The Modeler's Journal

A Free Journal for Today's Modeler

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Jason Jensen

Featuring His Amazing World of Kit-Bashed Artistry

Be Sure To Check Out Columns From Harry M. Haythorn, Jack Hykaway, Ron Marsh, The Track Planner, and Blayne Mayfield

Cover Photo Courtesy of Jason Jensen

Editor's Note...

Happy New Year and welcome to the first issue for 2019 of ***The Modeler's Journal***.

In this issue's Modeler Showcase section, we feature the amazing work of Jason Jensen, who is an incredibly talented and accomplished artist. Jason has applied his artistry and skill in building incredible "kit-bashed" structures and has assembled them to form a city we have fondly named "Jensenville."

Ron Marsh discusses the versatility of foam and several ways modelers can easily use this material in their everyday modeling.

The Track Planner explores the areas you need to consider when thinking about moving your layout versus starting over. He presents his reasoning, as well as his personal experiences, as to why he believes starting over is a better option than moving your layout to your new location.

Harry Haythorn provides background on the Pullman World War II-era troop sleeper and kitchen cars and how you can model troop trains on your layout in this installment of his *UP-Hub* column.

Jack Hykaway, in his column *Jack's Junction*, explores the Sperry Rail Services' track fault detection and maintenance vehicles and their use of induction, ultrasonic, and surface condition monitoring technologies to identify and repair faulty track.

Blayne Mayfield explores why many modelers tend to apply extreme weathering to their models when trying to recreate the real world, given his observation that not everything in real life is weathered at the same rate. He definitely makes a compelling argument.

We hope you enjoy this issue.

Happy modeling!

– **Loggin' Locos**
Editor-In-Chief

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The Modeler's Showcase

About the Cover

"Jensenville" is a busy place and there is a lot going on at KC's Auto and Repair and other shops in the center of town.

Visit Jensenville and some of its buildings, all created by Jason Jensen, within the pages of this issue of *The Modeler's Journal*.

The Workbench

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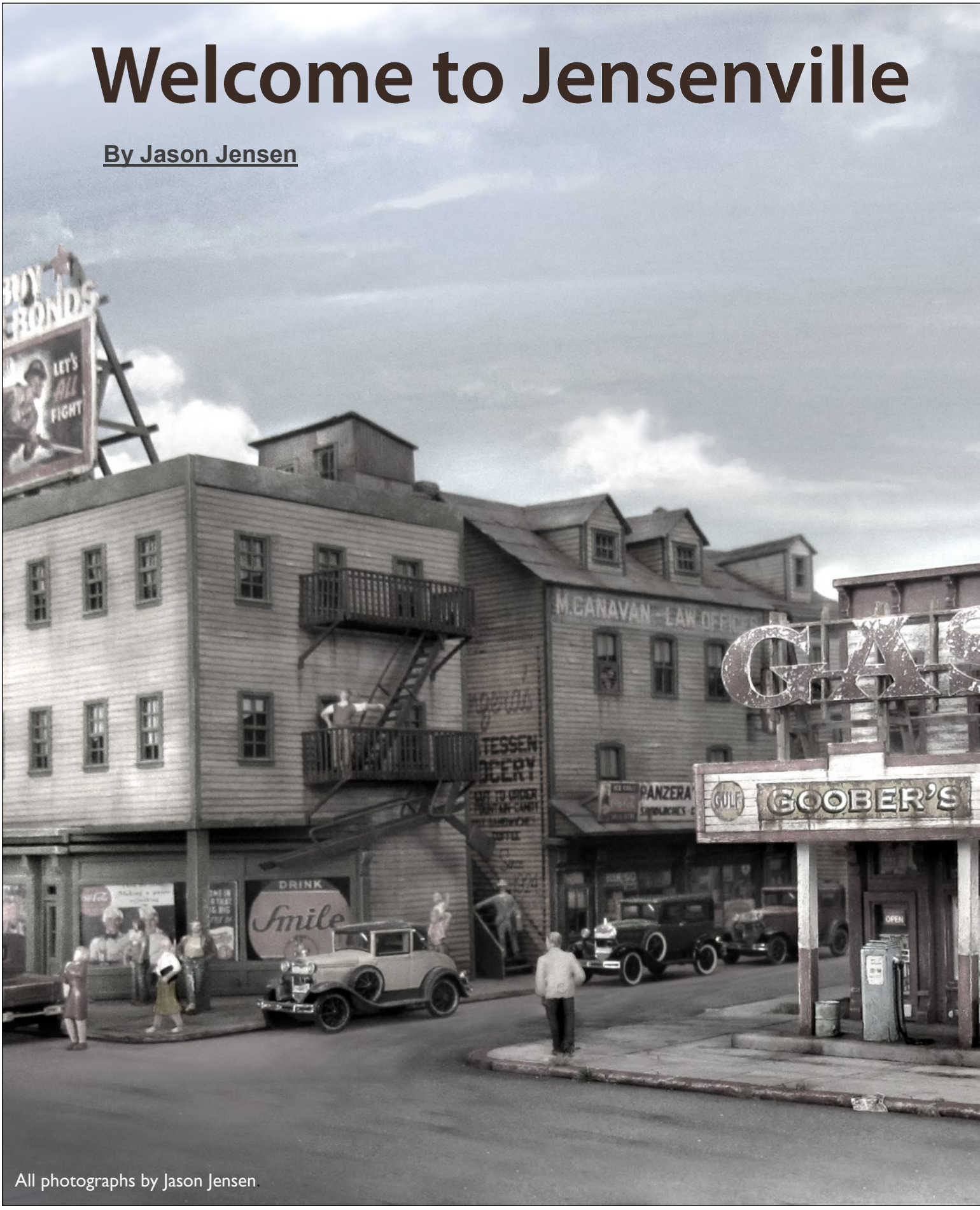
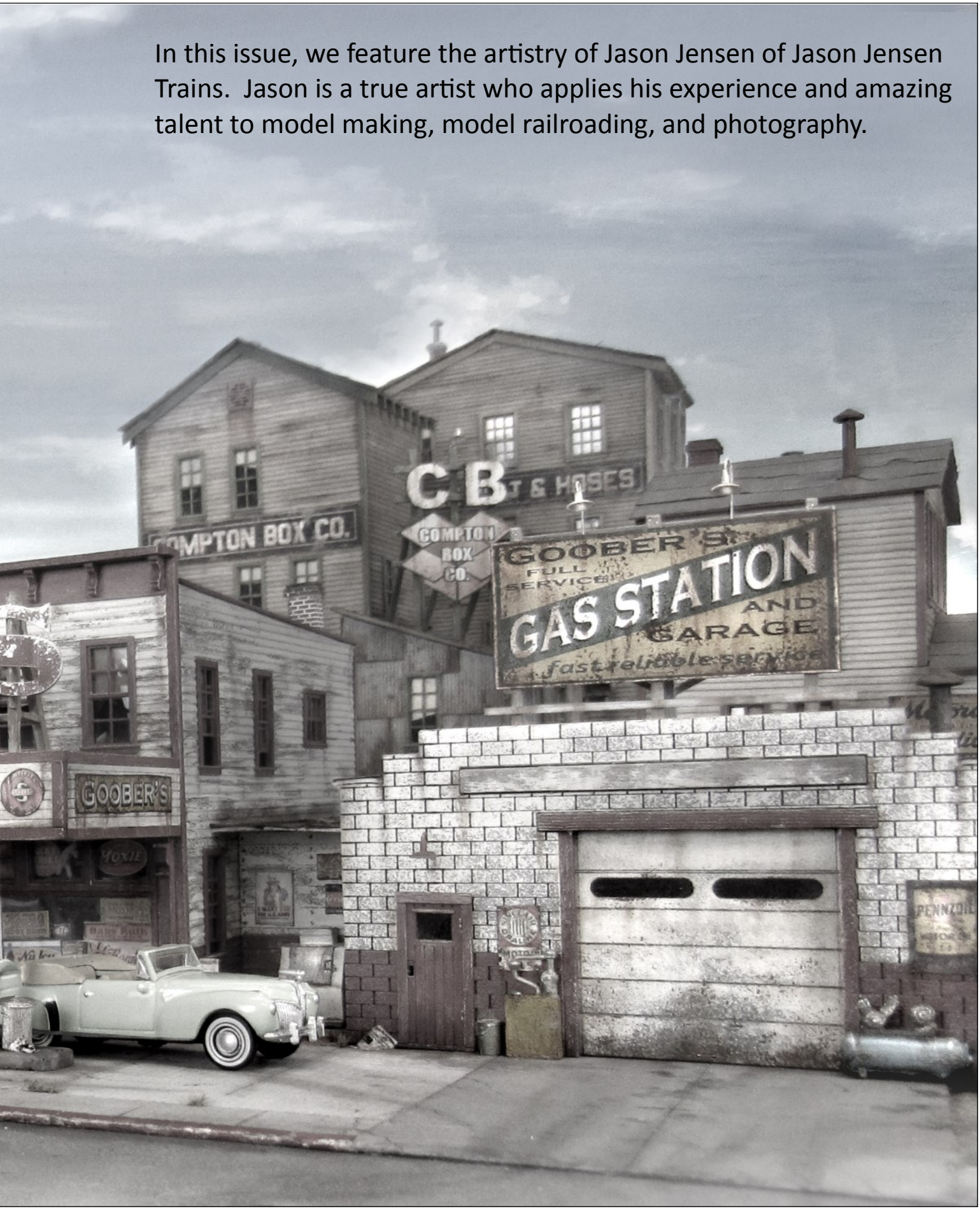
Welcome to Jensenville

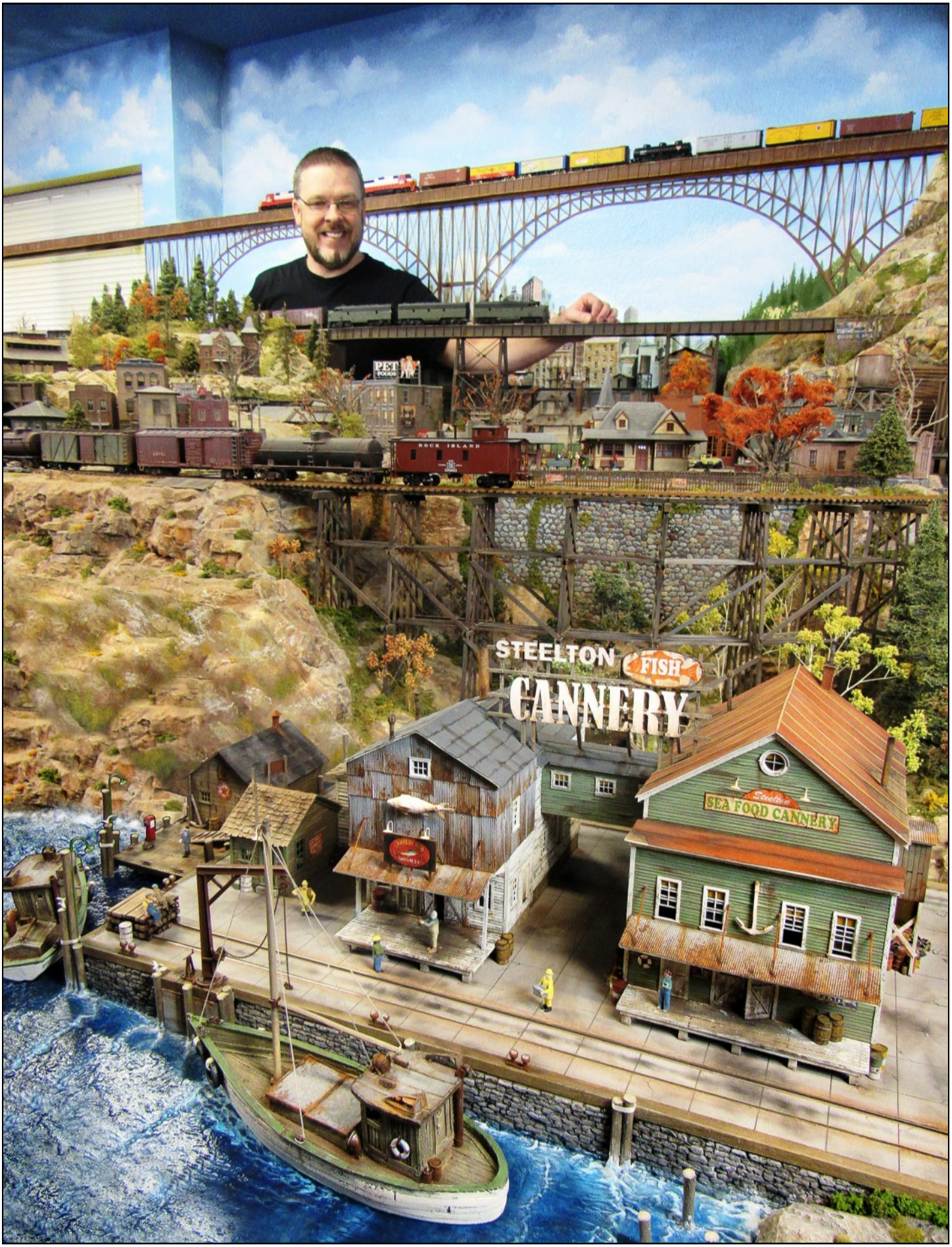
By Jason Jensen



All photographs by Jason Jensen

In this issue, we feature the artistry of Jason Jensen of Jason Jensen Trains. Jason is a true artist who applies his experience and amazing talent to model making, model railroading, and photography.




PET FOODS
ROCK ISLAND
STEELTON
FISH
CANNERY
SEA FOOD CANNERY

My grandfather, Frances Marn, was the one who introduced me to model railroading - that's how my passion started. I have so many great memories of being in my grandfather's workshop learning about model railroading.

My passion started in a simple way; I watched my grandfather's HO Scale trains go around the track, and this used to fascinate me. As I got older, he taught me about laying track, electrical work, and putting kits together, and this only fueled my passion.

I have built my career as a free-lance artist while continuing my hobby. Over the last few years, I have realized that I can bring my artist's eye and talent to structure building - and I love it! My favorite structures to build are Craftsman Kits. I continue to learn new techniques to make my structures more realistic.

I have come to realize that I really love helping other people in the hobby and I enjoy sharing my work and passion for the hobby on social media. I have created Instagram, Facebook, Twitter, and YouTube accounts. You can find my work at those sites under *Jason Jensen Trains*. I use these platforms to share with people my techniques, tricks, and materials that I find most helpful from my years of experience. On these platforms, you can watch as I build kits, kit-bash, and build dioramas. As a result of my utilizing these social media platforms, I have found a new hobby that I love - photography!

This year I will be focusing on posting on all the aforementioned social media platforms on a regular basis. I will continue to show techniques on structure building and creating dioramas.

In the upcoming year, I will be working closely with Kenny Crump, the owner of KC's Workshop. I first started working with Kenny in 2018 and I have found we work great together. Our first collaboration was the kit, *KC's Auto Repair*. After successfully completing this kit we went on to create the limited-edition kit, *Steelton Wharf*. Most recently, we released *Goober's Gas Station & Garage*. We have several kits planned for 2019 and we are also talking about other potential kit-bashing projects later this year.

I truly love this hobby. I am grateful to be able to wake up every day and do something that I love. My ultimate goal in the Model Railroading Industry is to inspire other modelers at all skill levels.

KC's Auto and Repair


HOSES
Gillett
TIRES
KEROSENE
QUAKER STATE
Phillips
TIRES & BATTERIES
MOTOR OILS

KC'S Auto and Repair was my first time working with products from KC's Workshop. For this project, I combined three kits. These kits are *Goober's Service and Towing*, *Marty's Fix-It Shop*, and *Utility Shed*. Before I started construction, I drew several rough drafts of what I would like the final product to look like. From these sketches, I was able to pick out the best design before I started putting the kits together. I find that, for me, it is much easier to make changes on paper rather than make changes to the actual model.

I was very impressed with how well the instructions are done and how well the kits assemble. The *Goober's Service and Towing* kit came with a large amount of gas related signs. As you can see, I used a lot of them. Most of the detail castings are from Rusty Rails and BEST.

Upon completing this kit-bash, I also designed and created a diorama/base for the kit. All the dirt I used for the base is from my backyard. The cement sidewalks are made from a matte board. The street was created from foam that I painted to look like asphalt. To see how I fully created the model and diorama you can visit my Facebook page: *Jason Jensen Trains*.


LUBRICATION SER
STANDARD OIL PENN MOTOR OIL
PENNZOIL
KELLY TIRES
CASTROL
TIRES & BATTERIES
KEROSENE
QUAKER STATE
Phillips 66


KEROSENE
STATE
D-A LUBRICANT
Phillips 66
TIRES & BATTERIES
FLYING A
Mobilgas
INDIAN

Goober's Gas Station & Garage

Watch Video

Goober's Gas Station & Garage was a kit-bashed project that I built using two kits from KC's Workshop. The two kits I used are called *Goober's Garage* and *Allie's Ice Cream*. When looking at the kits, I created a design to make the final product a gas station and garage.

For the design, I created a marker rendering to help envision the final product. I find it's a lot easier to work things out on paper first as it helps create a plan for the kit-bash project. By doing a marker rendering I was able to try different color schemes. Once I had a rendering that I liked, it was time to get to work on the structure build.


GOOBER'S
FULL SERVICE
GAS STATION
AND GARAGE
fast,reliable service
GAS
GOOBER'S
GOOBER'S
GOOBER'S
GAS STATION
AND GARAGE


GAS
GOOBER'S
GOOBER'S
THIRST-QUENCHING
DELICIOUS AND
DRINK
Coca-Cola
REFRESHING
KEEP IT ON ICE FOR
YOUR FAMILY AND YOUR FRIENDS
GOOBER'S
GAS STATION
AND GARAGE
fast,reliable service
OPEN


GAS
GOOBER'S
GULF
GOOBER'S
GOOBER'S
FULL SERVICE
GAS STATION
AND
GARAGE
fast reliable service
OPEN
MOXIE
Borden's
ICE CREAM


GOOBER'S


GOOBER'S
FULL SERVICE
GAS STATION
AND
GARAGE
fast reliable service


GAS

The Steelton Warf

Watch Video


STEELTON
Bait

The *Steelton Warf* was a joint effort between the owner of KC's Workshop, Kenny Crump, and me. Kenny and I had been working together and wanted to create a limited-edition kit for the 2018 holiday season. Kenny and I spent a lot of time discussing, designing, and creating a kit that other modelers could appreciate. We spent many hours on the phone, texting, and e-mailing back-and-forth to create a model we would both be proud of.

One of the unique aspects of this kit is how many detail castings are included. We wanted to make this wharf as realistic looking as possible. The kit even includes a stone wall for the sides of the wharf. If you would like to see more photos of this model you can visit www.kcworkshop.com


Steelton
SEA FOOD CANNERY
FISH
Lobster


Bob's
Live Bait
ICE
Coca-Cola


STEELTON
FISH
Live Bait


FISH
Bait and Beer

Adding figures to this *BBQ* FOS Scale Kit really brings it to life.

This *Machine Shop* was kit-bashed using 3 kits (listed left to right): *Dannen Feeds*, *Montana's Tax Shoppe*, and *Penryn Fruit CO*, available from RailroadKits.com.

The upper half of both models (*Compton Box Co* [this page] and *Myrtle Belt & Hoses* [next page]), are FOS Scale Kits. The bottom halves are completely scratch-built. These two models were highly influenced by George Sellios.


MYRTLE BELT & HOSES
BEER
WINGS

Gain A New Perspective

With The Track Planner!

Follow Bill Beranek's column "A Perspective on Track Planning" in every issue of The Modeler's Journal.

Topics include:

- ✓ Principles of Track Planning
- ✓ Designing for Operations
- ✓ Proper Benchwork Design
- ✓ Dissecting Track Plans

And much, much more!

The Modeler's Workshop

WITH RON MARSH

RTNT

The Versatility of FOAM

By Ron Marsh

Watch Video

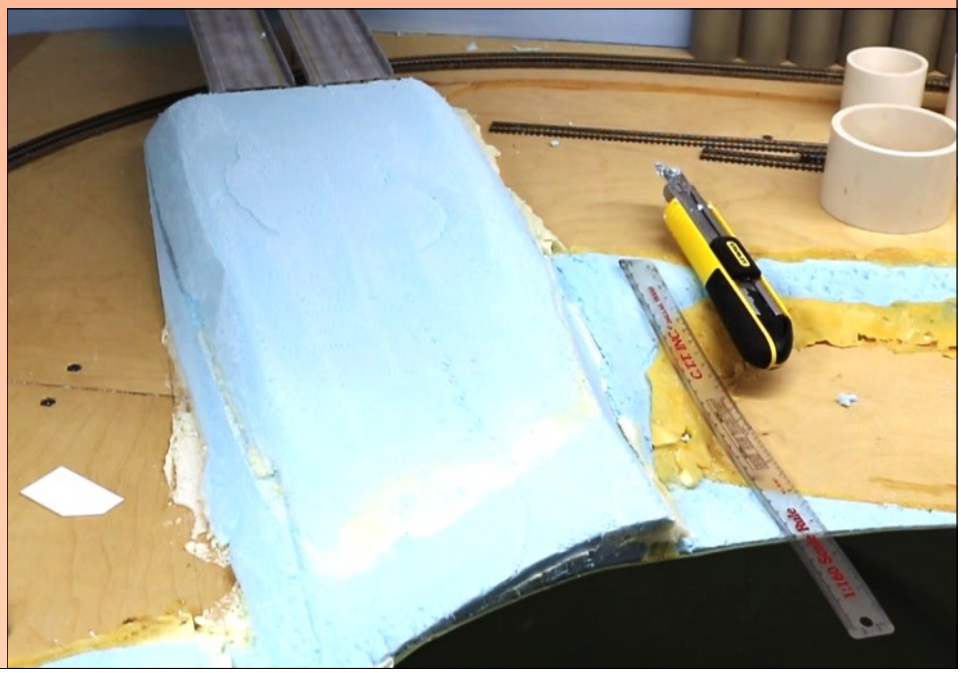
All photographs by Ron Marsh.

Versatility is the name of the game. As model builders, we are always looking for new materials that we can use in different ways or techniques for using materials in new and unique ways. The versatility of a product or material makes it quite valuable. It is a great value to be able to use the same material in various ways to accomplish different things.

In a previous article, I wrote about the debate over the use and value of different scenery materials. In that article, I discussed the growing popularity of foam as a scenery base material. Foam has the advantage of being easy to shape, strong, and lightweight. Let's continue that discussion, looking a little deeper into ways to work with foam and its variety of uses.

If you are going to use foam to build larger scenic forms or other large models, you are going to need to be able to glue foam pieces together (see Figure 1). What type of adhesive should you use to do this? The earliest advice I received on this subject was to use Liquid Nails for Projects to glue stacked foam for hills and mountains. This adhesive is foam safe and holds well, but it does not cut easily when shaping the

Figure 1. This highway ramp base is an example of how layers of foam can be shaped to fit almost any needed form. Note how the various layers and the foam adhesive between them form one consistent shape.



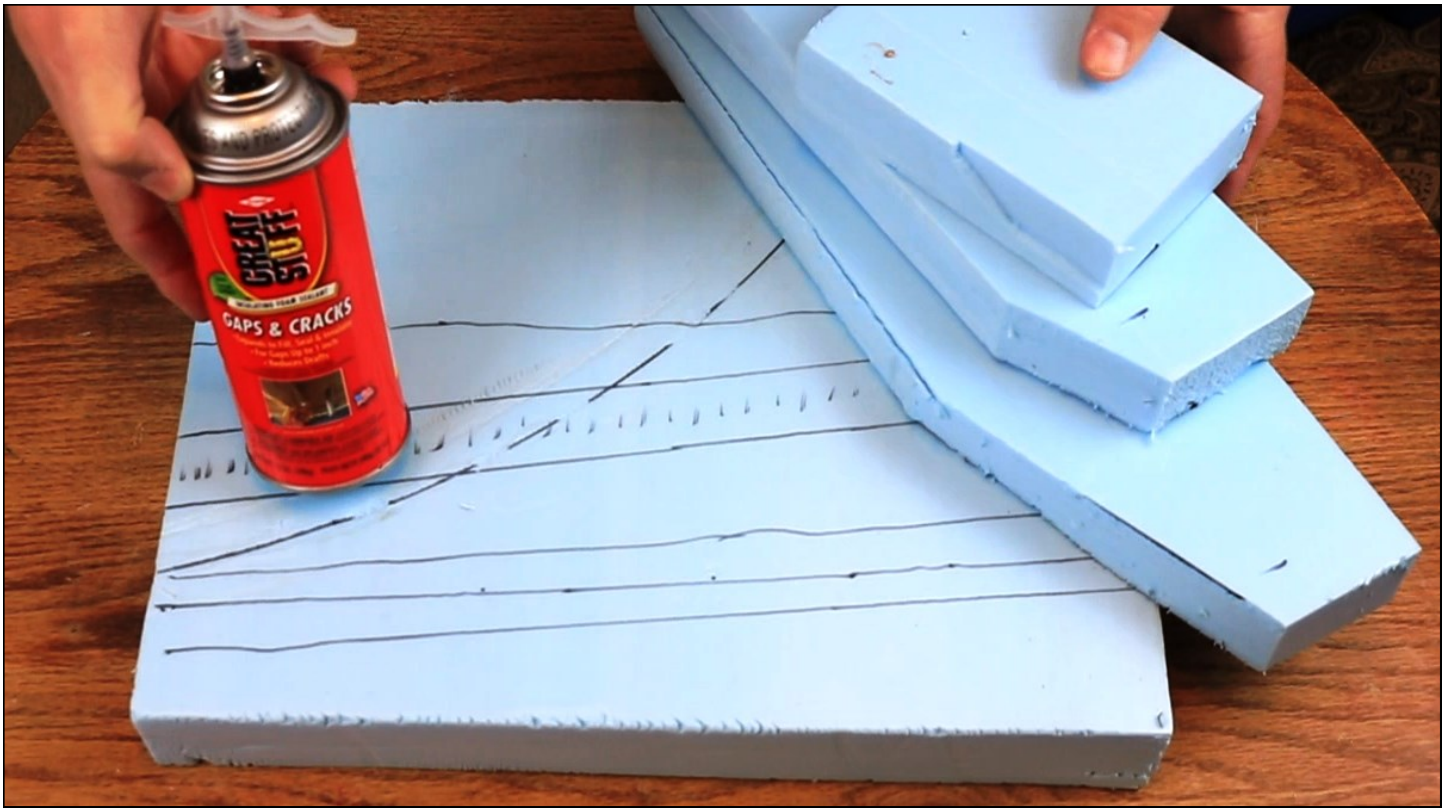


Figure 2 (above). Expanding foam insulation is one great option for adhering foam pieces together to build larger scenic or model projects.

Figure 3 (below). Hot-wire foam cutting tools are an excellent way to carve and shape foam for model projects, but be sure to work in a well-ventilated area when you use them.

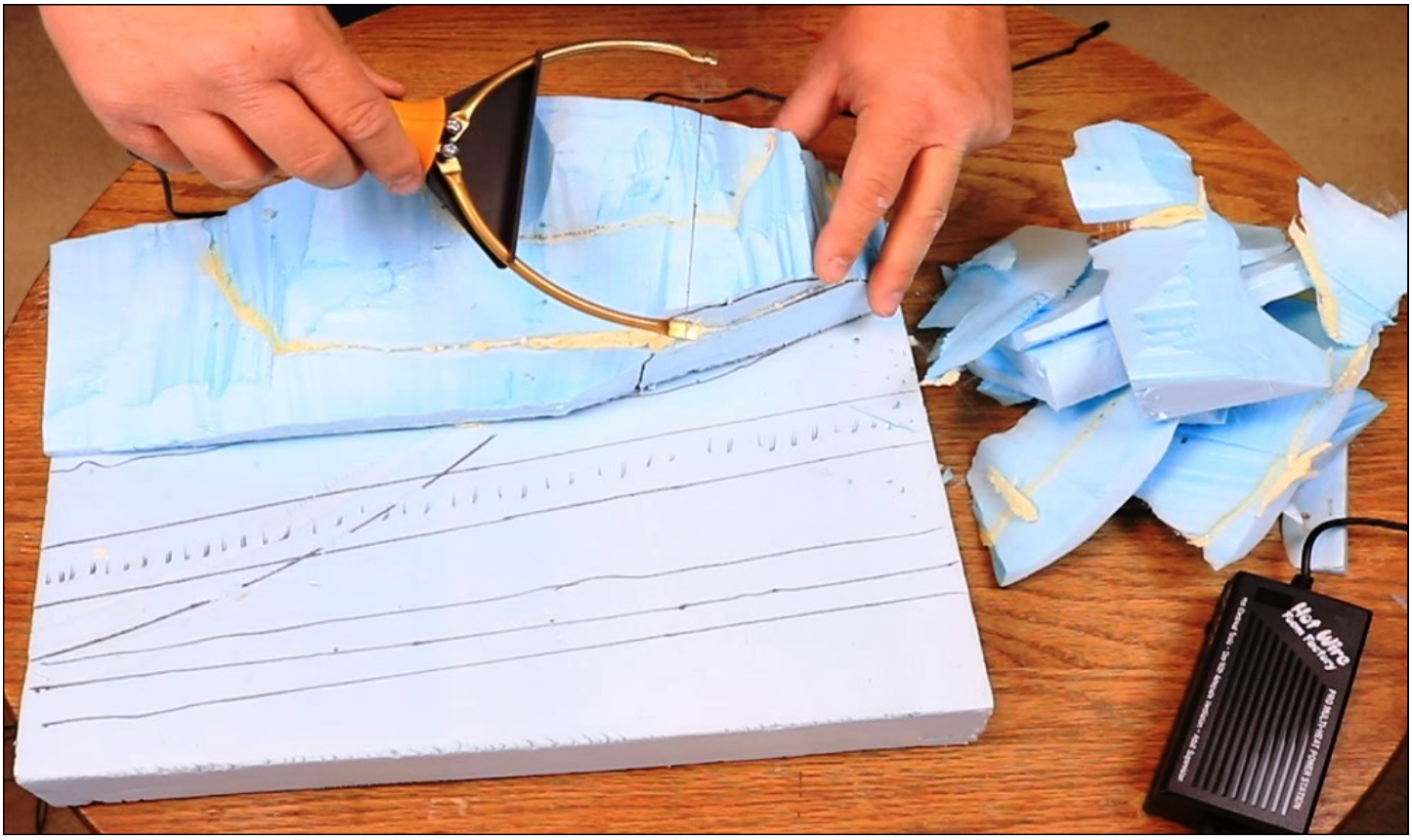


Figure 4. Examples of foam being carved into a cut-stone wall and the type of results you can achieve with a little practice.

foam. It was for this reason that I started gluing foam together with Great Stuff expanding foam (see Figure 2). Great Stuff can be messy and the foam must be weighted or clamped while it dries, but the result is that the adhesive cuts and shapes exactly like the foam itself. There are now more foam-safe adhesives on the market that hold well and are easily cut, even with hot wire cutting tools.

Since I mentioned cutting, let's talk about methods for cutting and shaping form. The traditional way of working with foam is to cut it with linoleum knives, hacksaws, and the like, and to shape it with knives, rasps, and sandpaper. These methods work great and yield excellent shapes, but they are quite messy. Anyone who has ever put a rasp to foam knows that those little, static-charged pieces get everywhere and stick to everything. A great answer to the mess of cutting foam is to use hot wire or hot knife cutting tools. I personally use a set of hot wire tools from Hot Wire Foam Factory, but there are many manufacturers who make similar tools that work equally well (see Figure 3).

Hot-wire foam cutters allow for smooth shaping of foam with little mess. A word of caution should be added, however, regarding fumes from cutting foam. Many foams release gasses when they are cut with hot tools that are not healthy to breathe. It is highly recommended that any cutting of foam with hot tools be done in a well-ventilated area.

Foam is a very versatile material because of its ability to be carved. As such, the foam can be used not only for scenery base, but also for rocks, retaining walls, wood, and a variety of other models (see Figure 4). One need only search Google for "foam carving" to see thousands of incredible models and sculptures that have been created using foam. With some practice using hot or cold cutting and carving methods, foam can become a versatile medium for all kinds of models.

Versatility is the name of the game, and as a model-building material, foam is as versatile as it gets. Next time you are looking for the right material for that new modeling project, be sure to give foam some thought. It just might surprise you what it can do.

Happy Modeling, Ron.

About the Author

Ron Marsh is a pastor in Southwest Missouri. He grew up in West Central Missouri where he became a railfan of the Gulf, Mobile & Ohio and Missouri Pacific Railroads at an early age.

Ron has been a model railroader for over 20 years and has modeled 1970s Missouri Pacific and contemporary BNSF.

He is currently working on his third layout—the Texas, Colorado & Western—depicting BNSF operations in North Texas and Colorado in 2008. He is a member of the N Scale Enthusiasts – a national organization for N scalers.

Ron posts model railroading videos weekly to his YouTube channel, Ron's Trains N Things.

A Perspective On Track Planning

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

Moving a Layout vs Starting Over

Sooner or later, most model railroaders face this dilemma: "Do I move my existing layout, or do I start over?" Many factors come into play when trying to answer that question, including emotions, finances, the new location configuration, and individual skill sets, just to name a few. I will discuss these four factors individually, and I will examine how each may intertwine with other factors. I also would like to relay my personal story regarding an unplanned move and how I approached the dismantling of one layout and the building of a new layout. But first, let's address the four factors I mentioned above.

Emotions

In my opinion, emotion is the number one hurdle most modelers need to overcome. Before any kind of rational decisions can be made, emotions must be taken out of the equation. Many times, I have heard someone say, "I have so much time, effort, and money invested in my current layout that I couldn't possibly think of dismantling it and starting over." If an emotional attachment is your primary reason for not wanting to start over, then – in my opinion – you have severely limited your ability to move forward. My father had a great quote regarding emotions and making sound decisions; he always said, "*Emotion is like a scale: when emotions go up, intellect goes down; but when emotions go down, intellect always goes up.*" Very few, if any of us, can make rational decisions if we let our emotions cloud our thought process.

Finances

For most modelers, I'm sure financial matters can be as important as the emotional factor. Unfortunately, in today's world, model railroading is not a cheap hobby. We all try to do things to decrease the cost, but there is only so much we can do to lessen the financial burden. It is basic human nature to think that starting over somehow is automatically going to be super-expensive. There is no question that it can be costly, but it doesn't have to be "over-the-roof" expensive. Many things can be reused or repurposed; not everything will be wasted. However, you should be judicious and balanced in your selection of items to reuse.

New Location Configuration

Many of the layouts I design are for new locations. The client has moved and is struggling to visualize a layout within the new space. For some modelers, it is hard to look at a new, empty space to visualize what is possible and how to best utilize the space. Compound this with the emotional and financial elements and it's not hard to see the way some modelers struggle. Some are not even aware that finances and emotions are clouding their thought process with regard to a change in layout space. A new location should be viewed as a positive, not a negative.

Individual Skill Sets

Numerous times, I've been told by a client that they're worried they may not have the skill sets necessary to build the layout I've designed. This also can become a problem when the modeler is moving to a new, larger space. If that new location is considerably larger, it can open numerous possibilities that weren't available previously or some that the client never considered or envisioned. This, in turn, can overwhelm the client. If the client's primary concern is saving portions of the old layout, that can add another layer of anxiety. In most cases, trying to save the old layout limits options rather than expanding them.

My Aversion to Moving an Existing Layout

Many model railroaders, when faced with having to move or tear down their existing layout, get caught up in the emotions of the moment. It is understandable that memories of how much work and effort they put into the layout creep in. Seldom do I hear someone say, "Hey, this is great! I can start over and end up with a bigger and much better layout." For a multitude of reasons, modelers tend to think in terms of "moving" not "starting over." Even when all the warning signs are telling us that starting over is the prudent choice, many modelers still want to include pieces of their current layout in the new one.

Having been involved in the hobby for five decades, I've seen lots of change. Having built five layouts and dismantled four, I can understand how emotions can cloud someone's thinking. Each time my wife and I relocated, I would let my wife worry about the upstairs and I concerned myself with the basement. While she was envisioning how the furniture would fit – picking the right color of drapes, choosing the right wall colors and carpeting – I was figuring out how big the basement was and where the obstructions were located.

Each time we moved, I looked at it as an opportunity: an opportunity to start over with the result being a better layout. I never thought about "moving the old layout." Having the advantage of designing layouts – first as a hobby and then has a business – probably makes me want to always look ahead, and not look back. I have yet to design the "perfect" layout. Maybe that has something to do with my somewhat obsessive-compulsive nature.

As soon as someone makes the decision to incorporate portions of their old layout into their new layout, they are often – in my opinion – limiting their options. Instead of looking at the new space as a blank slate, they're trying to figure out how to incorporate an old module into the new space. Experience has taught me that such compromises seldom work to the betterment of the new layout. In fact, it can severely limit creative thinking and precludes many new possibilities.

My attitude has always been that the next layout will always be better than the previous. The skills I learn along the way always help me improve the next layout. Every layout I've ever built has had problems or design flaws, but the next one never had the same mistakes. Sure, other issues popped up, but I made a serious effort to not repeat previous errors. My individual skills have increased with each consecutive layout.

My Personal Experience

The following story should give the reader some insight into my thought process, when – after designing, building, and operating a moderately-sized layout – I suddenly had to dismantle it because of an unplanned move. As mentioned earlier, I've built five layouts during my lifetime (one N scale layout and four HO scale layouts). This story involves my previous layout (#4) and my current layout (#5).

In 2002, my wife and I moved to Colorado. The home we purchased had a 2-1/2 car, attached garage. The house also came with an unattached, 24' x 24', finished and heated garage; this unattached garage made the perfect place for my new layout.

Shortly after moving in, I started planning the new layout. Over the next six years, I built a 20' x 19' layout depicting 66 miles of the Camas Prairie Railroad in north central Idaho, circa 1985. As with all of my layouts, this one was designed with operations as its main focal point, and we held approximately two dozen op sessions over the years we lived in the house.

Then, for the first time in our marriage, my wife and I downsized when we moved to our current house, and I ended up with considerably less layout space than before – approximately 50% of the space that I had in our previous house. I was coming from a 24' x 24' space to a 16' x 13' space. It is at this point that I proba-

bly differ from your typical model railroader.

Many model railroaders will build layouts based on things they remember when growing up, or they build what they currently see every day. Regardless of the era modeled, I doubt many modelers start out by asking themselves questions such as these: 1) "Can I reasonability depict what I want to model?" 2) "With the new constraints, will the layout I build satisfy my wants and needs?" 3) "Will the new layout operate like the previous layout?" and 4) "What are the things I'm willing to give up?"

Being honest with one's self can be tough, and we don't always like our answers. For me, the answers to all four of these questions were either "no" or "probably not." It was at this point that I redirected my thought process regarding the new layout. If you look up the word *purposeful* in the Oxford Living Dictionaries, it is defined as, "*having or showing determination or resolve.*" Knowing that I couldn't depict the same railroad in half the space, my "*determination and resolve*" kicked in, and I changed directions.

The change was dramatic: I sold off everything from the Camas Prairie RR, including motive power, rolling stock, structures, the DCC system, and even the benchwork. I virtually started over from scratch. To some, that probably seems extreme – and it probably was. But it also was a liberating experience; I now had a clean slate and could think clearly about what I wanted from the new layout.

After spending six months researching a good replacement railroad to model, I hit upon the Spokane, Portland & Seattle (SP&S) Railway. Why the SP&S? It met most of my operational needs. The SP&S ceased to exist in March 1970, after which it became part of Burlington Northern Railroad, which eventually became the BNSF. This meant that if I wanted to model the SP&S, I would have to choose an era prior to 1970. I settled on 1955.

Why 1955? Having half the space I had for my previous layout, there was no way I could model 1985 using six-axle motive power and mostly 50-foot freight cars, prevalent in the mid-80s; the radii on the new layout would be considerably tighter, meaning six-axle engines and 50-foot freight cars would look unprototypical on the tight curves. 1955 was a perfect year for me; most motive power was four-axle and almost all rolling stock was in the 40-foot range. A side benefit was that train lengths (in terms of the number of cars) could remain nearly the same. On the previous layout, trains averaged fifteen cars; on the new layout, using shorter equipment, I was able to run twelve to fourteen car trains – more than long enough for the size of the new layout.

In Conclusion

The point of this story is to show other model railroaders that a move need not be as stressful as one might think or as some people make it. As long as you're willing to adapt to changes, it can open up a whole new world in model railroading.

Never fall in love with a scene so much that you can't give it up. Doing so only limits your ability to learn new and better modeling skills. That favorite coal mine or logging scene you hate to dismantle should be looked at as an opportunity to build a new, better coal mine or logging scene. The skills you've learned don't go away; they easily can be used to build a new layout. Plus, you'll learn more skills along the way.

Am I happy with my change of direction? Absolutely! Having the "*determination and resolve*" to build another operating layout is allowing me to create another mini-transportation system, not just another model railroad. 

About the Author

Bill Beranek - The Track Planner has over forty years in the model railroading hobby. Bill enjoys golfing, traveling, 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 out more about Bill—The Track Planner at www.thetrackplanner.com.

HARRY'S UP-HUB

Harry M. Haythorn, UPHS #4043

Modeling WW II Era Troop Trains

Watch Video

All Photographs Courtesy of Harry M. Haythorn, unless indicated.

"Next stop North Platte Nebraska boys, short stop at the Canteen." The conductor of the MAIN train 93775 walks through the troop sleepers with the announcement of the upcoming station stop. The troops begin to get restless and are eager to stretch their legs, enjoy a little freedom, and a good meal. This scene was repeated countless times every day on troop trains during World War II.

In this installment of the UP Hub, I'm going to give you an overview of modeling troop trains and how to implement them on your layout, no matter the size. I will discuss the equipment and what models are available in HO Scale to use for these trains. I will, of course, discuss this from a UP modeler's point of view; however, this will be useful for anyone wanting to model troop trains operating on any road.

Prototype Information

Military personnel, no matter what rank or order, were known as troops. Whenever troops traveled by rail, they were assigned a MAIN; MAIN is an acronym, short for Military Authorization Identification Number. This ID system was used to protect the troop train movements from spies and possible sabotage, as well as to determine when a movement was completed. The MAIN could be assigned to a single car or to the whole train. The numbers started new every year and were assigned first based on the month and year and then the number of trains operating during that month. As an example; train 93775 would have been the 775th train dispatched in September (9th month) of 1943 (3).

Prior to 1943, all troops moved in standard heavyweight passenger equipment. As more and more men were on the move, the railroad's fleets were exhausted and Pullman became overwhelmed with orders for more equipment. Passenger traffic, in fact, increased from 23 billion passenger miles to almost 100 billion before the New Year. To meet this new demand, every usable sleeper-type car was pressed into service. The most common cars used before the purpose-built Troop Sleepers were built in 1943. These were a mix of 16-section tourist sleepers, 14-section sleepers for enlisted men, and 12-section, one drawing room sleepers for the officers.

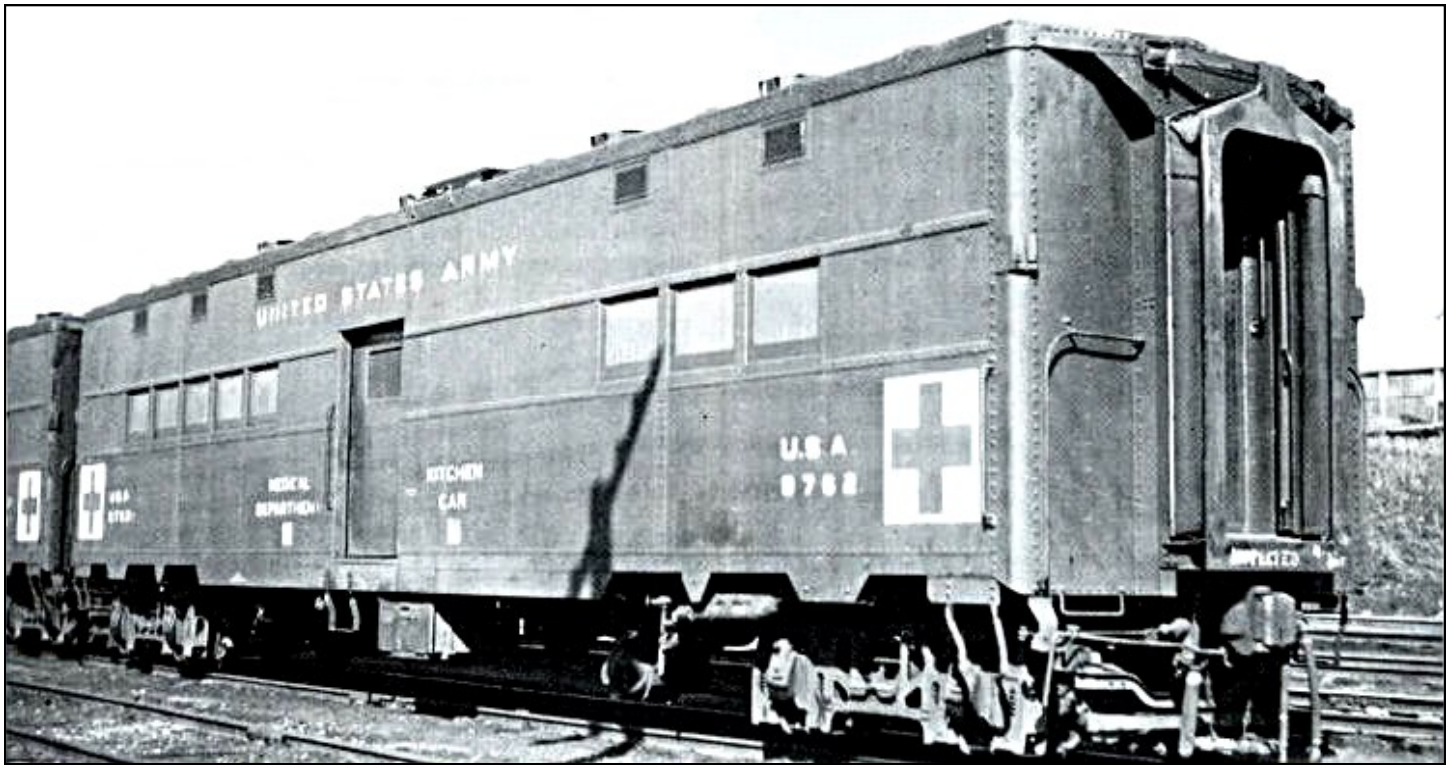
A number of troop sleepers and kitchen cars at the North Platte Depot and Canteen.

High-ranking staff members, such as commanders and generals, were usually given use of a railroad-owned café-lounge type car. This gave the staff a meeting place as a well as a separate kitchen and much more comfortable accommodations than what was offered in the section sleepers or the cars which later became known as "boxcar" sleepers.

In late 1942, the need for more cars arose and the War Department asked car manufacturers to step up production of specific equipment for the movement of troops. These cars had to be of standard design and would need to be able to be mass-

A medical-services kitchen car (#8762) sits at the Lafayette, IN shops of the Chicago, Indianapolis, & Louisville (Monon) Railway. The original photograph was taken on April 17, 1947, by William A. Swartz.

This photograph is in the public domain; sourced via Wikimedia Commons.



Above: Photograph of the Pullman troop sleeper car #7000 displayed at the Hoosier Valley Railroad Museum. (Mackensen [Creative Commons Attribution 2.0 Generic license], sourced via Wikimedia Commons).

Below: Troop sleeper and kitchen cars on the North Platte Depot platform.

Empty troop sleepers mean that the troops are inside the canteen enjoying a good meal.

produced very quickly. Pullman's answer to their request came in the form of the Troop Sleeper cars and the Troop Kitchen cars. Their first order was for 1,200 sleepers and 400 kitchens and was to be delivered in segments during 1943-44. In 1944, an additional 1,200 sleepers and 400 kitchens were ordered. The second order was in service on the rails by early 1945. American Car and Foundry also built 40 medical-service kitchen cars in 1943-44. These special kitchens were used in place of the standard kitchen cars on hospital trains.

The cars were built using the AAR 50'6" boxcar design, with flat ends to accommodate the diaphragms and associated air, steam, and signal lines for passenger equipment. They had three-foot-wide side doors for entry, ten large windows per side, six upper berth windows, and two lavatory windows. They rode on Allied Full Cushion high-speed trucks. Each car had accommodations for 29 soldiers and one Pullman Porter. They were owned by the US Government but were under contract with Pullman.

All bedding was standard Pullman bedding and the porters were all Pullman employees. The cars were not the most glamorous piece of equipment and their boxcar pedigree shone through; they were hot, stuffy, and rode rough compared to the heavyweights they replaced.

The kitchen cars were usually placed in the middle of blocks of six to eight sleepers, or one kitchen for every 250 men. The meals were served to the men in their seats or bunks. The kitchen cars used the same style field stove which was standard issue.

Before the kitchens were placed into service, the trains would either stop at railroad-owned eateries, or would use a number of railroad-owned dining cars, or sometimes baggage cars which had been retrofitted with a stove for impromptu meal service. After these much-needed kitchen cars were placed into service, the efficiency of the troop trains increased ten-fold: stopping for meals was eliminated and the trains got where they needed to be much faster.

Consist and Modeling Information

Let's look at some models available and how to implement them into your railroad. The good thing about modeling troop trains from the time period of World War II is that there is a relatively large selection of sleepers and kitchens available. These cars have been produced by many different manufacturers including Walthers, Roller Bearing Models, Model Railroad Warehouse, and even a few brass importers over the years.

The Walthers models are ready to roll and they even come pre-decaled in multiple different road numbers. Walthers made them available in single, double and triple car packs, however, they have been sold out for some time and now they fetch a pretty penny on the second-hand market.

The old Roller Bearing Models kits show up from time to time, but make sure that the casting has not been broken or that it has become

> The Pullman Troop Sleepers were built using the AAR 50'6" boxcar design, and were hot and stuffy, and rode rough compared to the heavyweights they replaced.

brittle over the years. They are a craftsman-style kit and they do require some work to assemble.

The kits available from Model Railroad Warehouse build into great models and are fairly priced at anywhere from $22 to $25 for a two-pack of cars. They are plastic injection-mold kits and include many details and extras, plus decals for multiple road numbers. Unfortunately, these kits don't include trucks or couplers. On the bright side, suitable trucks are easy to find; both Walthers and Athearn have the Allied Full Cushion trucks available. I have used trucks from both manufacturers on my builds of these cars and both roll very smoothly and are reasonably priced between nine to twelve bucks a pair.

Building Your Train

Consists of troop trains typically included a baggage car or two to hold various equipment and the troops' rucksacks and weapons. The Officers' cars were almost always found on the end of the train; however, there is evidence that this was not always the case. Just about every type of UP passenger power was used on troop trains, such as the 800-class 4-8-4s, Challengers of all classes, Mountains and Pacifics, as well as Big Boys. Yes, even the Big Boys were used on troop trains - in fact, it wasn't all that uncommon!

Let's have a look at a typical troop train on the Union Pacific's Nebraska Division:

1. 800 class 4-8-4 locomotive No. 819
2. UP Baggage (1726-series)
3. DRGW Baggage (2500-series)
4. USAX Troop Sleeper
5. USAX Troop Sleeper
6. USAX Troop Sleeper
7. USAX Troop Kitchen
8. USAX Troop Sleeper
9. USAX Troop Sleeper
10. USAX Troop Sleeper
11. USAX Troop Sleeper
12. USAX Troop Sleeper
13. USAX Troop Sleeper
14. USAX Troop Kitchen
15. Pullman 14-Section Sleeper
16. Pullman 14-Section Sleeper
17. Pullman 16-Section Sleeper
18. Pullman 12-Section, 1-Compartment

This train can easily be modeled with equipment available from manufacturers such as Athearn, Rivarossi, and Walthers among others.

Click this link to see my troop train: https://youtu.be/Hokgv5w0yYw

Here are some films from the North Platte Canteen showing troop sleepers in action:

https://youtu.be/7LyZAFXoYtk - This film is from 1942 when troops were still in standard cars.

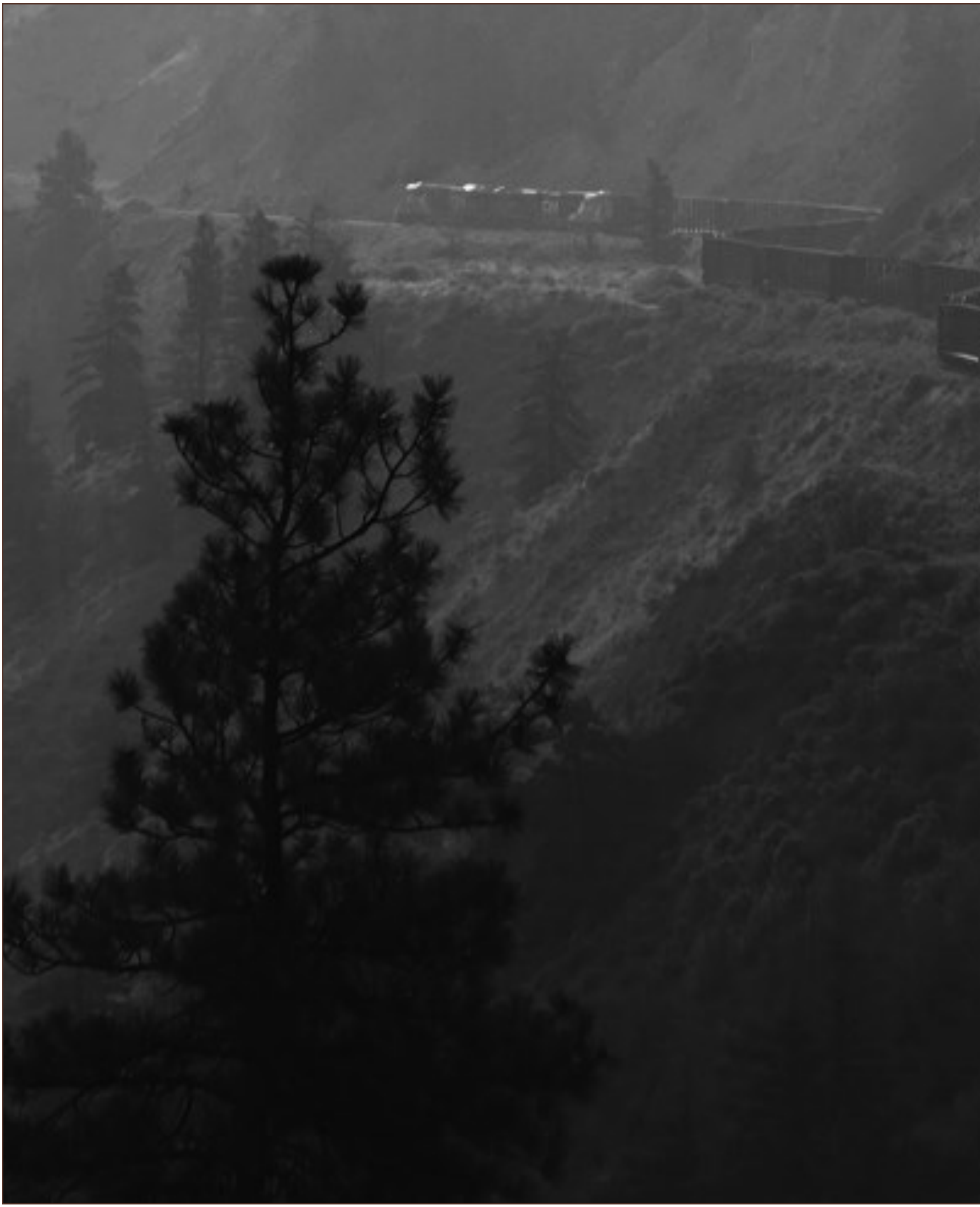
https://youtu.be/hWuiYILXcdE - This film is from 1945, showing the troop sleepers in action.

I hope this helps you in your quest to model a troop train on your layout. It's not as hard as you think it might be! Until the next time, keep the water above the crown sheet, your fire hot, and may your signals all be green. 

About the Author

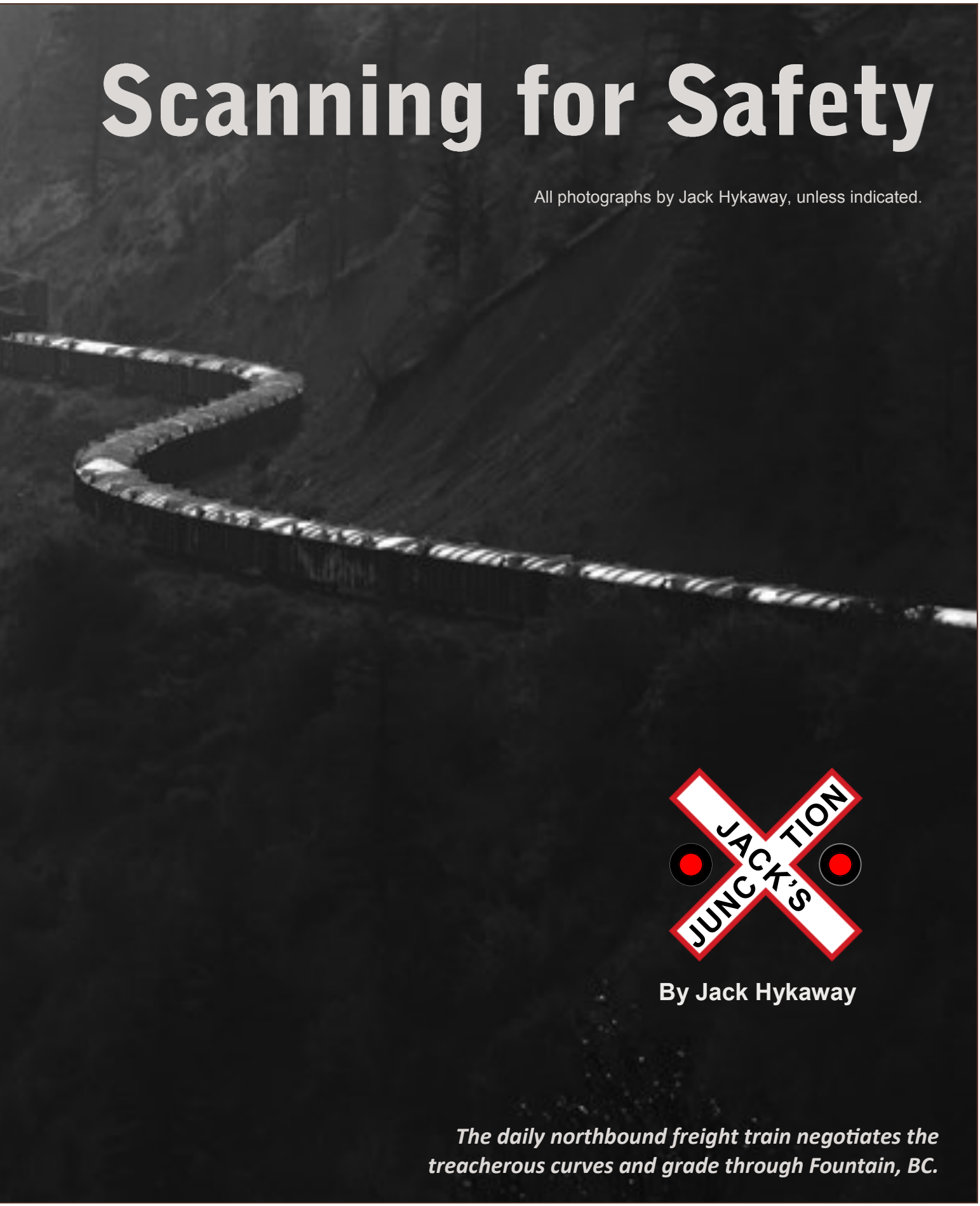
Harry is a rancher in Nebraska who works with his father and grandfather to help run their 22,000-acre, 1,500-head of mother-cow, ranch. Harry has been model railroading for over 20 years and models the Union Pacific Steam era from the 1930s to the 1960s, in central and western Nebraska.

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.



Scanning for Safety

All photographs by Jack Hykaway, unless indicated.



By Jack Hykaway

The daily northbound freight train negotiates the treacherous curves and grade through Fountain, BC.

Two BNSF freight trains meet near Ludlow, California on the Needles Subdivision.

Fountain, BC -- The sun has only just popped above the rugged mountain peaks, but the air in the valley is already thick with shimmering heat waves. It's the beginning of a new day in Fountain, though it seems as if it's life as usual for the hamlet's handful of residents. The gas station is open, and the neighbor across the highway is enjoying the sunshine from his porch with a coffee and a cigarette.

The town is peaceful and quiet; the only sound that stands out is that of the thrashing waters of the Fraser River far below my feet. The sun is now high enough in the sky that its rays shimmer on the frothy waters at the bottom of the gorge.

Halfway between me and the water, clinging to the dark, sun-soaked rock of the mountainside, two ribbons of steel slither along the mountain's contours. These rails lay silent for now, but in a few minutes, the daily northbound freight train to Prince George will be fighting its way uphill here.

Until then, the rails sit in the hot sunshine, cooking like mile-long strands of spaghetti. Every few minutes, they click and pop, as the molecules of steel expand in the heat and their internal stresses build.

Finally, the sound of an approaching train fills the canyon. Locomotives working hard, each of their twelve wheels claw at the polished railheads for traction. The rails hiss as the train approaches; then as the lead locomotive leans into the curve below, the hissing turns into squealing as the track flexes and more force is applied to those thin ribbons.

The technologies and techniques of tracklaying have changed fairly dramatically since the first spikes were driven into wooden ties in the 1800s. Now, the rails are denser and larger to support the weight of heavier trains, the roadbeds are well-profiled to drain water away from the right-of-way, and today's tracks come in quarter-mile continuously welded sections for smooth and fast train operation. Time is money on the railroad, and maintaining thousands of miles of track across the continent is no quick -- or cheap -- task.

The CN line through Fountain isn't busy -- it only usually sees four trains on its busiest days. Fewer trains, of course, means less wear-and-tear on the rails and more time to inspect and maintain the railway without holding up traffic.

BNSF's mainline through Southern California is a different story -- it's

one of the busiest arteries in North America. The Needles Subdivision from Barstow, CA to Needles, AZ sees upwards of 100 freight trains each day, leaving only small windows of time where maintenance can be executed without causing widespread delay across the subdivision. On this 200-mile subdivision with two main tracks and trains every twenty minutes or less, relying only on the visual inspection of the track would be inadequate to keep the rails in shape to support the weight of 70-miles-per-hour stack trains transporting millions of dollars' worth of freight.

To keep any railroad safe to operate, a certain degree of preventative maintenance is necessary. Staying ahead of the curve by forecasting where and when a rail is likely to break or fail in some way is critical. This forecast gives the engineering department a chance to find an available crew, or find out when one is available, to make the repair. When the dispatcher has a window in traffic, engineering will have a crew at the ready to get the job done and keep the trains rolling.

To forecast the future, railroad companies put some pretty intricate technology to work. Often, they contract this detection work out to companies with specialized trucks and equipment. One of the most well-known worldwide track inspection companies is Sperry Rail Services -- you may have already seen their yellow trucks rolling along the rails near you.

Sperry Rail Services (SRS) was founded by Dr. Elmer Sperry in 1928 when he discovered the first way to non-intrusively and non-destructively test rails for defects. SRS has been testing rails for defects in all corners of the world since then. Today, the

An SRS doodlebug sits in CP's Alyth Yard in Calgary, AB. This image shows off the rear end of the car, where the recording room is located. Notice the testing equipment between the axles of the rear truck. (RAF-YYC from Calgary, Canada [CC BY-SA 2.0 (https://creativecommons.org/licenses/by-sa/2.0)], via Wikimedia Commons).

company boasts to have tested over 12 million miles of track, uncovering 6 million defects of all kinds during their testing.

SRS has a large fleet of equipment to accomplish the huge amount of testing they do on a daily basis. Today, most of their North American fleet is made up of hi-rail vehicles, meaning they have the capability to operate both on the road and on the rails. SRS used to employ self-propelled diesel-railcars (more commonly known as doodlebugs -- see "Jack's Junction", November 2016); however hi-rails are preferred for their greater versatility and efficiency as they can be taken off of the tracks and tucked out of the way of oncoming trains anywhere there's a road crossing and they consume less fuel with their smaller and more efficient engines.

Sperry in the Doodlebug Era

The doodlebugs, being rail-bound vehicles, were outfitted to house their crews for long periods of time while they would test large sections of track. Each one of the cars featured a small galley kitchen, a lounge and dining area, four berths for that unit's crew, and a small washroom and shower towards the rear of the car. Behind the lavatory, the mechanical room housed the main diesel engine and the electrical generators which would generate large electric currents used in the rail's testing.

The car's detection equipment was mounted underneath the rear truck, between the two axles. This array of specialized rollers, coils, and brushes would be in contact with the rail while the car moved forward at speeds varying from five to nine miles per hour. One array on each side of the truck would simultaneously gather data from each rail.

The rail testing itself was done using electric current, and lots of it. 7000 amperes of direct current was delivered to the coils and metal bristles using three volts to complete a circuit. The electricity, when applied to

An SRS hi-rail truck is seen testing the rails in the United States. Notice the testing apparatus mounted to the truck's underbelly. The steps on the rear allow the operator to dismount onto the tracks in the case where he/she needs to do a manual inspection. (jpmueller99 from Shenandoah Valley of VA, USA [CC BY 2.0 (https://creativecommons.org/licenses/by/2.0)], via Wikimedia Commons).

the rail, would create a magnetic field. Detected inconsistencies in the magnetic flux would be recorded automatically on a never-ending roll of paper in the recording room at the very rear of the car. An operator would observe this change on the paper and would make any extra notes as necessary. And if he deemed the defect to be too large, he would command the car to be stopped and the rail would be replaced on the spot.

Once the testing was completed, SRS would return the gathered data to the railroad company. On the spool of paper, there would be seven lines of ink running along the entire length of the spool. Each of these lines would signify different data; the first line was manually notched by the operator every time a milepost or landmark was passed. This gave track repair crews a location of the flaw, so they could easily find it at a later date to replace it. The second line would notch automatically as it passed over a defect in the rail. The third line would keep track of the location of each rail joint -- again this was used to orient the track crews when they would go to perform the repair at a later date. Lines four and five monitored the performance of the onboard electrical systems. These two lines were used mostly by the operator during the testing of the rail to ensure that the instruments were working properly. Lines six and seven, the final two lines on the sheet, monitored the right-hand rail, indicating where the rail joints and defects were found, respectively.

Sperry's doodlebugs revolutionized the way that railroads performed maintenance. Instead of fixing the issue after it happened, railroads now had the option to fix problems before they came up. This prevented expensive and deadly derailments and ensured train crews a safe day at work.

SRS continues the tradition of testing and documenting flaws in the rails today, with a fleet of high-tech hi-rail and rail-bound vehicles. Their detection technology has improved, too:

- **INDUCTION** measures the inconsistencies in the magnetic field introduced to the rail and is especially efficient at detecting transverse defects and vertical split heads. Induction is usually passed through to the rail by means of a metal brush.
- **ULTRASONICS** is applied to the rail using specialized rollers. The rollers detect well on both uneven and bumpy rails because they stay in better contact with the rail, which is a significant advantage they have over the induction method of testing.
- **SURFACE CONDITION MONITORING** uses eddy currents to detect flaws and cracks in the surface of the rail. This technology covers the full width of the rail's head.

Used in combination with the three technologies mentioned above is the **VISION** system, which generates an image of the suspected defect in the rail. The truck operator can consult this image to decide whether or not a manual check is necessary. This speeds up the testing process and eliminates any unnecessary stops.

Today, railways are busier than they ever have been before. Bigger, heavier, and faster trains are pounding the rails in the heat and the cold. Catching these potentially fatal flaws has become even more important now than ever before -- especially when speedy passenger trains share the right-of-way with the heavier, more damaging, freight traffic. However, thanks to companies like Sperry Rail Services and others who offer similar services, we're all in good hands -- whether we're on the train or indulging in the thrill of watching one speed by.

For more information, please consult these links:

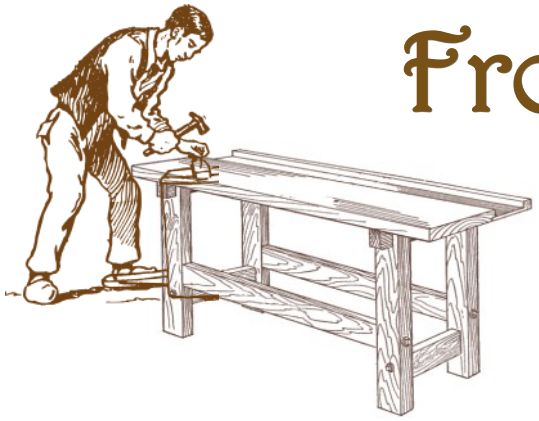
- http://mikes.railhistory.railfan.net/r107.html
- https://www.sperryrail.com/index.php

About the Author

Jack Hykaway is a student, currently attending a post-secondary institution in his hometown of Winnipeg, Canada. He is an amateur videographer and writer and enjoys exploring and documenting nearby railroads and railroad operations in both written and visual formats of his work.

Jack's main focus of late has been producing his column *Jack's Junction* for *The Modeler's Journal.*

Follow along with Jack's videography on his YouTube channel at https://www.youtube.com/user/WinnipegRailfanner1.



From My Side of the Workbench...

By Blayne Mayfield

Whether or Not to WEATHER a Lot

I am a Facebook lurker. That is, I like to keep up with people and groups on Facebook, but I rarely post. There are some great modeling groups that you can join, there. And you can learn much about the hobby from those who post to these groups. One topic that applies across a broad spectrum of modeling areas is weathering.

Just so that we all are on the same page, here is the definition of weathering that I am using: modeling the effects of age, use and abuse, and environmental factors on the texture and appearance of objects. This applies to vehicles, buildings, and even natural objects such as trees and rocks.

The primary reason we weather our modeling efforts is to give our objects and scenes a look of reality. For example, in a typical town or city, do all of the automobiles on the streets look "showroom fresh?" Probably not. But another important reason that we weather is that the practice and process represent an art form in themselves. Let's say one is building a barn and chooses to make it an aged one. The sides of the structure show more of their silvery-grey, old wood than they do the wind-worn, red paint that once hid and protected the wood; several boards are cracked and filled with knotholes, and others even have missing sections; the corrugated metal roof is coming loose in spots, where the wind causes the panels to flap slowly, like the wings of some tired bird; and if you stand at a distance, you can see the faint remnants of the "Meramec Caverns" sign painted on the barn's steeply-angled roof. If you can picture this barn with just a few words of description, imagine what a model artist can do with his or her tools-of-the-trade.

I own a few weathering DVDs by some well-known names in the modeling business, and I also watch weathering videos (commercial and free) on the Internet. One of the things I notice in a majority of these step-by-step tutorials is how the artists tend toward the "extreme" end of the weathering spectrum. Now, don't get me wrong: I enjoy as much

as the next person looking at a well-accomplished "rust-bucket" of a boxcar or other piece of railroad rolling stock. And, I can understand the temptation to weather a model as though it's had little maintenance over many years; such a model can tell a whole story all by itself.

But when does heavy weathering on a model become too much?

I suppose if one was trying to recreate a ghost town, or an industry that suddenly had been shut down years earlier – with all of the equipment left where it last had been used – or a hopper from which the railroad is trying to eke one more year of use before replacing, then a significant level of exposure to the elements not only is permitted, but is expected.

However, in trying to recreate "the real world", not everything we see is weathered to the max. As I was driving through southern Missouri last week, I observed all levels of weathering. A number of the houses I saw looked almost new, a greater number looked to be in need of a little repair or repainting, and a few were in sad conditions. Likewise, as I was driving, I saw that my fellow travelers' vehicles followed much the same pattern: there were cars and trucks that were well-washed, shiny, and maintained, and others obviously were not long for the working-world; but a majority of them were somewhat dingy, needed a paint touch-up, or had been involved in minor, bumper-thumper accidents. In fact – and not trying to carry my observations too far – I would speculate that the distribution of houses and cars that I saw followed the classic "bell curve" that you may have learned in school. It makes sense that weathering, in general, would follow such a curve.

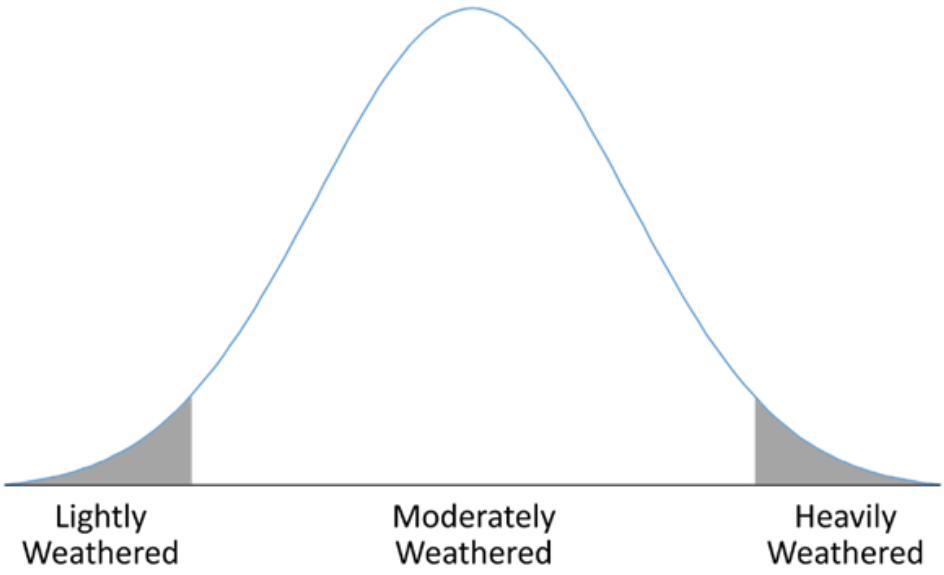


Figure 1. General weathering distribution?

Then, it seems that a modeled town, neighborhood, or scene (other than something such as Gotham City from the Batman™ series) could look more natural if one follows a "weathering continuum" like the one shown in Figure 1.

I would like to see more weathering tutorials take an approach that covers the whole spectrum of weathering levels. This would provide those of us trying to learn to apply both subtle and extreme weathering with the techniques that would help us achieve more natural-looking scenes and models. I would hope that such broad-ranging coverage would include instruction on the use of multiple media: from chalks to oil paints and from simple washes to deeply-layered applications.

Do you weather your models and scenes? If so, do you lean toward minimalism or extra dirty and corroded? There is nothing wrong with either approach, just think about balance.

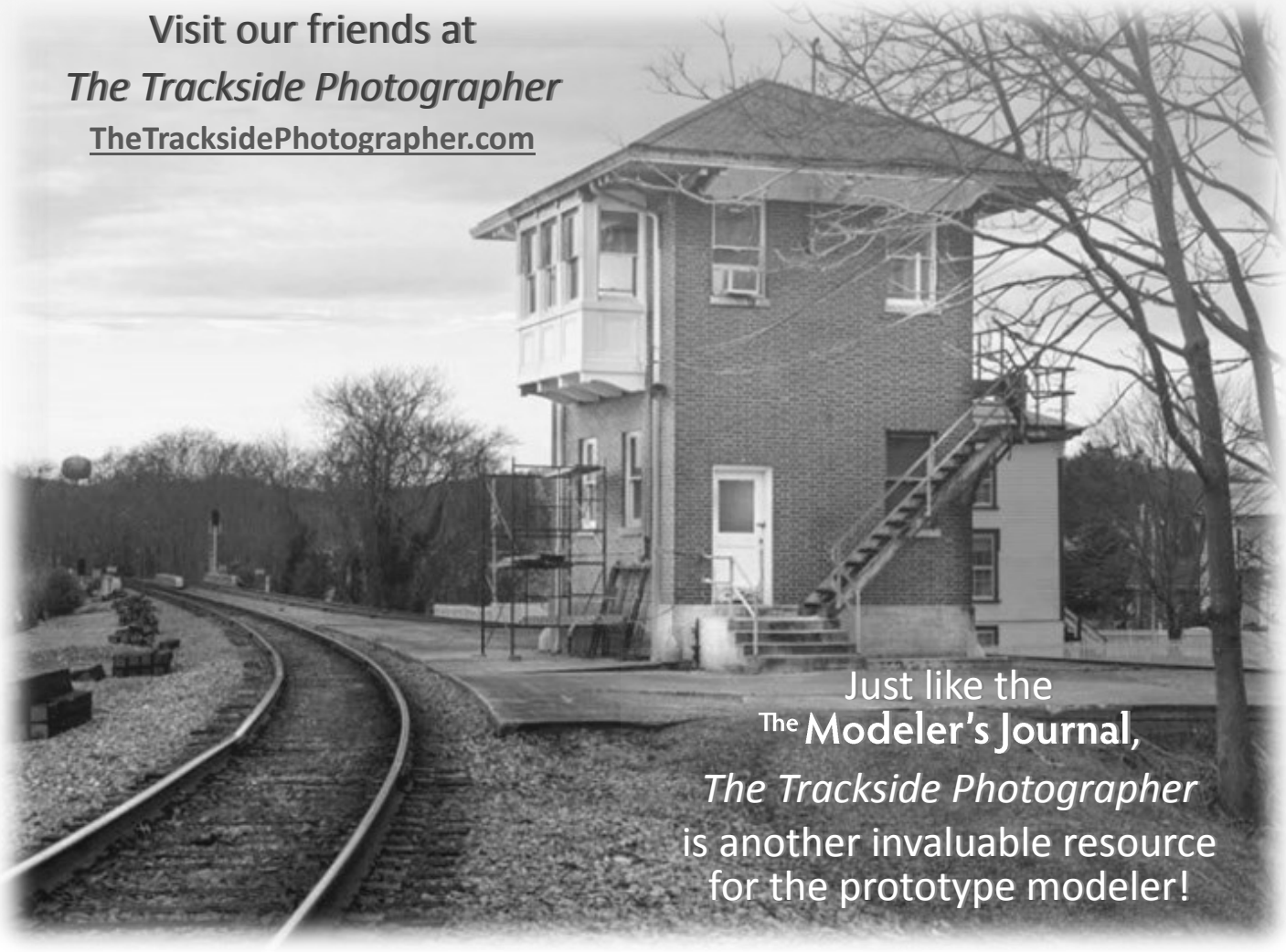
About the Author

Blayne Mayfield is a university professor by day and an HO engineer by night. After a 20+ year absence from the hobby, he currently is working on a proto-freelance layout based on the Frisco Railroad in southern Missouri. Blayne lives in Stillwater, OK, and volunteers as a content editor for *The Modeler's Journal*. You can follow him on his YouTube channel by clicking here.

The Trackside Photographer

If you are looking for a wealth of interesting railroad lore along the tracks: depots, freight houses, signals, interlocking towers, bridges, trestles, shops, turntables and other trackside structures and equipment, then look no further than *The Trackside Photographer*.

Visit *The Trackside Photographer* and explore the visual and cultural landscape that the railroad moves through, with photographs of trackside structures and scenery and writing about the history of sites that are rapidly changing, or have already disappeared.



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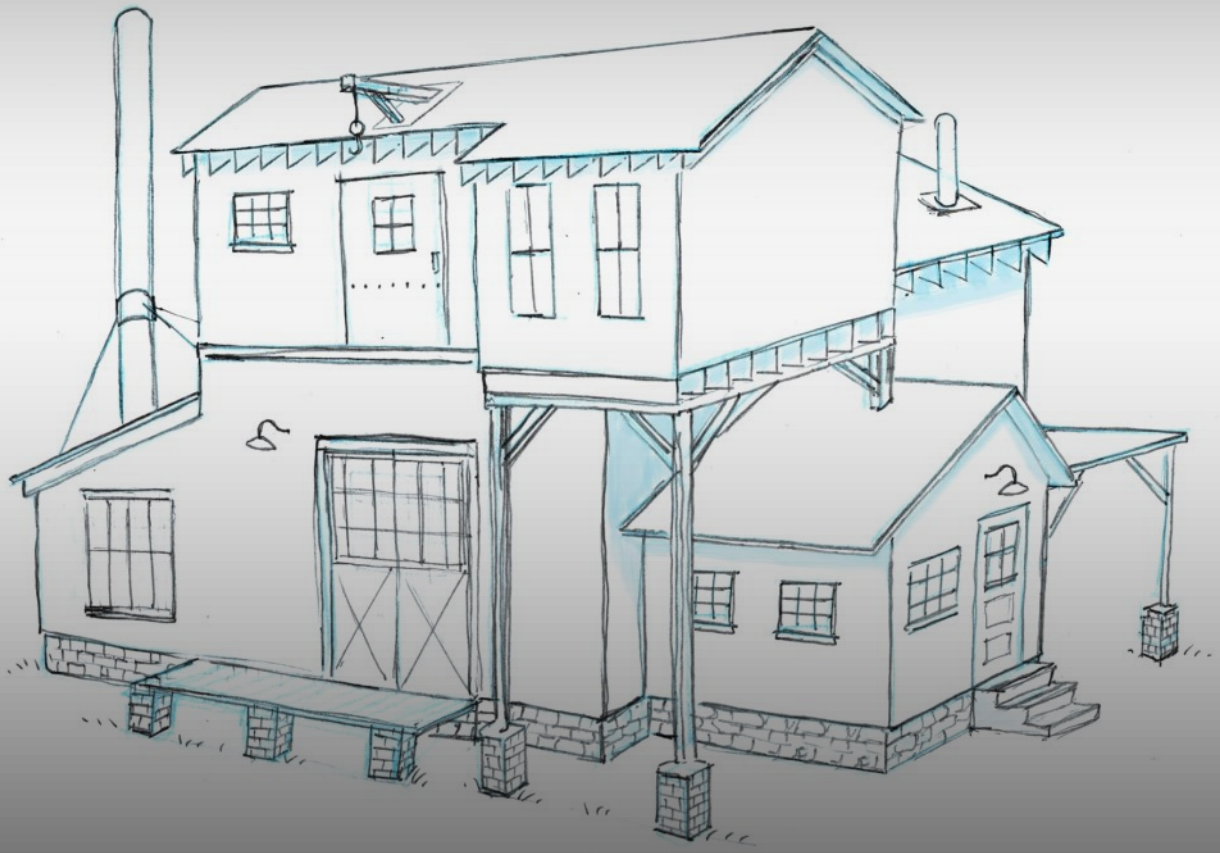

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Original sketch of *KC'S Auto and Repair* by Jason Jensen.