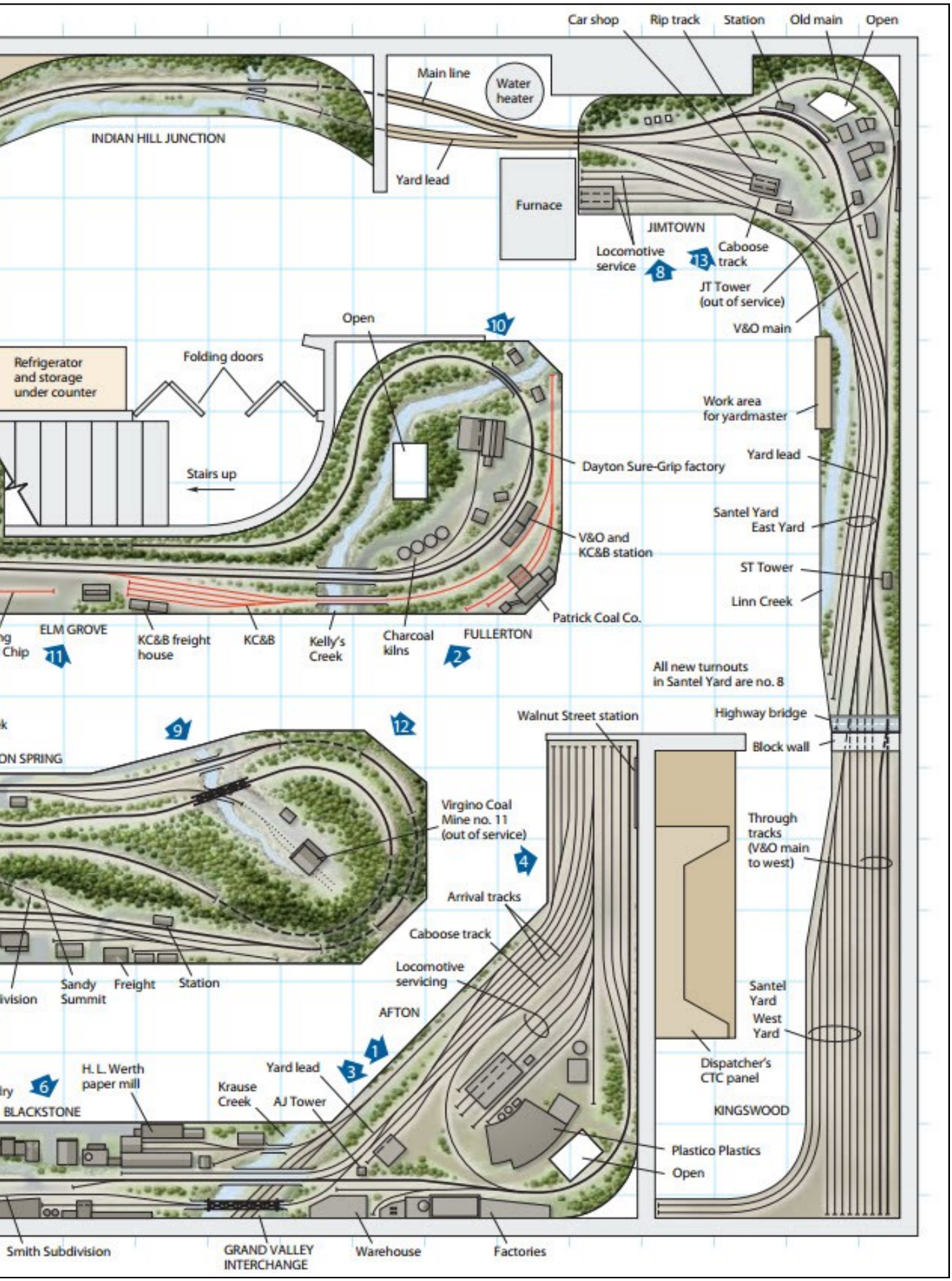
From the beginning, Allen envisioned the V&O as a coal-hauling bridge-route railroad, running from the coal fields of Virginia, northwest through West Virginia, and on into central Ohio. Allen came up with a fictional route; he even imagined thirteen subdivisions along the route, giving each one a name. Then he went about modeling three of them, the Allegheny Sub, the Smith Sub, and the Durham Sub. Collectively, he called the three subdivisions "The Afton Division of the V&O."

As you read chapter after chapter, you have to keep reminding yourself that all of this is not real – everything is fictitious. But, with the way



Allen McClelland's layout encompasses his design concepts, including the "beyond-the-basement" concept, the "selective compression" concept, and the "making operations simple" concept. Allen was one of the early pioneers in the use of staging yards (top right). Staging represented all places beyond the V&O, or as Allen put it, "beyond the basement." Without the multiple staging yards the V&O would never have operated as Allen intended - like a real transportation system. When studying the track plan you will notice how Allen made great use of the "walk-around" (with your train) concept and how simple the layout is to operate.

Track plan courtesy of Model Railroader magazine / www.ModelRailroader.com


Car shop
Rip track
Station
Old main
Open
Main line
Water heater
INDIAN HILL JUNCTION
Yard lead
Furnace
JIMTOWN
Locomotive service
Caboose track
JT Tower (out of service)
V&O main
Open
Refrigerator and storage under counter
Folding doors
Work area for yardmaster
Yard lead
Dayton Sure-Grip factory
Stairs up
Santel Yard East Yard
V&O and KC&B station
ST Tower
Linn Creek
Patrick Coal Co.
ELM GROVE
KC&B freight house
KC&B
Kelly's Creek
Charcoal kilns
FULLERTON
All new turnouts in Santel Yard are no. 8
Walnut Street station
Highway bridge
Block wall
Virgino Coal Mine no. 11 (out of service)
Through tracks (V&O main to west)
Arrival tracks
Caboose track
Locomotive servicing
Sandy Summit
Freight
Station
AFTON
Santel Yard West Yard
Dispatcher's CTC panel
H. L. Werth paper mill
Yard lead
Krause Creek
AJ Tower
BLACKSTONE
KINGSWOOD
Plastico Plastics
Open
Smith Subdivision
GRAND VALLEY INTERCHANGE
Warehouse
Factories

A pair of V&O diesels make their way upgrade across a truss bridge with the town of Dawson Spring below. Photograph courtesy of White River Productions.

Allen was able to describe things, everything was entirely plausible and believable. Everything revolved around making the V&O feel and operate like a real railroad.

Below are five concepts Allen applied to the V&O. There were many others, but these five have stuck with me and have had a major influence on my track planning and design philosophy.

The "Beyond-the-Basement" Concept

To quote Allen, "When I was designing the V&O, the concept of interchange was foremost in my mind, as this was the basis for what I often call the 'beyond-the-basement' concept. If one limits his or her thinking to a model railroad restricted to the confines of its benchwork or room, there is every chance that the overall potential for the enjoyment of that model railroad has been limited as well – perhaps severely or even fatally. A closed system is not truly a railroad, as it cannot be a transportation system – and that is what the actual railroad must be, regardless of physical size."

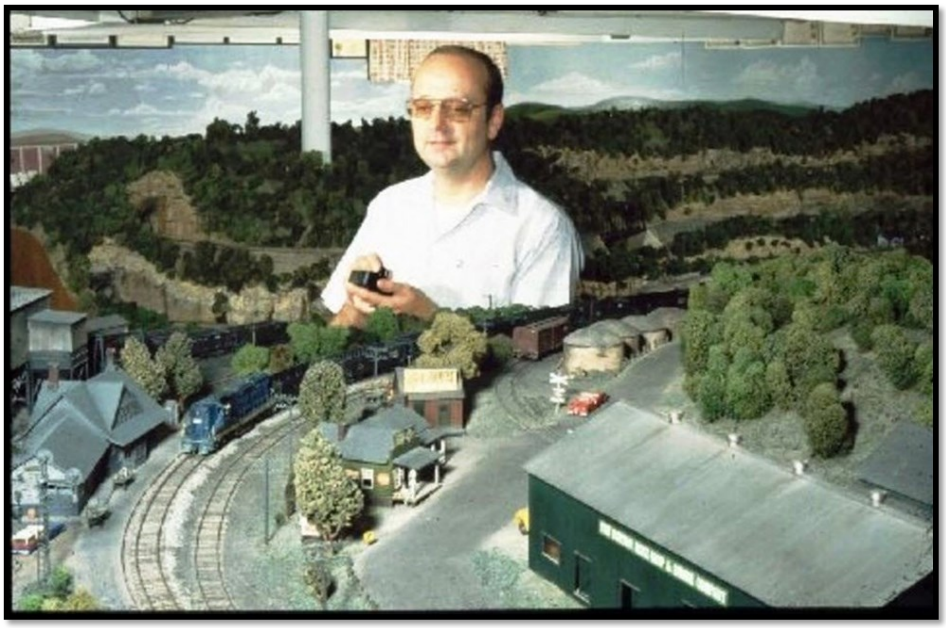
Allen continues, "'The beyond-the-basement' concept was another critical building block for the V&O's final design. If rolling stock does not appear to leave the railroad to go elsewhere in the world, then on a bridge line like the V&O there is no reason-for-being."

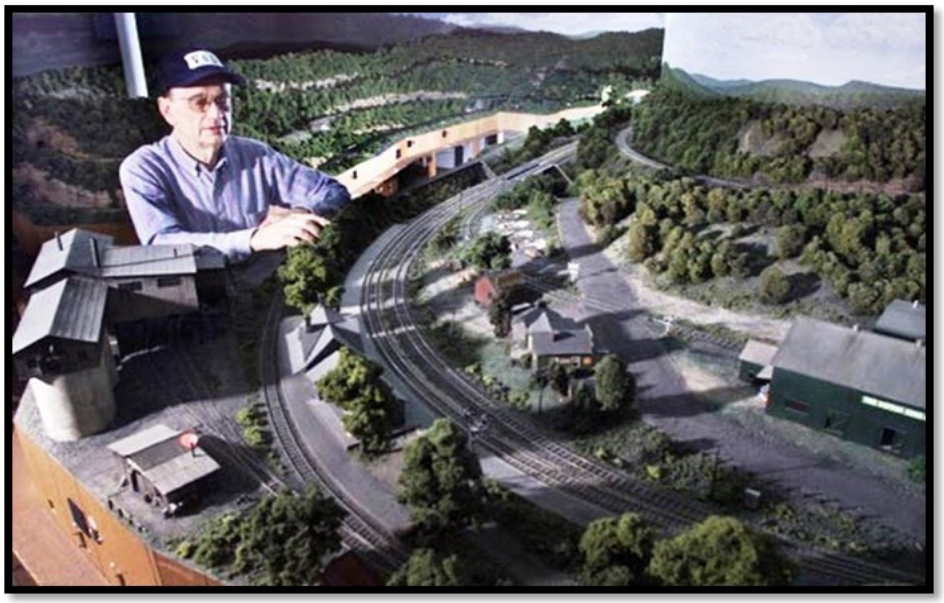
The "beyond-the-basement" axiom has influenced my track planning and design philosophy more than any other single thing. Before starting to build a model railroad of any size or shape, I wish all modelers would think in terms of beyond-the-basement, as Allen described it.

The "Walk-Around" Concept

Allen was one of the early model railroaders to incorporate the "walk-around" concept, which was key to giving operators the feeling of actually going somewhere. Quoting Allen, "I could walk with it (the train) and get the feeling of being where the action was. Trains had to progress from one point on the railroad to another distant point; and this feeling of going somewhere had to be obvious to the train crews. The V&O was a point-to-point railroad, did I

Allen operating a westbound coal drag passing the V&O passenger station at Fullerton. Photograph courtesy of White River Productions.





Allen waiting for the next eastbound freight to come into view and pass through Fullerton. Photograph courtesy of White River Productions.

ever consider including continuous running, no!"

When potential clients fill out the questionnaire on my website, easily 65% to 70% say continuous running is important or very important to them. The V&O was one of the most successful model railroads ever built, and the owner never once considered continuous running!

To make the walk-around concept work, back in the 60s & 70s, when everything ran on DC, Allen had to design his own DC walk-around throttles. This was a major advancement, and was critical to making the walk-around concept work. No longer did operators stand in one place and watch their train navigate the layout. Today, with DCC, this is something modelers never have to think about.

In addition to the walk-around concept, much thought was given to designing the track plan so trains would visibly progress from one point to another. To help reinforce this progression, Allen added numerous small towns, some with only one or two structures. Allen also designed the track plan to be directionally pure. On the V&O, no matter where you were standing, if you were facing the mainline, everything to your right was west and everything to your left was east. If your train was going left-to-right, it was westbound, and if it was going right-to-left, you were traveling eastbound. This also reinforced the "feeling" of distance and of actually going somewhere.

Allen also felt designing a single track mainline railroad, as opposed to a double track mainline, further enhanced the feeling of distance and believability. Today, I have numerous clients who want me to design double track mainline railroads, inside a typical bedroom size area. Unless the client has a very large space or a full size basement, designing and building double mainline railroads is usually a mistake. Very few of my clients have had the space required to make double track mainline railroading believable.

The "Selective Compression" Concept

This is another area where Allen differed from conventional wisdom, and it ties in with his concept of single-track mainline railroading. Today, to most, "selective compression" means redesigning a yard or large industry to fit within a small amount of space. Allen took a different approach. Again, quoting Allen, "I felt that an alternate approach was through the management philosophy of thinking small; I simply chose concepts which were limited in scope."

As an example, the V&O had numerous small industries, most of which used short, single track spurs. Even though Allen had a full-size basement to work with, he kept the industries small, which further enhanced the believability.

Even though the main theme of the layout was an Appalachian, coal-hauling, bridge-route railroad, Allen did not have a large dominate coal mining operation on the layout. There were a couple coal mines designed into the layout, but they were small in scope and size. Again, keeping with Allen's "thinking small" concept.

The "Making Operations Simple" Concept

Having a large, operations-based layout can cause problems for new operators. As a new operator, it is very easy to get overwhelmed by the beauty and complexity of a large layout. Because the V&O was a free-

lanced railroad, using prototypical railroad practices, Allen created a simple but effective way for operators to understand where they were on the layout at any point along the mainline.

As mentioned above, Allen incorporated that left is always east, and right is always west into the layout. Because the V&O was freelanced, Allen was able to name towns anything he wanted. He chose simple, believable names, and then did the unusual thing of placing the towns in alphabetical order. Starting at the east end of the railroad, Allen named the towns Afton, Blackstone, Clintwood, Dawson Spring, Elm Grove, Fullerton, Gage Pass, Highland Wye, Indian Hill, Jimtown, and finally Kingswood Junction.

Some towns were separated by only a few feet, while others were separated by long distances of mainline running. Knowing that the town names were in alphabetical order, operators had a good sense of where they were on the layout and which town was next. This was a simple, but effective way to make operators feel more comfortable.

It has also been said, Allen was quoted as saying "don't over think things. If you need to work out a design problem, take a look at the real railroads, in most cases, they've already done it."

The "Good Enough" Concept

Out of all of Allen's design concepts, the "Good Enough" concept is probably my favorite. Allen realized building a large basement layout would require compromises. In the 1960s, and even today, there are many layouts that feature one or two impressive design elements. It could be finely-detailed, scratch-built wood structures, or maybe highly-detailed rolling stock, or incredibly realistic scenery.

What many of those layouts don't have is "balance". Tony Koester says on page 5 of "The V&O Story" book, that Allen had the ability to know where to draw the line. He further goes on to mention that, "When a train is moving through a scene, the eye follows the action: thus there's no reason spending countless hours adding a lot of detail to all the structures."

On my new layout, I have adopted Allen's "good enough" philosophy. Almost 99% of the structures are "off-the-shelf" plastic kits. When it comes to rolling stock, I've paid under $18.00 for 95% of it, other than a few pieces given to me by friends. My layout, like the V&O, is an operating layout. During op sessions, accidents happen! I never want my operators to have to worry about breaking off some small detail part, nor do I want them to worry about accidentally knocking a car on the floor. If it happens, no big deal, we pick up the pieces, glue them back together and keep operating.

In Closing

What I have described above is but a small portion of the things Allen (and the V&O) taught me about designing track plans and building model railroads.

I firmly believe that if today's modelers would take a week off from watching YouTube videos, sit down, and read and absorb "The V&O Story", they will exponentially increase their modeling skills and, most importantly, increase their enjoyment of this great hobby.

Today's modeler also will gain a greater appreciation for what I call "the visionary design concepts" Allen implemented way back in the "old" days. Those 40 and 50-year-old philosophies and concepts are just as relevant today, maybe even more so. I firmly believe that Allen McClelland and the V&O Railroad were ahead of their time.

About the Author

Bill Beranek - The Track Planner has over forty years in the model railroading hobby. Bill enjoys golfing, travelling, and of course designing "prototypical operations" focused track plans. He has been a member of a local 135+ member model railroad club since 2003 and has served twice as the club's president, twice as a board member, and is currently serving as the club's treasurer.

Bill is currently working on his latest triple-deck HO scale layout depicting the SP&S (Spokane, Portland & Seattle Railway) in southern Washington and the OTL (Oregon Trunk Line) on the upper level in northern Oregon in the mid 50s.

You can find more about Bill—The Track Planner at:

www.thetrackplanner.com.

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Harry M. Haythorn, UPHS #4043

UNION PACIFIC'S "HARRIMAN" STANDARD 24' X 64' DEPOTS

Long before Amtrak, and small concrete shelters of little or no "character" at all, railroads ran their own passenger trains and had depots of all sizes and styles. Union Pacific was no exception. In some places, the depot was the town's most recognizable structure, and the railroads took great care of these lineside buildings to help maintain them, as the depot was the first building people on passenger trains would see. The depot was of great importance for towns all across the country; it was the source of news, supplies, and information.

As the UP built westward, at a rate of about 10 miles per day, these stopping points would become small towns or large cities all along the Overland Route, and depots were constructed so that the community could do business with the railroad. In larger towns, there was usually a separate freight house and passenger depot, but in the small towns dotted along the mainline, the depot was a combination style building that accommodated both freight and passenger service.

The typical design of these types of structures had a passenger waiting area on one end of the building and freight room on the other, with an office and living area for the station agent between the two rooms, with a bay window that afforded a great

Figure 1. Gothenburg Nebraska Common Standard depot, which was moved one mile north of the tracks.

Figure 2. A model of an UP Harriman Standard, 24' x 64' depot.

view of the tracks in both directions.

The Harriman Common Standard

In 1900 when Edward H. Harriman took control of Union Pacific, one of his many influences, was to implement common standards all across the railroad; this included locomotives, rolling stock, bridges, and structures. This was done to take advantage of volume buying and offered standardized parts that could be used across the system.

Structures built between 1900 and 1915 were very similar to each other, with the only variations being in the materials used and locations of windows and doors to better accommodate the agent, customer, or the community. Because of the variations of needs and projected business of the depots, there were four different sizes, all built to the Common Standard: 20' x 40', 20' x 50', 24' x 64', and 24' x 80'. The most common size was 24' x 64', and 80 or so depots of this size were built.

These depots served the railroad for many decades and went through multiple paint schemes: two tone green (Pullman Green), colonial yellow (the most well-known and longest-lived scheme), a rust brown trim with black window frames, and some in two-tone gray to match the two-tone gray passenger equipment and locomotives. Late in the steam era they were painted white with green trim, and many of them served out their lives from the 1960s onward in simple white with black trim.

Modeling a Standard Depot

American Model Builders has made modeling a UP Harriman Standard, 24' x 64' depot fairly easy with their 2 laser-cut wood kits, available from Walthers or directly from American Model Builders. The two kits represent both styles of 24' x 64' depots, with kit #127 (Walthers P/N #152-127), having the station agent bay on the left side, and kit #182 (Walthers P/N #152-182), with the agent bay on the right hand side. The location of the window was relevant to the location on the depot in relation to the tracks, the most prevalent wind direction, and the heaviest train traffic direction.

Let's talk about this kit. Some of you may be saying to yourselves, "I have never built a wooden kit, plus I don't have the tools or the skills to do such a complex building." I will tell you that you are wrong; if you have built a plastic structure kit before and can follow the instructions, you can build this structure. All you need is a bit of glue that is capable of securing wood; it can be CA glue (superglue), white glue, canopy glue, or any other glue that will bond to wood. You will also need a hobby knife with a good, sharp #11 blade and a bit of your favorite paint to match the scheme of the building you are modeling. I used spray paints from my local super store.

These kits are very easy to build and turn into a gorgeous lineside piece. They are all tab-and-slot construction with peel and stick trim, shingles and doors; this makes assembly a breeze and insures a square, highly-detailed structure that will last years and years on your layout.

The most difficult part of construction is the application of the rows of shingles. They are precut and are adhesive-backed, and all you have to do is make sure that they are lined up square and true to the roof edges before you press them down tight.

The structure has all of the rooms divided up just like a 1:1 structure, making it a breeze to add interior details. The roof is one piece once finished and fits nicely onto slots, so no glue is required to secure it to the structure. This makes it easy to remove the roof to show off the inside of the structure.

There are many clever innovations in these kits that make building them a

Tips, Tricks, and Hints for Laser-Cut Wood and Card Stocks Kits

Tools Needed

- A wood-compatible glue, such as superglue (that is, CA glue), wood glue, or white glue. Glue sticks are also useful, as is a clear glue such as canopy cement for securing windows into place.
- An X-ACTO type knife with good, sharp #11 blades; or, you can use single-edge razor blades.
- Micro-brushes or toothpicks to apply glue. Cotton swabs also are useful to help in glue application and removal.
- Low-tack masking tape for holding parts while glue sets up. Clothes pins or similar small spring clamps also are useful.
- A small machinist square to make sure walls are square and true.
- Small sanding blocks or emery boards are useful in filing pieces to fit, as needed. Small nail files may be substituted, and they are available at the big box stores for a few dollars. (Guys: Check with your wife or girlfriend to see if they have any you can use.)
- A steel straight edge or ruler to cut against.
- A self-healing cutting pad/board or – as bare minimum – a thick piece of cardboard to cut on.
- A pin vise and micro-bits to drill holes for details.

Tips and Tricks

- Paint both sides of the wood before removing it from the carrier; this keeps the wood from cracking and warping over time.
- If there are to be decals on the structure, give the structure a gloss coat after its paint has dried overnight; this will keep the moisture required for the decals from getting into the wood, and the gloss coat also will provide a smooth surface onto which the decals can be applied. After the decals are applied, add a layer of gloss-coat or dull-coat, based on the modeled age of the structure and your preference.
- Build all the walls completely before full assembly (this includes glazing, trim, and shades/blinds for the windows). If the roof is not removable, the interior details need to be installed before the roof is secured to the structure.
- Some wood and cardstock models don't have floors, and because of this they can be weak. To address this, glue a piece of 1/16", 1/8", 3/16" or 1/4" square strip-wood to the inner corners of the building to add strength to the walls and also help with alignment of the walls.

Figure 3. The roof lifts off to show off the interior details.

fun endeavor instead of a nightmare, including wainscoting material that is pre-cut against the grain so it doesn't fall apart, windows that come with a white backing paper that can be used to simulate shades, and double-hung, pre-cut, 2-piece window frames that can be used to model windows in open or closed positions without any tedious cutting or any chances of lose a piece.

If you model the Union Pacific from 1900 to the 1970s, you may want to consider one of these amazing kits. They are simple enough for the novice modeler, but they also are complex enough for the more advanced modeler who appreciates the ability to detail and add character to a wooden kit. You'll end up with a depot that looks as though it was built board by board, but it will take you only a few hours instead of months to build.

About the Author

Harry is a rancher in Nebraska who works with his father and grandfather to help run their 22,000-acre, 1500-head of mother cow, ranch. Harry has been model railroading for over 20 years and models the Union Pacific Steam era from the 1930's to the 1960's, in central and western Nebraska. Harry is a Sustaining Member of the Union Pacific Historical Society and a member of the UPHS Streamliner 100 club. He is a National Model Railroad Association member currently working on his Master Model Railroader Certificate. Harry regularly posts videos on his YouTube page. You can follow Harry as he works on his 7th layout at https://www.youtube.com/channel/UC6-MPHmYU3Cc2uEVfjZDIcQ.

Figure 4. Three Streamlined Beauties sit in front of my finished Depot.

Community Collage

In this issue, we feature photographs of a few pieces from Harry M. Haythorn's fleet of 158 locomotives and over 1,000 pieces of rolling stock on his 16' x 20' modular layout that he has been working on since 2007. This is Harry's 7th layout and is based on track arrangements across the Nebraska division of Union Pacific in the mid-1950s. The above pictures include some of his brass pieces from Overland, The Coach Yard, and Alco, along with some scratch-built cars, and some pieces from Athearn Genesis. Harry plans to expand his layout to a size of 25' x 50'.

If you would like to share pictures of your layout in the Community Collage, please contact us at YTMBeMag@gmail.com.

PICK 3

In each issue we share with you three YouTube Model Builders' channels that provide the community interesting ideas, tips, tricks, and resources. Here are three channels that will help you be more creative in your modeling efforts.

Union Pacific

https://www.youtube.com/user/UnionPacificRailroad

If you want to learn more about the Union Pacific Railroad, go to the source! The UP YouTube channel focuses primarily on the many aspects of the railroad today, but you also will find videos on the "UP 4014 Project", regarding the restoration of a classic UP Big Boy steam locomotive. This is a great way to gain prototypical knowledge about the Union Pacific!

Union Pacific Geneva Subdivision

https://www.youtube.com/user/Rochsub

Daryl Kruse uses his YouTube channel to chronicle the work and progress on his N scale Union Pacific Railroad layout, which models the Geneva Subdivision across Northern Illinois. His videos stretch back 8 years and include early construction and even the disassembly/reassembly of the layout when he relocated.

SteamUP

https://www.youtube.com/user/SkipW

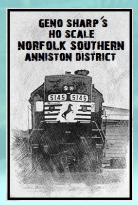
Many folks, it seems, have a fascination with the steam locomotives owned and operated by the Union Pacific. Skip uses his YouTube channel to document his chase after these mighty machines. If you want to see live footage of UP steam locos to get ideas for detailing or weathering, this is a great site!

Into Facebook?
Check out the YouTube Model Railroaders Facebook page!

Geno's Corner

ROOFTOPS

THE WASTED MODELING SPACE



By Geno Sharp

Hi gang, welcome back to the corner. We modelers pour our heart and soul into every scene on our layouts and displays. We take pride in the level of detail and accuracy in our structures, trains and scenery.

Modelers are inspired from a wide range of sources; from taking a walk down the street to scouring the web for photos of the prototype.

From our usual low-angled perspective in the 1:1 world, it's tough to get a detailed view of commercial, industrial and residential rooftops.

Even the Google Machine sometimes struggles to give us images of the specific types of rooftops we're looking for. This lack of prototype images and information shows through in our models. Rooftops are some of the most prominent features on our layouts and displays, yet we seem to forget about them in our models.

More often than not, when it comes to the roof, a little paint and maybe some weathering are all the attention it gets. Rooftops usually end up being wasted modeling space. For the most part, we spend the operating time on our layouts looking down on these roofs. Why not capitalize on this modeling space and make them a focal point? It doesn't have to be a major undertaking. When it comes to detailing, it's usually the smaller steps that have the biggest payoffs.

Figure 1. Photographs of actual building rooftops show just how many details there are that can be modeled.

When you look at prototype rooftops, there are all kinds of items you can recreate on your models. You can see the A/C units, the metal ductwork snaking around the rooftop, and the various vent pipes and stacks. (Please see Figure 1.)

There are several simple steps you can take to add major roof detail to your structures. One quick method is to scribe roll-roofing lines and apply some flat black paint for tar lines. This will make a noticeable difference. To model long-forgotten trash on rooftops, cut up small scraps of paper and scatter them over the roof. Can you see your roof coming together? That's not even the half of it! Trim scrap pieces of wood to create old framing boards or leftover 2 x 4s from a repair job. Scatter cinder blocks, pallets and some old used tires around. Oven and plumbing vents can be easily made from tube styrene and are simple to make, but add a ton of detail. All of these small pieces bring the rooftop to the

Figure 2. An example of a building with very little detail modeled on the rooftop.

highest level and are things that you can make yourself for nearly no cost.

The detailed rooftops stand out from the rest of the rooftops with no details. (Please see Figures 2 and 3.) Even the smallest amount of detail and 30 minutes of effort will make a huge difference.

There are also many rooftop details and kits that are commercially available. You can purchase things from vents, stacks and skylights to further enhance your rooftops. I do my best to make the most of the items I have in my scrap box. I make electrical and junction boxes from styrene. I also use craft wire to make electrical conduit, which I string across the roof area to bring more attention to the rooftop details. (Please see Figure 3.)

Don't rule out creating mini rooftop scenes. Use figures to set up a roof repair scene or sun bathers basking in the heat, or even have the nosey neighbor spy on the building next door. The possibilities are endless. There is no right or wrong way to detail a roof; the more random the better. Anything you create will just add more detail to an often overlooked modeling space.

About the Author

Geno Sharp is a retired law enforcement officer with 21 years of service. Geno has been involved in model railroading for over 30 years and is now a YouTube channel owner. He produces a monthly layout blog video for his YouTube channel, Gknos modeltrains, as well as various "how-to" and structure build videos. Geno is currently working on a new layout, a prototype version of The Norfolk Southern Anniston District - part of the NS Alabama division. His layout features many highly detailed and weathered scenes, and hand-laid track. You can learn more about Geno's weathering techniques and about his Central City Belt Line on his YouTube channel Gknos modeltrains.

Figure 3. Several examples of various details that can be modeled on rooftops. The details include electrical and junction boxes, A/C units and duct work, as well as scraps of wood and other leftover material from construction and repairs.

Rollin' Coal

By Jack Hykaway

Santa Fe, Canadian Pacific, Southern Pacific, The Pennsylvania Railroad, CB&Q, Norfolk and Western, Milwaukee Road … the list goes on. Every railroad company that once polished, or still polishes North American rails is known for something unique. Santa Fe dressed their locomotives in the fantastic "Warbonnet" paint scheme, Canadian Pacific ran the famous Canadian passenger train from coast to coast, SP 4449 once led revenue passenger trains over Southern Pacific rails, GG1s flew up and down the Pennsy's Northeast Corridor, the CB&Q ran the very shiny California Zephyr across the country, N&W 611 once served on the Norfolk and Western network, and Little Joe electric locomotives polished the rails of the Milwaukee Road.

Though most of the companies listed above no longer exist, they still hold a special place in the hearts of fans from all over the world. A fan favorite is, and always will be, the Union Pacific (UP). Thanks to the unique "outside of the box" thinking by UP Executives over the years, the company has become one of the most successful railroads in North America.

UP is probably best known among fans for the unique roster of locomotives it once had. UP did some big thinking and poured millions of dollars into developing locomotives that were the biggest and the best on North American rails. The Big Boys, the DD40s, and the Gas Turbine Locomotives were all unique to UP and all delivered huge power and huge success to the railroad.

The stories behind the oil-fueled Gas Turbines, the Big Boys, and the DD40 locomotives have been shared hundreds of times. Instead of looking at one of those locomotives, I looked for something even more unique to feature in this edition of Jack's Junction.

In the early 1950s, UP was looking for modern power to work alongside its fleet of Big Boy locomotives on fast, long-haul freight trains. Diesel Electric locomotives had just started replacing steam locomotives, but there was no diesel available on the market that rivaled the power or the performance of UP's 4-8-8-4 Big Boys.

UP's "go big or go home" mentality shone through when the road invested in a small fleet of Gas-Turbine Electric Locomotives (GTELs for short) for long-haul freight service. General Electric and ALCO built 55 of these huge locomotives, which were delivered to UP between 1952 and 1961.

The turbine-electric locomotives function much like the conventional diesel electrics we see on the rails today. The turbine, however, didn't use an internal combustion engine to create electricity to drive the traction motors. Instead, the GTEL used a massive turbine, similar to those

Figure 1. An NJCB brass model of number 80 (8080) gives us perspective on the total length of the locomotive. In HO scale, the model is about 32" long! Photo courtesy of Harry M. Haythorn, UPHS. Engine courtesy of Jack Rickett.

found on large commercial aircraft, to generate 6,300 kilowatts (6,300,000 watts) of power to feed the traction motors. We'll go into specifics later – for now, think of a "jet-train".

After years of faithful service to the UP, these gas-guzzling turbines were losing their appeal, then the price of Bunker C oil rose dramatically. UP didn't give up on turbine technology, so the railroad sent its mechanical engineers back to the drawing board.

Figure 2. UP 8080 sitting in Union Pacific's yard at Council Bluffs, IA on October 31st, 1965. Kodachrome by Dick Rumbolz, Chuck Zeiler Collection.

In 1962, the Union Pacific constructed an experimental gas turbine in its Omaha, NE shops. The experimental locomotive ran on pulverized coal instead of Bunker C oil, saving UP money on operating costs. UP had accumulated an impressive supply of coal due to the widespread use of locomotives that burnt petroleum products, and the railroad was glad to use some of their cheap fuel to feed this coal-chomping monster.

This huge locomotive was divided into three sections: the A unit, the B unit, and the tender. The A unit, or control unit, was built using a slightly modified ALCO PA locomotive. The ALCO's 2,000-horsepower diesel engine was kept in the A unit to jumpstart the 5,000-horsepower turbine, which was housed in the massive B unit. The turbine was harvested from a second-generation UP GTEL and sat on a chassis from a Great Northern W-1 electric locomotive. The 101-foot-long B unit also housed the coal combustion equipment, the main generators, and a small diesel engine hooked up to an alternator to provide the electric power necessary to drive the coal processing equipment in the tender. A Challenger steam locomotive's tender was rebuilt and used to contain the locomotive's 61-ton supply of coal and coal-pulverizing equipment. The tender had enough capacity to run the train for about 500 miles, as the turbine consumed approximately 200 pounds of coal per mile. Coupled together, the locomotive set (numbered 80, later changed to 8080), funneled 7,000 horsepower through twelve powered axles and measured 215 feet in length.

Figure 3. UP jet-train of the future? Photo Courtesy of the wig-wag-trains.com Pinterest Page.

No. 80 was a very complex machine. The turbine produced its massive amount of power when compressed air flowed into combustors, where the fuel (pulverized coal), was mixed and ignited. The temperature inside the confined space skyrocketed to 1,450 degrees Fahrenheit before the expanded gases were forced through the locomotive's two-stage turbine. To start the combustion process, diesel fuel was used to get the turbine up and running. The switch to coal combustion was made automatically once the combustion process has commenced.

The pulverization process was one of the most important steps of the combustion process. Medium-sized pieces of coal measuring about 1 by 2 inches were fed through a series of crushers and eventually a pulveriser, until the coal particles were small enough to move freely in the combustion air stream. The crushing and

pulverizing reduced the coal into particles that were so fine that they had the same handling characteristics as a liquid.

There were a few major flaws hidden within Union Pacific's coal-burning turbine, which is why the design never caught on. The biggest problem with No. 80 was that its turbine didn't last very long before it needed to be repaired or replaced. The coal, even though it had been reduced to tiny, tiny particles, was responsible for serious turbine blade erosion and soot buildup within the locomotive. Because the turbine burnt approximately 200 pounds of coal per mile, the blades would erode away quickly, sometimes causing damage to the turbine and resulting in a large maintenance bill.

A second flaw was the tremendous noise produced by the turbine. No. 80 was tested on the mainline between Council Bluffs, IA and Cheyenne, WY, through 500 miles of sparsely populated prairie. Other GTELs ran from Salt Lake City to Los Angeles, but they were quickly taken off that route due to noise complaints.

UP No. 80 was declared a failure on March 15, 1968 when it was struck from the Union Pacific's roster and was scrapped. The massive coal turbine only had about 10,000 miles under its belt, compared to the 1,000,000+ miles that each of the conventional GTELs racked up in about the same time frame.

In the end, all of UP's mighty turbines were retired in favour for more efficient diesel-electric locomotives. Many, however, have been saved from the scrapper and are on display across the United States, where one can get a true sense for their size.

Union Pacific No. 80 Specifications Sheet

Builder	Union Pacific/GE/ALCO
Number of units built	1
A unit power output	2,000 HP
B unit power output	5,000 HP
Total power output	7,000 HP
Tender capacity	61 tons
Length	215 Feet
Maximum speed	65 MPH

For more information on UP's turbines, please visit the following sites:

- Wikipedia: https://en.wikipedia.org/wiki/Union_Pacific_GTELs
- Union Pacific: https://www.up.com/aboutup/special_trains/gas-turbine/index.htm
- Car and Locomotive Cyclopedia: http://www.trainsim.com/vbts/showthread.php?214853-One-Last-Turbine-to-go-The-UP-Coal-Turbine-!-!/page2

About the Author

Jack Hykaway is 17 years old and lives in Winnipeg, Canada. Model railroading and rail-fanning are his favorite hobbies. He spends his free time working on his HO scale layout, or trackside waiting for the next train to roar past. Jack has been in the model railroading hobby since he was seven years old. Like most people, Jack started with an oval of track, and a rugged train set. He built his present layout when he was 11 years old, and he is constantly upgrading it. However, there is still a long ways to go. Climb aboard and follow Jack's progress on the Silver Lake Junction layout on his YouTube channel at https://www.youtube.com/user/WinnipegRailfanner1.

From the Ranch to the Rails

By Harry M. Haythorn, UPHS

Moving livestock on the Union Pacific

In this article, I will cover a piece of Union Pacific history and operations that is near and dear to me: the movement of livestock by train from the western states. We will go through a little history and basic information on the movement of livestock in the US, and after that, I will provide a little modeling information.

Figure 1. A 1950s UP livestock train.

A Little History

Beginning in the 1830s, meat packing began to grow from a local cottage industry to the third largest industry by the 1930s, eclipsed only by the steel and auto industries. After the end of the American Civil War and the signing of the Pacific Railway Act, the floodgates of the meat packing industry opened. Prior to the 1860s there was no practical means of refrigeration, so meat was processed locally. When J.B. Sutherland developed and patented the design of the refrigerated rail car in 1867, the meat packing industry was able to serve both local and nationwide markets. With this invention came the need for centralized packing plants near the areas of livestock production in the western part of the nation. This is where the railroads played a vital role for both producers and consumers.

Figure 2. Cowboys drive a herd of longhorns to the railhead. Image courtesy of Microsoft Clipart.

As eastern populations grew, the farmers and ranchers could not provide enough livestock to keep up with consumer demand, and this is where the railroads in the west became a champion of the industry. The vast, open prairies of the west and southwestern part of the United States provided the perfect location for livestock producers to raise their herds, and the railroads met the demands for a way to ship those herds of animals back east.

Before the railroads of the west had reached the coast, the cattle were driven to the railhead and shipped east. Between 1867 and 1872, more than 3 million head of longhorn cat-

Figure 3. Map of the cattle trails.
Image courtesy of Microsoft Clipart.

tle were shipped from Abilene, Kansas at the head of the Chisholm Trail. The cattle were shipped on the Kansas Pacific Railroad, which later became part of the Union Pacific to points east, and so began the relationship between the American rancher and Union Pacific Railroad. As the UP built westward through Nebraska, the cattle drives came to the wild west town of Ogallala, NE, to where my great, great, great, grandfather Haythorn drove cattle four times and stayed on his fourth drive in 1880 and established the beginnings of my family's ranch in 1884.

By the 1860s, Chicago had become the largest rail center in the world and, in turn, became home to one of the largest stockyards in the world. The Chicago Union Stockyards processed 1.5 million head of livestock in its first year, and by the 1870s it was handling more than 2 million head per year. Packing companies began to establish plants next to union stockyards.

By 1900, the five biggest meatpacking states were Illinois, Kansas, Nebraska, Indiana and Missouri. The five biggest packing companies were Swift, Armour (one of Union Pacific's biggest shippers and the source of the color named Armour Yellow), Nelson Morris, Cudahy, and Wilson; together, they controlled 2/3 of the fresh beef market and 1/2 of the pork market, so they required huge numbers of cattle and hogs on a daily basis. The railroads were more than happy to provide the means to move those animals from producer to packer. The Omaha Union Stockyards was home to every one of these packers and was the largest stockyard in the world, actually selling and shipping more livestock than Chicago.

During the Early part of the 20th century, the traffic patterns of livestock were established: the livestock raised in the west was sold and shipped by rail from small towns to large cities, where it was processed and packaged for the consumer. The peak of livestock traffic was in the mid-1920s with the highest volumes of more than 1.5 million carloads in 1925.

The shipment of livestock was big business for the railroads, with both long and short distance hauls being common. The railroads established

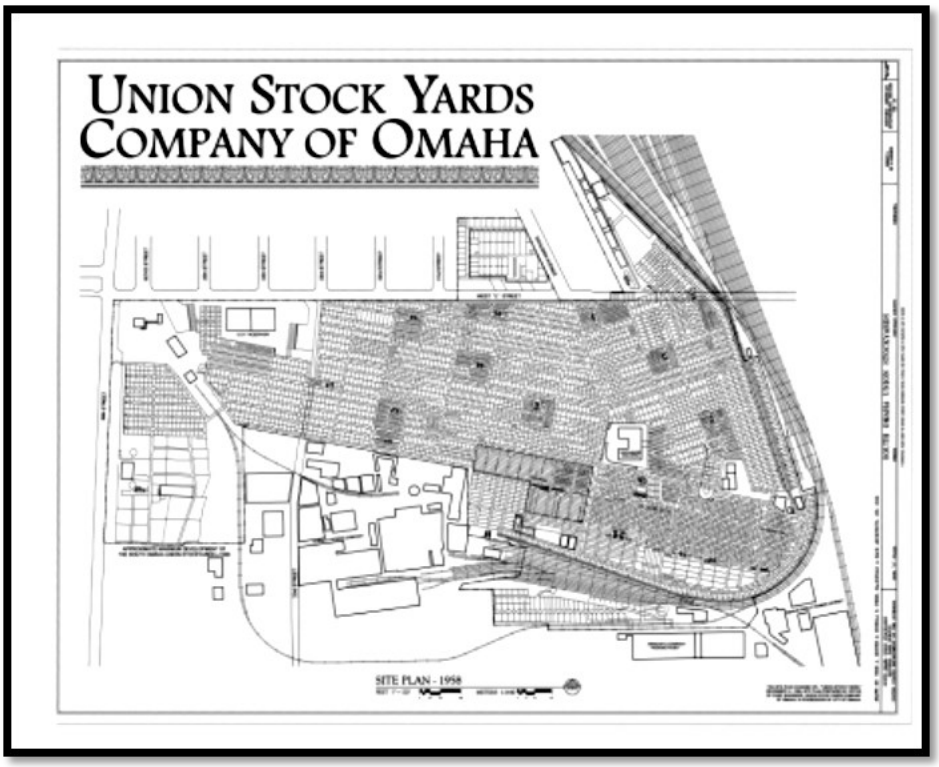


Figure 4. A map of the Omaha stockyards. Image courtesy of Microsoft Clipart.

and maintained all sorts of livestock handling structures along the right of way. These facilities allowed the trainloads of animals to be unloaded, fed, and watered in accordance with the 28-hour law that required the animals a rest period. In addition to the stock pens, they also maintained scales to weigh the animals, feed storage areas, and – of course – fresh water supplies, also.

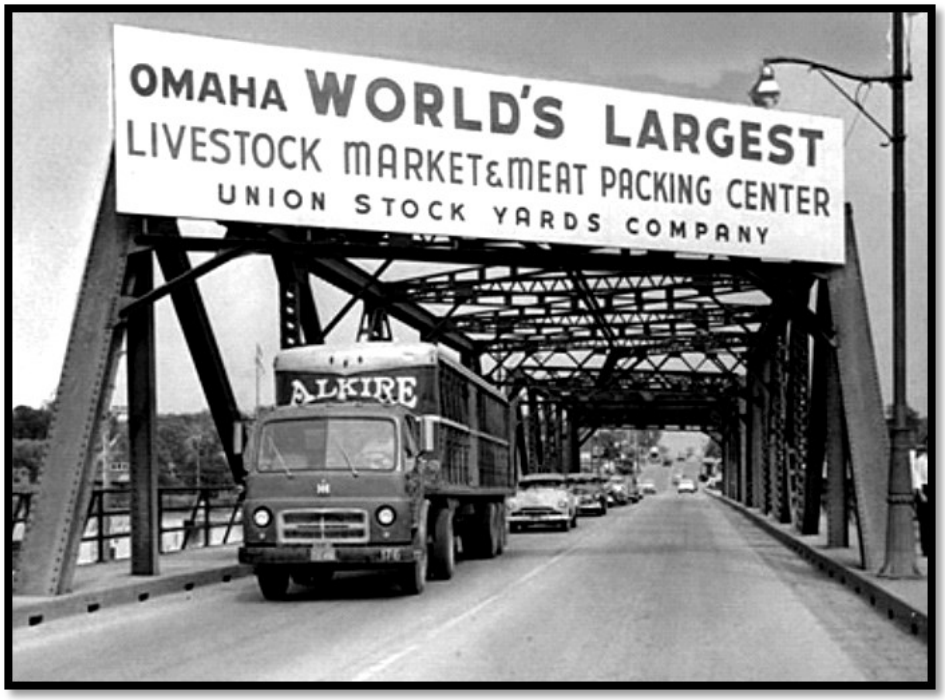
With improvements to the highways and byways in the 1940s through the 1960s and the growth of trucking, the railroads started to see a loss of livestock revenue and traffic to these trucks. These improvements signaled the beginning of the end for shipping livestock by railroad. Most railroads stopped shipping livestock around 1971, when the Chicago Union Stock yards closed, with Union Pacific being the exception. Union Pacific continued to ship hogs for Farmer John/Jimmy Dean from Omaha to plants in California until the early 1990s.

Modeling a Union Pacific Stock Special in the 1950s

As a UP steam era modeler, I have a huge fleet of both stock cars and meatpacking company reefers. The use of that equipment is one of my favorite modeling adventures, and I will walk you through the use of some of that equipment. In the time period that I model, trains of livestock were very common on the Union Pacific, especially in the spring and fall as producers moved cattle. The Union Pacific moved a lot of livestock from the west in the 1950s and they would run livestock specials to get the empty stock cars to the producers in the west and then get the loaded cars moved east in a timely manner.

The HO equipment I use includes

Figure 5. Omaha surpasses Chicago as the world's largest stockyards! Image courtesy of Microsoft Clipart.



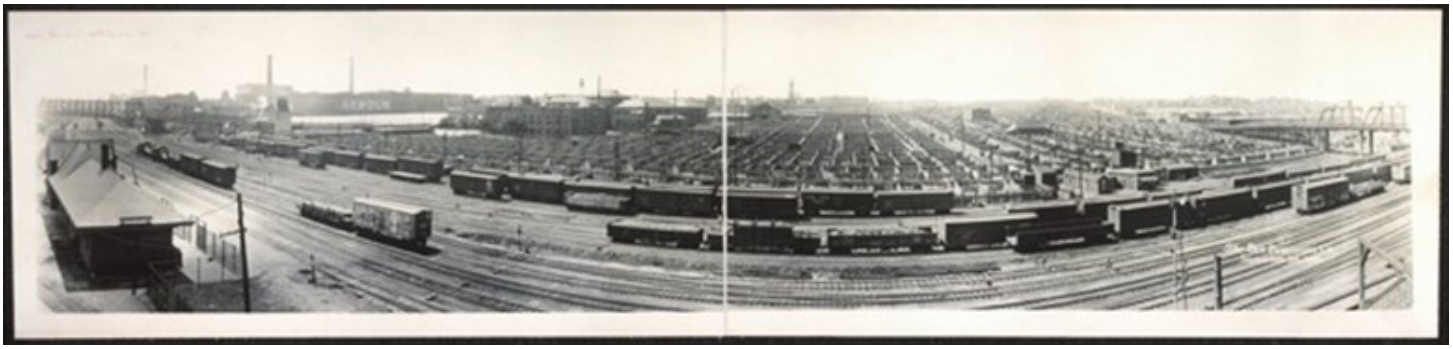


Figure 6. The Omaha Stockyards. Image courtesy of Microsoft Clipart.

stock cars from many manufacturers, including Athearn's S-40-12, MDC Roundhouse older truss rod style cars, a Non Common Standard (N.C.S.) drover (cowboy) caboose, the UP Historical Society's S-40-6 double deck cars, Walthers/Life-Like Proto 2000 Mather stock cars, Broadway Limited Imports K7 sound car (not a UP-based prototype), and even a few resin cars from Westerfield, including a drover caboose and a Harriman Standard drover coach kit-bashed using a Model Power Harriman Coach. Structures that are used include stockyards and Union Packing from Walthers. I also have a Swift packing house from Alpine Models, among others.

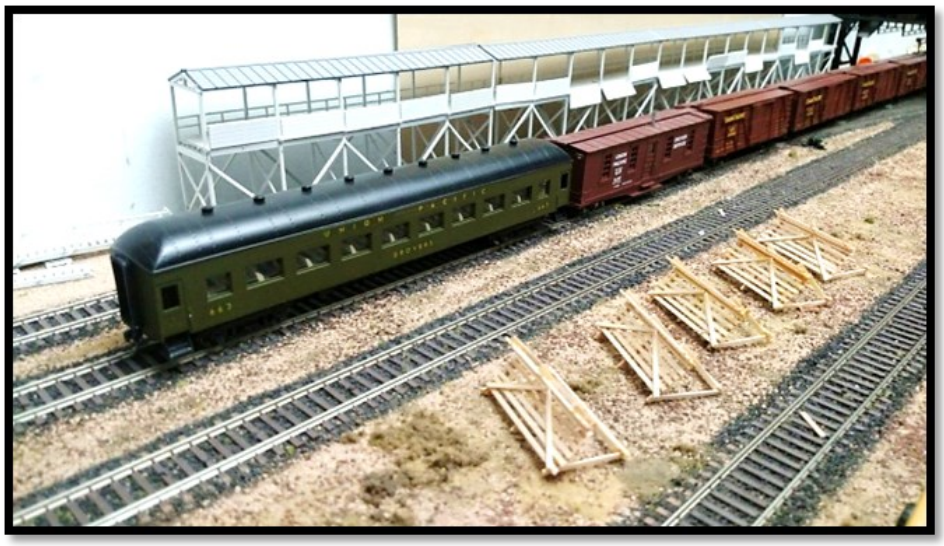


Figure 7. The Drover coach and caboose with a few S-40-6 cars.

Let's Move Some Cattle.

It is fall in the 1950s, and there is a chill in the air as you walk from the crew shack to your charge for the day: loco #2485, a USRA-design MacArthur (UP called its 2-8-2s "MacArthur" instead of Mikado in honor of General Douglas MacArthur). You have been called for a livestock special that will need to be worked and then brought to North Platte so that the stock cars can go on east to Omaha. You will take 12 livestock cars, a drover caboose and drover coach to haul the ranchers and cowboys, and of course a caboose will bring up the markers. The 12 livestock cars are S-40-6 class 36' cars that will hold about 50 head of 400-pound cattle per car, or about 600 head of cattle total.

Figure 8. A few yellow S-40-12s wait for their next load.

As you wait for the highball signal, you think about the task you have ahead of you for the day; you will run out about 40 miles to Lemoyne, Nebraska and load calves from the Haythorn Ranches in Keith and Arthur counties. You leave North

Figure 9. Two cowboys work a few cows and rope a calf in the Swift stockyard.

Platte at 7:20 a.m., and you will arrive at Lemoyne right around 8:30 a.m. to begin loading the cattle at 9:00 a.m. sharp. With no place to turn the locomotive, you run in reverse with the drover coach and drover caboose coupled to the pilot, the stock cars trailing behind them, and the CA-1 bringing up the rear.

The stockyard at Lemoyne has 3 loading chutes, so it will require 4 moves of the cars to get them positioned so that the cowboys can load the cars. This will take a few hours to complete before you can run around the train, pull the caboose onto the main, hook back up to the stock cars to pull them out and couple back onto the caboose, and then head back east towards North Platte. From there, the cars will be part of the next freight headed to the Omaha Union Stockyards, where the calves will be sold. Now that the cars are loaded, the clock begins to tick away the seconds, minutes and hours for the cattle, because they only have 28 hours before they have to be offloaded and rested; now, these cattle should make it to Omaha by midnight, but there were many instances in which the stock had to be unloaded.

This exact process was repeated all over the system and the UP put great importance in shipping livestock, so any train carrying livestock had priority over all but passenger trains. Livestock was a prized commodity on the railroad, and as such it was always treated with the utmost care and respect; it was handled at the front of train when practical, and the train crews always paid attention when handling their locomotives to minimize slack action.

I hope you have enjoyed this article in this special Union Pacific edition of the YouTube Model Builders eMag. For a more in-depth look at the livestock and meat packing industries there are entire books covering the subject, more so than could be covered in the eMag in years. To see how I simulate livestock operations, here are three videos to view on my YouTube channel:

https://youtu.be/VxONTdhZYnU

https://youtu.be/_zN8F2NA7fE

https://youtu.be/7ogaquJMw-M

About the Author

Harry is a rancher in Nebraska who works with his father and grandfather to help run their 22,000-acre, 1500-head of mother cow, ranch. Harry has been model railroading for over 20 years and models the Union Pacific Steam era from the 1930's to the 1960's, in central and western Nebraska. Harry is a Sustaining Member of the Union Pacific Historical Society and a member of the UPHS Streamliner 100 club. He is a National Model Railroad Association member currently working on his Master Model Railroader Certificate. Harry regularly posts videos on his YouTube page. You can follow Harry as he works on his 7th layout at https://www.youtube.com/channel/UC6-MPHmYU3Cc2uEVfjZDIcQ.

Building A Display Case For Your Locomotives

By Darrell Medley

A vacation trip to San Diego, in 2010, reignited my love for trains with a visit to the model railroad museum in Balboa Park. Since that time, I have been working on my second layout and have collected quite a few locomotives. One day, while in the "Train Room" – as it is called by my wife and kids – I looked at my layout and noticed that I had quite a few cars and locos sitting on the tracks. I didn't want to keep taking trains out of their boxes, but I also didn't want them sitting on the layout collecting dust. It was at that moment I decided to try my hand at building my own display case for my locomotives and cars. This would give me a place to keep them free from dust and provide me easy access when I wanted to use them.

Figure 1. Picture of "1 x "3 shelves in the case. The narrow width adds a sense of depth to the case. The smaller width leaves options for later, such as adding LED light strips to the sides to light the case.

I did some research to see what type of case I wanted to build. I saw quite a few cases online and finally settled on my idea. I decided not to do something too big the first time out, so I settled on a case that was 48" X 24" (inside dimensions). Once I had my dimensions, I had to decide what dimensional lumber I wanted to use. I settled on using 1 X 4s for the frame of the case, 1 X 3s for the case shelves, and 1/2" plywood for the back. Select pine was my wood of choice. Since the door of the case was to swing upward, I wanted something light; so I chose to use Plexiglas for the door insert.

First, I sketched my design to make sure all of my measurements were correct. I decided to miter the corners so all sides would fit at a 45-degree angle; mitered corners give a more professional look to a project. I decided to use 1 X 3s for my shelves for a couple of reasons: first, if I used 1 X 4s there would be a lot of empty space on the shelves because the trains are not that wide; second, I feel that the 1 X 3s provide a better look, providing a sense of depth to the display case, as shown in Figure 1.

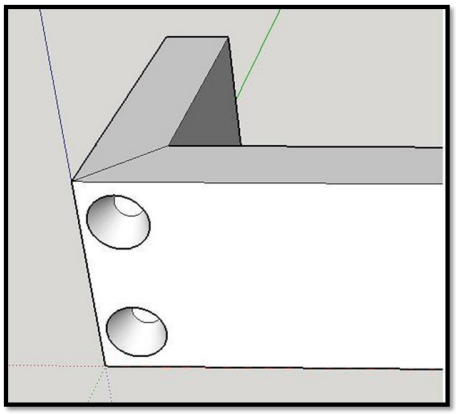


Figure 2. Countersink holes for each corner of the case. Holes were 1/8"-1/4" deep, and were filled with wood putty and sanded once the screws were in place, for a clean look.

I started by working on the case frame. First, I cut the long sides to their outside length (49 1/2") and then cut the short sides to their outside length (25 1/2"). After mitering the corners of all four pieces, I used a ratcheting strap to test fit and hold them all together. Once I determined that all of my pieces were square and joined well at the corners, I started at one corner and made two countersink holes on the short side for the screws that would hold together the case, as shown in Figure 2.

I made the countersinks about 1/8" to 1/4" deep. After securing one side, I moved counter-clockwise and secured each corner, taking time to make sure each corner was square and my joints were tight.

After I completed the frame, I measured for the size of the case back; the reason I waited to make the back piece was to allow some flexibility in case my actual measurements differed from my drawing. Now that everything was checked, I cut the back piece from 1/2" plywood to a size of 49 1/2" X 25 1/2" and then attached the back to the frame. At this point, I filled my screw holes with wood putty to conceal the screws, since I would not be taking the case apart. Once I finished the frame, I used 3M spray adhesive to line the inside of the case with felt, and set the case aside for the putty and glue to dry overnight.

Now that the case was done, I cut the inside shelves to 48". After I cut the shelves, I had to go back and shave about 1/16" off of their lengths to account for the felt that I had used to line the inside. I also cut 2 pieces of 1 x 4s to 4 1/4" to measure the space between the shelves as they were installed. I attached the shelves with Brad nails. With the case completed and lined with felt, and the shelves cut and inserted, I now moved on to working on the door.

For the door, I cut two 1 X 3 pieces; one piece was 49 1/2" and the other piece was 25 1/2". After cutting the two pieces, I ripped both pieces along their lengths to create four pieces that were 1 1/8" wide. Now that I had the four pieces for the door frame, I used the table saw to cut a 1/2" groove, centered along the inside edge of each piece (as shown

Materials List

- 2 – 1" x 4" x 8'
- 5 – 1" x 3" x 8'
- 24" x 48" Plexiglas
- Felt
- Spray Adhesive (Such as 3M Brand)
- 1 1/4" screws
- Wood Glue or Construction Adhesive (Such as Liquid Nails Brand)
- Piano Hinge
- Stain (For Example, Cherry Stain)
- Polyurethane Finish

Figure 3. A 1/2" groove was milled into each door frame piece. The groove was cut first and then the ends were mitered to 45 degrees. The half-inch groove gives enough room to allow for expansion and contraction of the wood.

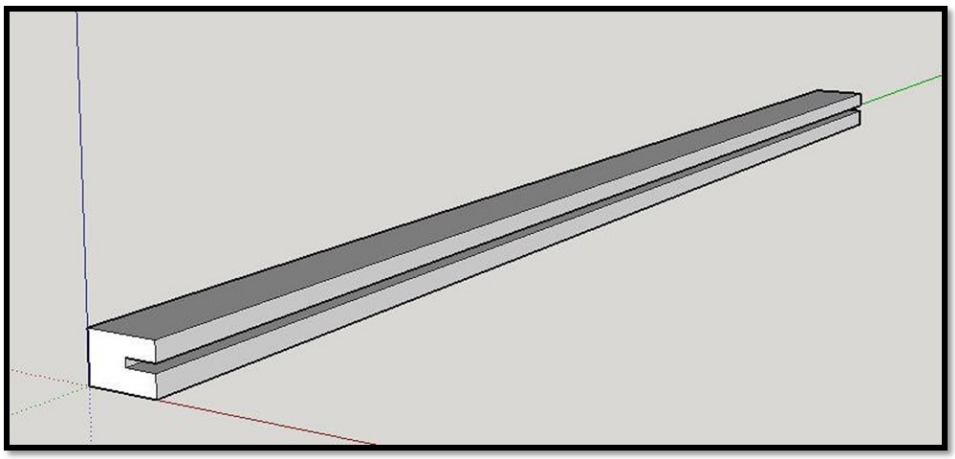


Figure 4. A piano hinge is used to connect the case to the door along the top edge.

in Figure 3), to insert the Plexiglas. After cutting the grooves, I mitered all four pieces and made sure they mated properly. (I made sure to cut my groove before I mitered the four pieces.)

Once the case was dry and the shelves and door frame pieces were cut, I took a 220-grit sanding block and began lightly sanding the outside of the case, the shelves, and the door frame pieces. I used pine, a hard wood, so I wanted to roughen up the surface a little so the stain would take better. After sanding everything, I took a rag and wiped off all the dust and residue so that I could stain everything.

I applied stain and polyurethane to all the wood surfaces, just following the product label and allowing everything to dry as directed. I installed a piano hinge on the top of the case; its length and numerous screws provided the support needed for the door. Before I placed the shelves in the box, I located and drilled holes for attaching the case to the wall, and I made sure those holes would not be blocked by the shelves. I then assembled the door frame with the Plexiglas, making sure all corners were square, and secured the corners with brad nails. I had some scrap pieces of Plexiglas that I cut into four small pieces to use as spacers between the case and the door and then secured the door to the piano hinge, as seen in Figure 4.

Now the display case was ready to be attached to the wall. (See Figure 5 and Figure 6.)

Here are a few tips I learned along the way:

1. When adding the felt, either cut all of the pieces at once, spray the entire inside with glue, and attach each piece of felt; or cut and spray each piece of felt with glue and attach them one-by-one.

2. Drill your mounting holes before adding the felt liner, and then

Figure 5. The completed case, mounted on the wall and containing some of my collection.

Figure 6. The Display case with the door propped open.

locate the holes on the felt with a marker. After that, use a hot soldering iron to poke holes in the felt. This will give the hole in the felt a clean edge. Do not try and drill your holes through the felt; the felt will bind and pull apart.

3. Cut all of your shelf pieces a little long at first, then trim each piece as needed.

4. You could use pocket holes on the inside of your case frame instead of screws on the outside of the case.

5. If I ever build another case, I think I will use a "Tongue and Groove" joint for the door. The miter joints are ok but they do not add much in the form of stability. There is not enough surface area for screws, and nails are too small to use as stably. Also, there is still minimal surface for wood glue to be used as well.

Although this was my first build of a display case, I thought it turned out very well!

About the Author

Darrell always has loved trains, even as a kid growing up. Like many model railroaders, he had that first battery-operated steam engine that ran in a big oval. He got heavily involved in the hobby in 2010 after visiting the Model Railroad Museum in San Diego. Since Darrell resides in Virginia, he models mostly Norfolk Southern, but also models BNSF as well. His current layout is freelanced and includes the following industries: a plastic bottle manufacturer, a corn syrup transloading facility, a grain elevator, an intermodal terminal, an LP gas facility, and a lumber distributor. When he is not working on his layout, Darrell enjoys woodworking, golfing, and being outdoors.

You can check out Darrell's posts on his Google+ page by clicking here.

Google+ Hangouts And Etiquette

Dude Lindler

YouTube Model Builders works very hard to bring YouTube model railroaders together in what is called Google+ Hangouts. Google+ has many free resources for us to use and we look forward to taking full advantage of these resources.

What is Google+ Hangouts? It's an application that runs through a web browser that allows up to 10 people to connect with webcams. Using this forum for model railroading discussions is great! It builds friendships, inspiration for model railroad building, and most of all, a great place to air your designs, models, and share in your building adventures with others in real-time. Many of the YouTube video producers you know "Hangout" in these Google+ Hangouts.

Many builders simply place their webcam on their project they are working on and show others what they are doing; it may be they are building a model, laying track, or working on anything model railroad related. Many look for feedback from the group, get questions answered, and elaboration on the many projects on which they are working. It's simply a great place to interact in real-time with other YouTube model railroaders.

These Google+ Hangouts are posted most every day on the Google+ YouTube Model Railroaders Community page. You are not required to use a webcam or even a microphone; you may only use the provided chat box if desired.

With the utilization of Google+ Hangouts by many model railroaders, YouTube Model Builders is now scheduling specific types of events for the community members. Here are the Google+ Hangouts that we have arranged to help bring more model railroaders together.

Topic Driven, Tuesday Night Hangout Presentations:

YouTube Model Builders invites specific guests to explain techniques in model building, and many times these individuals are invited to our topic driven hangouts based on videos they have produced. Showing the progress real time, the topic driven hangouts are moderated by YouTube Model Builders staff which keeps these hangouts on subject and informative. The Topic Driven Hangouts are much like clinics as they are more so for instruction and techniques shared by a presenting individual or individuals.

We have two specific topic-driven hangout presentations. The first topic-driven

hangout presentation is The Geno Show, which is hosted by Geno Sharp of Gknos Model Trains. Geno's monthly Tuesday night show is all about structures, weathering, scenery, and more. The show includes guests such as Miles Hale and Bill Beranek (The Track Planner).

The second topic-driven hangout presentation is the Barry and Mike MRR Tech Show which is moderated by Barry Rosier and Mike Dettinger. This monthly Tuesday night show focuses on the more technical aspects of model railroading such as DCC controls and JMRI. There are plenty of opportunities to learn from many experts in model railroading through these hangout presentations and shows. So come and join in the Hangouts!

General Moderated Hangouts: Thursday Nights

Where many hangouts posted through the Google+ YouTube Model Railroaders encompass many subjects and often have many people showing their layouts, and discussion varies from model railroading to just general conversation, YouTube Model Builders has a weekly scheduled, Thursday night, general moderated hangout, to specifically keep on the subject of model railroading. The Thursday night hangout is moderated by Johnny of Southeast Rails and the topic selection is really driven by community feedback.

YouTube Model Builders as a team helps drive these Hangouts, to spread the word, and get the YouTube Model Railroaders involved. Many people participate and as these numbers have grown, a simple etiquette is followed for the hangouts posted on YouTube Model Railroad resources.

Below is a simple guideline for participating in any YouTube Model Builders hangout event:

- Always keep the conversation G Rated.
- Refrain from political/religion based conversations.
- When not speaking, mute your microphone.
- Keep the hangout fun and on model railroading subjects.
- Remember, you're in a room with others, try not to monopolize speaking time. Allow others to get in their input.
- If you have your camera on, please be presentable – remember others can see you!

Following these simple etiquettes will make hangouts fun, and most of all, suitable for anyone who might want to join! We hope to meet you in a hangout in the near future if you don't already participate! If you have any questions on this subject, feel free to ask any one of the involved YouTube Model Railroaders to help get you into the fun sharing in the Google+ Hangouts.

Food For Thought...

Is Prototype Modeling For You?

By Andy Crawford

Is prototype modeling for you? There seems to be a great divide appearing amongst model railroad sects: to proto or not to proto.

First, I would like to suggest that this "great divide" that many modelers would believe simply doesn't exist. Even the most dedicated prototype modelers are still some distance away from true recreation of a prototype railroad or location. This is because it is simply not possible to scale 1:1 to some other smaller multiple. Gravity, friction, kinetic energy, etc., do not change from scale-to-scale. We also have to fit our layouts or dioramas into some concentrated space, therefore some degree of creative freedom or selective compression is required in even the largest of spaces.

My goal here is to encourage you to learn to love the color grey in this respect, and understand that we are all performing some balancing act of fidelity vs. achievability. Where you might land with your vision, which could drift somewhere in that grey area, is up to you. None of us are 100% freelance modelers. We are all, to some degree, trying to recreate something of a rail-based transportation system that will come with some givens that are derived from the prototype.

If you look hard enough, you can find some amazing examples of nearly anything in the real world. Balloon tracks, loops, and lines tracing back on themselves are all things we often do on our layouts that are often negated as less than prototypical, however there are too many examples to count of these in practice. Yes, they aren't the norm, but they do exist. There's no died-in-the-wool prototype modeler, and no completely freelance modeler, which begs the question: how far down this rabbit hole might you want to go?

The trend in the hobby seems to be towards more prototype fidelity, especially with regards to the modelers with more "experience" in the hobby. However, it is also often the direction of newer modelers in our greatest of hobbies. Take for evidence the emergence and growth of the Railroad Prototype Modelers (RPM) meets. These shows seem to be the biggest in growth in terms of attendance. I've heard really good things of the Mid Atlantic RPM (MARPM, affectionately spoken as 'Mar-Pum' meet). The St Louis meet was excellent last year, well attended, and I look forward to visiting again. The growth of manufacturers in this area hasn't hurt either, with the addition of road-specific and era-accurate rolling stock and structure kits, there's plenty of growth in this space to look forward too.

Second, I would like to encourage you to consider approaching your vision of what you love about the prototype with more attention on fidelity. Not that you need to try to accurately reproduce a particular place and time, but that you might try to narrow your vision. If you do, it's my opinion that you may find it easier to find satisfaction in your modeling work. I've heard many modelers express fear of attempting prototype modeling; the fear that this is too difficult, may require too

much research, or is beyond their skills, etc. In my opinion, modeling "freelance" style is much more difficult. You have to be creative to dream up everything instead of just matching what you can see or read about.

I would also encourage you to look at the vast online troves of railroad information that are available to you at your fingertips. It's quite easy to get detailed information about modern or historical roads and/or locations. That information can provide most of the inspiration needed to find your vision.

> "The trend in the hobby seems to be towards more prototype fidelity."

Additionally, let me relate this to what is achievable. What was good enough historically may not meet your qualifications today.

Often referenced is Allen McClelland's "good enough" philosophy, which was to help make his aspirations achievable. I might add one clarification to Allen's approach, if I might be so bold as to manipulate Allen's thoughts. I would like to add that "good enough" is a fluid idea. I believe that "good enough" can be reallocated through the years as time goes on, as modeling techniques improve, as products evolve and improve, and as all of our skills as a collective grow, "good enough" should grow as well. What was considered as "good enough" in the late 1970s for Allen has evolved into a brand-new standard for today, in an era where much of the available rolling stock comes with separate grab irons, more details, and more accurate scale features. "Good enough" today will get you further than what defined "good enough" for Allen. We're surrounded by a better "good enough" today; take this into account when you draw the line for your choices. We're barraged by better products and ever-better modelers these days. We should be compelled to allow our environment to influence us in the positive and continue to raise the bar on the "good enough" standard.

I am not trying to push you in any particular direction with your modeling, but I am trying to open your mind to the possibility that prototype modeling isn't such a far reach. You should consider looking into what you fell in love with about railroads in the first place. It would do any modeler, at any place within the spectrum of grey area, and within the realm of "good enough", to catch a few YouTube video clips of prototype modelers, perhaps visit an RPM meet in your area, and raise the discussion on the many YouTube Model Builders Hangouts and shows. I look forward to continuing that discussion with you.

About the Author

Andy Crawford, 38 years old, is a technology provider to mid-sized businesses and financial institutions, and a lifetime model railroader. Starting young in the hobby with a train set, like many others, and after spending a decade as an armchair modeler, he returned to the hobby a few years ago, in full force. He models a very exacting replica of a 15 mile section of the Clinch Valley District of the famous Pocahontas Division of the Norfolk & Western Railway in 1952.

His interest in exacting replication of the prototype, fine scale craftsmanship, weathering, and prototypical operation can all be seen in his work. For him, recreating the experience of being a railroad professional, 1/87th the size, in the 50's is all the focus that is needed. You can check out Andy's YouTube channel here: https://www.youtube.com/channel/UC8l2bTYfzVY37328sGPD9Bw.

Want to get your YouTube channel featured or mentioned in the YouTube Model Builders eMag? Contact us at YTMBeMag@gmail.com and tell us about your YouTube Channel.

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