



# SHORT LINE

Sierra Division \* Pacific Coast Region \* National Model Railroad Association

## In This Issue

Scratch Build A Small Office	1
From the Superintendent	2
Call Board	2
From The Editor	4
2025 PCR Convention	5
International Rail Fair 2024	6
Time Table	7
SPH & TS Convention	8
Tidewater Southern	9
NMRA Interchange	10
Sierra Division Calendar	18
Our Future	19
Fast Tracks Loan Program	20
Around And About	21
NMRA Partnership Program	23
Membership Application	24



## CELEBRATE OUR FREEDOM



**Scratch-Built Streamline Moderne Small Office**

*Story Begins on Page 11*

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Short Line is published quarterly by the Sierra Division of the Pacific Coast Region of the National Association. Material may be reprinted with permission.

Articles, photos, tips, or ideas are heartily encouraged and will be enthusiastically accepted! The preferred format would be in Rich Text Format (RTF), with photos as JPEGs, but we will accept any format (from a PC or Mac; MS Word, Simple Text, typed, or handwritten). Send it to your editor by regular mail to Short Line, 2260 Cherry Glenn Ct., Chico, CA 95926 or by email to :

[chipmeriam@comcast.net](mailto:chipmeriam@comcast.net) If e-mailing put EDITOR in the subject line.

# From the Superintendent



**Dave Putnam,  
Division Superintendent**

Greetings, Sierra Division members. I'm sure everyone is looking forward to these long hours of daylight, outdoor get-togethers with friends and family, fireworks on the 4<sup>th</sup> and relaxing by the pool or nearby river. While we're approaching the slow season for model railroading, when the outdoors beckons us, there are still some summer highlights in the forecast.

The Pacific Coast Region's annual convention took place in late April. This year's convention was hosted by the Coast Division. Convention Chairman Phil Edholm and

his team put together a great event that was capped off by a banquet that included a talk given by Doug Debs from the Niles Canyon Railway. Also, during the awards presentation at the banquet, our own Dan Moody took home the Sierra Division's Member of the Year award. Dave Bayless, Chip Meriam, Michael Eldridge, and Walter Schedler took home awards given in the convention contest room.



**Member of the Year,  
Dan Moody**



**UP 4014**

Union Pacific's 4014 "Big Boy" is due to steam into our division territory in mid-July. I'm sure those of you who like to

lurk about the mountains, canyons, rivers, and valleys are making plans to capture a few "once in a lifetime" photos and videos as it navigates the Feather River Canyon prior to parking for a few days in Roseville.

The excitement will continue as this historic locomotive and executive passenger cars head out eastbound for whistle stops in Colfax, Truckee, Sparks, and elsewhere along the line as it heads to Ogden. I'm planning on being amongst you, so please avoid elbowing me or standing in my shot as we attempt to capture the moment.

## Sierra Division Big Boy Dates and Places:

### California

Portola 07/10

Oroville 07/11

Roseville 07/12 & 13

Roseville – Colfax – Truckee 07/14

### Nevada

Sparks – Lovelock 07/16

Winnemucca – Carlin 07/17

Elko – Montello 07/19

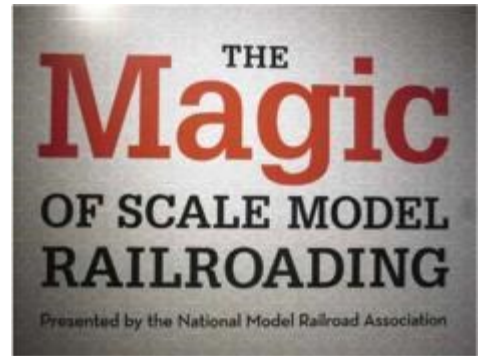
*Continued on page 3*

# From the Superintendent, ct'd.

The NMRA's "Magic of Scale Model Railroading" recently marked its' three-year anniversary at the [California State Railroad Museum](#). Since the 2021 opening date was a somewhat subdued event, due to still in place COVID restrictions, we have plans to make a splash on July 31<sup>st</sup>. We will have a morning presentation in the museum theater, followed by a lunch in Old Town Sacramento, and then back to the museum where former NMRA President Charlie Getz will be giving personal tours of the exhibit.

The NMRA's "Big Show" is happening in our neighboring region's territory in August. The [Surfliner Convention](#) is taking place in Long Beach from August 3<sup>rd</sup> through 11<sup>th</sup> and it promises to deliver a lot of top-notch clinics and layout and prototype tours. The [National Train Show](#) will also be happening in conjunction with the convention on the 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup>. Look for some major announcements on upcoming releases from several manufacturers at this event.

Also, later in August, the Sierra Division will be holding our third quarter business meeting in the Sierra Nevada foothills. This meeting will be held at the [Nevada County Narrow Gauge Railroad Museum](#) in Nevada City on August 17<sup>th</sup>. We will also have several great layouts to tour that day from Granite Bay to Nevada City including [Southern Pacific Donner Pass](#) and [Sandy River & Rangeley Lakes](#) layouts. There will also be a couple of nearby hobby shops that will be open and ready for you to help the local economy. Details will be forthcoming, so be sure to watch your e-mail inboxes.



Donner Pass



SR & RL

Looking further down the road, the International [International Railfair takes place at Cal Expo on November 2nd and 3rd at Cal Expo](#). We will also be holding a modular layout weekend in the roundhouse of the California State Railroad Museum on November 9th and 10th. More details on these two events will be passed along in early Fall.



*Dave Peterson*



# From the Editor



Chip Meriam,  
Short Line Editor

In **The Last Issue**, I asked you to submit your method of organizing your time to allow for progress in your hobby, promising to publish your response in the next issue. Well, someone took heed of my plea. Here is what Michael Eldridge had to say:

*"I don't exactly organize the time, but I have specific goals and an accountability partner. I have a friend in Phoenix. We have a Zoom meeting every Friday morning. We each have a short list of things we intend to get done by the next meeting. This started out when we both were intending to write iPhone apps, but it soon became much more general. At this point I usually have one railroad goal and one app development goal. A goal might be, "I will get the passenger car roof completed by next week." We are not rigid about this. It is not uncommon to say "copy and paste," our way of saying I didn't meet my goal this week so keep it on the list for next week. At the same time, knowing that I am going to have to give a report on Friday makes me want to finish the goal by*

*Thursday. Yes, lots of Thursdays include modeling time. My projects do get done sooner with this accountability."*

My thanks to Michael for his brilliant suggestion. This provides the necessary organization in the form of goals and accountability, plus it furthers and sustains a long-distance friendship!

Our cover story for this issue is a scratch-building article by Division Director, Lou Anderson. In the article, Lou references a previous piece about The Library of Congress, which appeared in the July 2020 PCR **Branch Line**. Here is a link to the **Branch Line** archive page: <https://www.pcrnmra.net/branchline2/>

We frequently broach the topic of how to keep our hobby alive and attract younger people to join us. I'm here to bear witness that the task is far from impossible. Please see the short story on page 19.

Sierra Division member, Tom Campbell, has already started organizing the 2024 International Rail Fair, which will take place November 2 and 3 at Cal Expo. The "Square Foot Diorama Challenge" returns to the event this year with the theme "Fall Into Winter." You can find complete details on page 6.

Our "Around and About" feature this time (page 21) is a beautiful, large-scale, box cab electric locomotive on display at the Gridley Museum. Twice a year, there is a train show at the Butte County Fairgrounds in Gridley. If you visit Gridley for one of the train shows, you should plan to visit the museum. You'll find the box cab model in an exhibit devoted to the Sacramento Northern Railroad in Northern California.

Planning for the 2025 PCR convention is well underway. Our sister Daylight Division will be hosting us in San Luis Obispo. Please see page 5 for preliminary details and a link to the convention website.

*Daylight Limited*  
PACIFIC COAST REGION  
**CONVENTION**

MARCH  
27-30  
2025



SAN LUIS OBISPO, CALIF.

As always, I thank you for reading this publication. I sincerely hope the **Short Line** enhances your enjoyment of this fascinating hobby!

**HAPPY INDEPENDENCE DAY**



*Daylight Limited*  
**PACIFIC COAST REGION  
CONVENTION**

**MARCH  
27-30  
2025**



**SAN LUIS OBISPO, CALIF.**

- Three full days of clinics
- Lots of layout tours and operating sessions
- Several train related excursions available
- Great location accessible via Amtrak
- All suites hotel offers free breakfast, free cocktail hour, and free parking

<https://pcr2025.org/>

# INTERNATIONAL RAILFAIR

International Railfair November 2-3 at Cal Expo Building C in Sacramento

**The International Railfair's Square Foot Diorama Challenge** is back for a third year!

**Theme:** 2024's Challenge theme is "Fall into Winter." Anything to do with the fall and/or the winter seasons are fair game this year. Fall colored trees, any of the holidays from Halloween through Christmas, or something like "Home for the Holidays" will work as the seasonal thematic elements. In addition, the diorama must include at least one railroad element. This doesn't necessarily mean you must include track. A billboard for a railroad company in the scene would qualify, for instance. Whatever the railroad element is, it must be obvious.

**Maximum Dimensions:** Entries will be no larger than 12" x 12". Smaller sized dioramas are acceptable.

**Height:** There is no height restriction beyond what is practical. Is your diorama stable? Can you transport it? Can you fit it in Cal Expo's Building C?

**Scale:** Model railroad scales are encouraged but not mandatory. That said, the diorama should be a scale model. Nothing is preventing a 1:400 scale model for example.

**Prize:** There will be a prize and a trophy for the winner of the popular vote count. Details on the prize and the trophy will be coming soon. Depending on the entries, we may include a junior division for entrants 14 years old and younger this year.

**New Work:** The diorama must be new to the IRF Square Foot Challenge. If you've entered the diorama in our challenge in the past, do not enter it again. We want to see something new! If you have a diorama that you've entered at other contests but not at IRF and it fits the theme, feel free to enter it!

**Entry:** There is no entry fee for the Challenge. Please bring your entry to the Square Foot Challenge table where an attendant will help you with Challenge Registration. The show opens on Saturday at 10 am. Voting begins at noon and goes to 2pm on Sunday. You may retrieve your entry at any time, but you'll possibly miss out on votes if you pull your entry early. You can retrieve your entry after the show is over up until 5 pm on Sunday. If set up with us in advance, it may be possible to work out a later retrieval time and place if needed.

**Fun:** The Challenge's goal is mostly to have fun, but also to give those in attendance another cool thing to look at! Many thanks for your consideration in entering the Challenge!

I'm happy to answer any questions at [tom.c.irf@gmail.com](mailto:tom.c.irf@gmail.com) If you finish early and send me a picture of your diorama, I'd love to show off your creation on our social media accounts.

Tom Campbell, International Railfair's Square Foot Diorama Challenge Director



**SIERRA DIVISION**  
 Next In-Person Meet: August 17  
 Nevada County Narrow Gauge  
 Railroad Museum  
 Nevada City, CA

TIMETABLE
Aug 17, 2024 Nevada City
Oct 12, 2024 To be determined
Feb 8, 2025 Sacramento
May 10, 2025 To be determined


SHORT LINE
Sept 10 for the Oct Issue
Dec 10 for the Jan Issue
Mar 10 for the Apr Issue
June 10 for the July Issue



Sierra Division continues to have online meets via ZOOM. Future online meets will be held the second Saturday of each month when an in-person meet is not scheduled.

**UPCOMING ONLINE MEETS**  
 (all beginning at 10:30 AM)

June 8, 2024  
 July 13, 2024  
 Sept 14, 2024




**Save The Date.** Pencil it in on your calendars. The date is Wednesday, July 31st and the location is the California State Railroad Museum. As you're probably acutely aware, the NMRA exhibit at CSRM had a very silent debut back in 2021 after the museum had been closed to the public for over a year due to state mandated COVID restrictions and protocols. Now that we are 3 years in and well established on the road to normal, we can finally celebrate in a grand manor. The NMRA has reserved the CSRM theater that day and are inviting anyone interested in speaking a few words about the exhibit to step up to the podium and provide us with your thoughts. We've scheduled this to coincide with the NMRA's National Convention which will be taking place the following week in Long Beach. Several of the higher ups in the NMRA are planning to travel to Sacramento to be present that day before heading south for the convention. Some of them have not had the opportunity to visit the exhibit and see it in person.



We are still finalizing plans for the day and will provide details as soon as all the "I"s are dotted, and the "T"s are crossed. Depending on everyone's availability that day, we will probably start on the third floor for some touring during the mid-morning and then to adjourn to a location to be announced for a meal around noon. Following lunch, we will

head back to the museum for our get-together in the museum's theater. We hope you can join us!

Dave Putnam, NMRA CSRM Gallery Committee Chair

**2024/2025 Great Train Show Schedule**

Date	Midwest Shows		Western Shows	
October 04-08, 2024			Del Mar, CA	Del Mar Fairgrounds
October 12-13, 2024	Springfield, IL	Illinois State Fairgrounds		
October 26-27, 2024	Shokopee, MN	Conterbury Park		
December 07-08, 2024	Collinsville, IL	Gateway Convention Center	Salt Lake City, UT	Utah State Fairpark
December 14-15, 2024			Pleasanton, CA	Alameda Co. Fairgrounds
January 04-05, 2025	Kansas City, MO	KCI Expo	Boise, ID	Expo Idaho
January 11-12, 2025	Columbus, OH	Ohio Expo Center & State Fair	Ridgefield, WA	Clark County Fair
January 18-19, 2025	Novi, MI	Suburban Collection Showplace	Puyallup, WA	Washington State Fair
January 25-26, 2025	Stard Charles, MO	Saint Charles Convention Ctr		
February 08-09, 2025	Indianapolis, IN	Indiana St. Fairgrounds	San Jose, CA	Santa Clara Co Fairgrounds
February 15-16, 2025	Cleveland, OH	I-X Center	Costa Mesa, CA	OC Fair & Events Ctr w/ WGH
February 22-23, 2025			Sacramento, CA	Cal Expo w/ WGH
March 08-09, 2025			Ventura, CA	Ventura County Fairgrounds
March 22-23, 2025	Des Moines, IA	Iowa Events Center		
March 29-30, 2025	East Moline, IL	Bend Expo		

# Southern Pacific Historical & Technical Society

## 2024 SPH&TS Convention : Sparks, Nevada



**Dates:**

Wednesday, October 16 through  
Saturday, October 19

**Location:**

Nugget Casino Resort  
1100 Nugget Avenue  
Sparks, NV 89431



**Tidewater Southern MRC, Inc.**  
 A nonprofit public benefit corp. EST. 5/6/19

Saturdays\*  
 9:00 am - 5:00 pm

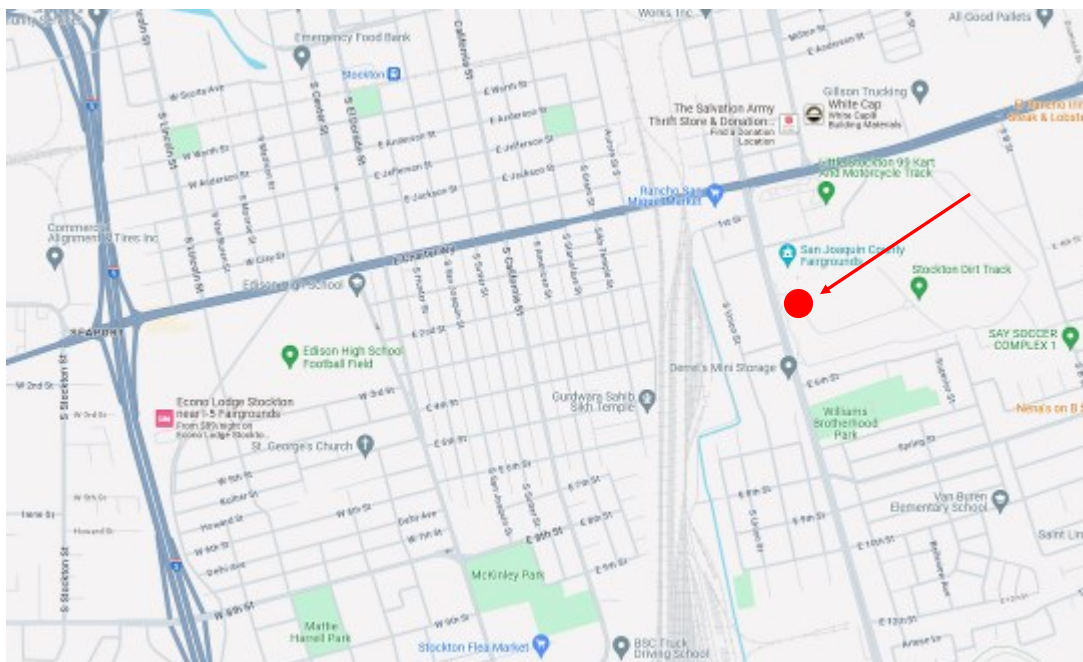
Building and  
 Operating both HO  
 and N scale layouts  
 NMRA Member

WWW.TWSMRC.COM  
 tidewatersrhs@gmail.com  
 The Tidewater Southern Model Railroad Club

San Joaquin County Fairgrounds  
 1658 Airport Way Stockton, CA 95206 Building 1  
 \*Unless preempted by other events

## Tidewater Southern MRC Inc.

We are Located in Building 1 at the San Joaquin County Fairgrounds ([1658 S Airport Way, Stockton, CA 95206](https://www.sjcfairgrounds.com)), We have both HO and N scale layouts housed in a 2,400 sq. ft. alcove. The HO scale layout represents the former Tidewater Southern branch line of Western Pacific. We meet every Saturday from 9am - 5pm except for major holidays and run trains on the last Saturday of the month. Admission is free! Email us at: [tidewatersrhs@gmail.com](mailto:tidewatersrhs@gmail.com) for our schedule.



**Have you joined the NMRA Interchange? It's the newest tool to help you connect with other members, gain knowledge and learn to modeling techniques. The Interchange is hosted on the Discord application which is available for Windows, Apple OS, Android and Apple devices. See instructions below for signing up.**

## Joining the NMRA Interchange

Speed Muller

IT Manager, NMRA

Have you joined the Interchange yet? If not, follow these steps to get connected!

1. Go to [nmra.org/nmra-interchange](https://nmra.org/nmra-interchange)
2. It will ask you to log in to the NMRA website if you're not already logged in. If you are not registered with the NMRA website yet, now's the time to do it. Click the "Need a username? Register now" button, and get set up. Use the email address on file in the NMRA membership system (probably the one where you got this eBulletin). The system will email you a link to set your password.
3. Now you should be in the [NMRA Interchange](#) page. If not, click this link.
4. Click on [Member Info](#) in the top right corner and scroll down get your exact Member ID. You'll need that later.
5. Read through the page and then follow the "Interchange Server Invite" link at the bottom. This is a special link just for you and will look something like <https://discord.gg/xxxxxxx>
6. You will be taken to Discord (the platform that hosts the NMRA Interchange) where you will be prompted to sign in, if you already have an account there, or prompted to register, if not. If you need instructions for creating an account or logging into Discord they can be found [here](#).
7. Once you accept the NMRA Interchange Invite, and you are logged in, you will land in **#the-lobby** with a message on what to do next.
8. We suggest that you read and agree to the **#rules** first. Just click on **#rules** and then click on "thumbs up". Then click on **#the-lobby** again to do the most important step.
9. Discord and the NMRA need to check with each other, in order to verify that you are a current NMRA member with an email on file. You start the process with the **/onboard** command. Now, this is very sensitive to the type of device you are using, so just type the first few letters **/onb** at the bottom where you see a + sign in a circle. It will complete the command for you in a pop-up just above that. Click on the **/onboard** command. Add your membership number (6 characters followed by a space and then two more characters) just as you noted in step 4. Example: `/onboard input: 123456 0A`
10. Discord and the NMRA computers will have a chat, and then you will receive an email containing a **/clearance** command. That's your entry ticket. Copy and paste the whole line into **#the-lobby** (at the + sign again). Example: `/clearance input: 654321`
11. You're in! You will not have to do any of this again. If anything derails, you'll get a message telling you what to do next, and we also have Moderators in the Interchange standing by to help.
12. If all went well, you'll now see more than 350 channels (those # things). We suggest you start by going to **#introduce-yourself** and then scroll up to **#the-workbench** to see what others have done and shared! Then find your Region and Division and say "hello" there. And then start participating and enjoy!

# Scratch Building a Streamline Moderne Small Office

By Lou Anderson

I'm a fan of Streamline Moderne architecture, also called Art Moderne. I like the smooth lines and the metallic trim that makes a stationary structure look like it's going 100 mph. I've also been fascinated, all my life, by the glass tiles surrounding the display windows of stores on Main Street in Woodland as well as in Sacramento and San Francisco.

For a long time I have wanted to try scratch building a small structure, in the Art Moderne style in HO scale, for something a little different on my layout. Also, for your Master Builder - Structures AP Certificate, at least six models have to be scratch built. So, this project could help with that. If not, it would provide experience in the style.

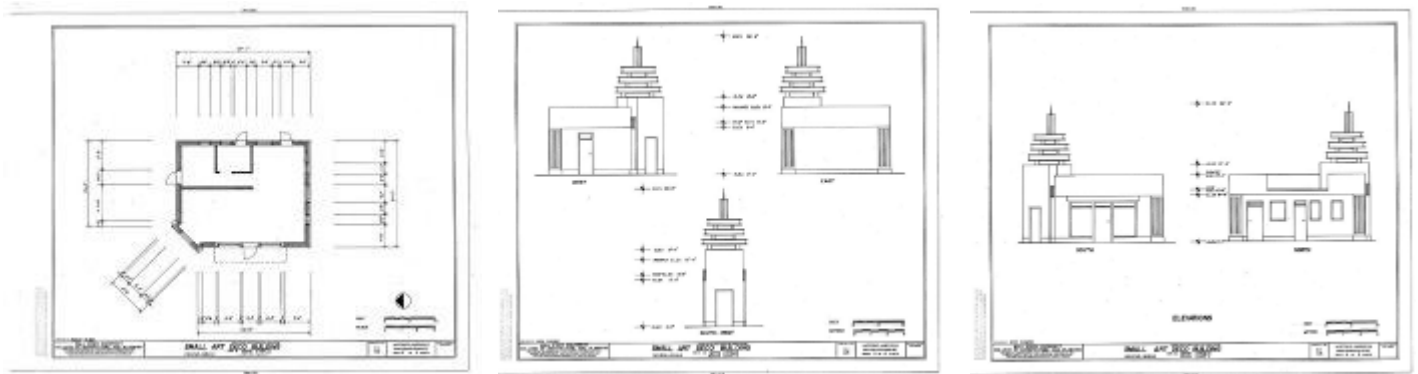
If you have never tried scratch building, it isn't hard and not much different from constructing a model from a kit. The major differences are you find a structure you'd like to build, locate or draw a plan and instead of someone else cutting out the plastic or wood to size, you do it yourself. A piece of basswood can provide the same end result whether a manufacturer cuts out the shapes with a laser or your cut it out with your hobby knife.



## Getting Started

My first source for structure plans is the Library of Congress Historic American Building Survey (<http://www.loc.gov/pictures/collection/hh/>) a free searchable data base.<sup>1</sup> A hunt using the terms "Streamline Moderne" and "Art Moderne" gave zero matches, so I chose the next closest architectural style by entering "Art Deco." The HABS database search engine was much happier with that and provided about 400 matches.

Sifting through the results, I found an entry titled "Small Art Deco Building." It was a small office structure in Decatur, Indiana with a 22' x 22' footprint. Scaled down to HO (1/87th) scale that's about 3" x 3", perfect for a spot on my planned layout. Unfortunately, the survey did not have photos and I was unable to find any online. However, the HABS measured drawings show the floor plan, elevations for all outside walls and details of the triangular Art Deco spire on top of the structure.



After converting the drawings HO scale, I created a mock-up of the main structure by printing out the scale plans on paper and gluing them to a foam core board and cutting them out.

<sup>1</sup>(See my article *The Library of Congress Historic American Building Survey* in the Jul-Aug-Sep 2020 PCR *Branch Line*.)

*Continued on page 12*

Looking at the mock-up, the appearance was very much Art Deco. But, since early Streamline Moderne evolved from Art Deco, a few changes here and there, made the transition simple. I made the following modifications:

- Altered the south and west sides to represent Vitrolite® tiled walls
- Changed the front display windows to round/oval ones.
- Extended the 45-degree entryway out, adding a tower style entry.
- Replaced the spire with a five-panel crest on top of the tower.
- Reduced the number of rear windows to one.
- Eliminated the vertical fluting at each corner.

These adjustments now looked good enough for a model railroad structure. I did consider going for a more streamlined look by replacing the entry tower area with a curved glass corner and door. However, when I tried it on the mock-up it overwhelmed such a small structure. That is a big advantage of having a mock-up.



Foam Board Mock-up

### Materials

My favorite scratch building materials are wood and styrene. Since the original structure had a sleek look, styrene was chosen. The main walls, replicating Vitrolite® tile, are Evergreen ½ x ½ tile sheeting with Evergreen ¼ x ¼ tile sheets for the tower and parapet. The rest of the walls, roof and floor are Evergreen .040 sheet. Various half-round pieces were used for the trim with the canopy and fin being made from scrap styrene sheet.

The rear door frames and window are from Tichy but the doors themselves are from basswood and styrene. More on the round windows and tower sidelights later. The glass block windows are made from Plastruct clear tile.

### Tools

During construction, to make sure everything was square, I used a Coffman 4" Right Clamp, a Micro-Mark Magnetic Gluing Jig, along with a pair of small machinist squares and 1-2-3 blocks. When it comes to sanding, I use a variety of sanding sticks along with a Micro-Mark Tru-Sander.

For cutting I primarily use a #11 scalpel blade in a Swan-Morton #3 handle. For thicker material have an X-ACTO #1 with a #11 blade or #17 chisel blade. (Admittedly, very often I reach for the closest knife and hope the blade is pointing away from my fingers. (Pro note: Always keep Band-Aids on your workbench.)

For gluing styrene together my favorite is Tamiya Extra Thin Cement, but if I need a quick bond I'll use either Gorilla Super Glue or BSI cyanoacrylate. For clear pieces Pacer Formula 560 Canopy Glue dries clear and will also glue dissimilar materials fairly well.

When scratch building you also need some good measuring tools. In addition to a multi-scale (N, HO & O) ruler a 12" architect's rule (preferably metal) and a set of calipers come in handy. For general modeling you don't need an expensive electronic caliper; I got mine for under \$20 on Amazon and it does just fine.

For holding parts together while the glue dries I use plastic bar clamps in both the 5½" and 7½" sizes, 2" cross locking clamps and various sizes of spring clamps. For temporarily holding parts and paint masking, my favorite is Tamiya 6 mm and 10 mm masking tape. This kind of tape is also called kabuki or washi and there are several other brands out there that will work just as well.

### Starting Construction

Construction started by cutting out the four walls<sup>2</sup>, roof, entry, and floor from Evergreen sheet styrene. I initially cut the west and north sides full width making a complete rectangle to determine the cut line locations for fitting the entry tower. The walls were temporarily taped together to determine the main footprint and create a template for the roof and floor. I placed a piece of cardstock under the structure and traced the inside footprint for a cutting guide. The walls were then taken apart.

Once the walls were ready, I used the drawing measurements to mark door and window locations. I simply drew these on the back of side of the styrene, then cut them out by scribing the lines with the back of an #11 blade guided by a ruler. A little sanding squared the walls. The north and west walls were then shortened to final length. The parapet and trim were saved for later to insure a precise fit.

The four walls were then prepared by adding strip styrene around the inside of the walls to hold the roof. The north and west side wall are full height, but the front walls only went to roof level as I wasn't sure yet of the parapet's final look and best way to attach it.

<sup>2</sup>In this article I may distinguish the walls by their compass direction. The main front wall faces west, and the primary side wall faces north so the tower is at the northwest corner. The back wall faces east and has two doors and a window. The south wall is solid with the electrical meter and fuse box.

*Continued on page 13*

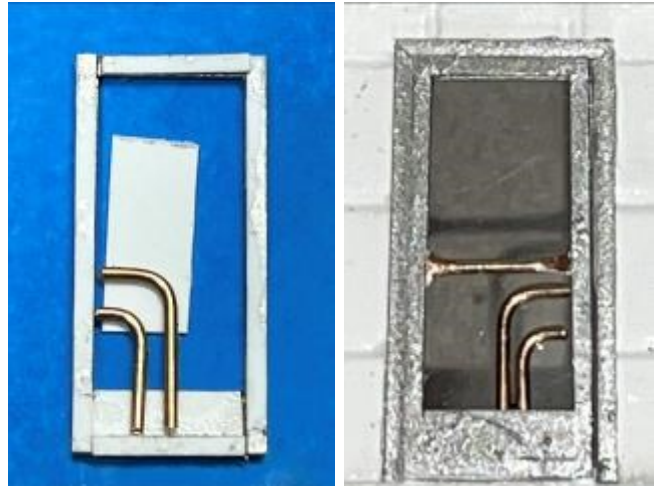
## Doors and Windows

The round porthole windows were made by cutting thin pieces of 1/2" styrene tube and carefully sanding the resulting rings to the correct thickness. The front oval window used the same method with the ring split in half and a square Tichy window sandwiched in between. The glass block glazing was cut from Plastruct clear tile and attached with canopy glue from the back. The side and back doors are sheet styrene or stained bass wood with commercial casings.

The tower and front doors were more of a challenge due to the decorative door bars. Construction started by cutting and gluing the door stiles and rails. Once everything was dry, the doors were painted silver.

It took me a while to figure out the tubular decorative door bars, especially getting the curves right and parallel to each other. I settled on .032 brass wire, shaped the curve with trip-pin bending pliers and trimmed them to length with wire cutters. It took several times to get the shapes correct.

To attach the bars, they were carefully set in place. This took some fine adjusting to get the correct angles. (Tweezers and an Opti-Visor are your friends.) Once in place, the upper ends of the curved bars were glued to the stiles using the tiniest drop of canopy glue. As I wanted the bars not to move or come loose, the lower ends were secured with a small blob of CA glue which is hidden from the outside by lower door panels. Clear acetate was added to the back for the glass and the two doors were set aside to be installed later.



Door Construction

With the windows and other doors installed, the main walls were assembled using the Coffman Clamp and Micro-Mark jig. Evergreen angles reinforced each corner on the inside. I added two cardstock walls inside in a "T" shape for a view block. These were painted to give the impression of an interior should I ever decide to light the building.

The floor and roof were added next to stabilize the assembly. After gluing the floor, the thought hit me that I might later need to access the interior. I drilled a hole, then used nippers and a saw to cut a section of the floor's center. Next time I'll plan ahead (When attaching the tower, I was glad could access the interior)!

## Tower Construction

The tower proved a bit of a challenge. Originally I was going to build it by using a lost piece of styrene for the north and west walls and bending them at an angle for the tower sides. I would then add the entry wall. I soon realized that would not work as the tower is taller than the walls and trying to cut all of that out of one sheet would be complicated. Besides, the tile squares were different sizes.



Tower Assembly

I changed my approach and made the tower a separate piece. The lower tower section was constructed first using Evergreen 1/4 x 1/4 tile. Each side has four pieces—full sections for the top and bottom and narrower strips for the sides of the vertical windows. The door wall was made in a similar fashion.

Once assembled, the tower side windows didn't look quite right even with the glass brick installed. To fix this a piece of "L" channel was painted silver and attached behind the glass brick with one of the open edges on each side of the window forming a triangular shape. This gave the needed depth to the windows.

The door canopy was made by laminating five pieces of .040 styrene and hand sanding the outer corners to shape. A piece of .080 half-round trim was glued to the upper corner with plastic cement but the rest was left loose, and the joint was allowed to dry overnight. The trim was then carefully softened with a heat gun, curving it around the canopy block, securing with glue, tape, and clamps as I moved along. This was one of those times when a modeler needs three hands and four would be better. I let the assembly dry for several days, then repeated the process for the lower trim.

*Continued on page 14*

### Crest

With the lower tower done my attention turned to the decorative crest. Three cardboard templates were cut to the basic shape then placed on the mock-up before trimming to the final size. The template outlines were then transferred to .040 sheet styrene and cut out a bit over size.

Each matching pair was then tightly clamped together and sanded to the final shape resulting in three identical sets. What would be the outside edges of the curved part of the sides were rounded off with a light sanding. It's a minor detail but greatly improved the look. The three different sized side sections were glued up making certain the front and bottom edges were even. These formed the two sides of the crest.

The width of the crest was determined by the width of the tile front. A styrene block was placed between the two side pieces to achieve the correct width. The entire assembly was clamped and left to dry for several days. Once dry a .010 styrene strip was glued over the crest's spine to cover the gap.



Crest

### Parapet

Once the tower and crest were finished the tower was glued to the north and west walls and after drying, the crest was attached. Only about two-thirds of the crest is visible and the bottom rests on the roof. Once installed the crest looked strange just sitting on the roof, so a raised box structure was built to hide it.

To add the parapet, a piece of styrene strip was added to the upper back side of the main tile walls for a place to attach it. The parapet's smaller styrene tile pieces were then glued on leaving .080 gap between the lower wall and the parapet for the streamline trim. The parapet and backer were topped with .020 half round styrene to hide the joint. The rounded vertical corner columns and top front trim for the crest were attached.

### Details

The air conditioner was made from sheet styrene and round trim. The side vents are 3-D louver decals, and the top exhaust vent is an N-scale locomotive fan. The pipes are a piece of sprue with styrene squares added to the ends. For the large vent pipe, I heated and bent a piece of styrene tubing. The power meter and breaker box on the south side were made from scrap and painted to look passable. The tower entry canopy was then added.



Air Conditioner



Electric Meter and Fuse Box

### Roof

The roof was finished by painting it black. Initially I was going to just leave it to simulate a tar roof but after adding the air conditioner and piping it still looked too plain. I decided to use N-scale ballast to represent gravel roofing. Thanks to my friend Geoff Carter, I've had plenty of experience ballasting track. So, that is how I attached the gravel in place.



Roof Detail

*Continued on page 15*

## Painting

With the basic structure completed, I masked the windows, doors, trim, and roof for painting. I mostly used Tamiya masking tape, but blue painters' tape was used for the roof and other sides.

The tower and north and west tile walls received two coats of Tamiya Fine White Primer. This is my go-to primer for anything that needs a fine coat. I was going to spray on a gloss white, but the white primer looked just fine so I added several coats of clear gloss.

After the clear dried it looked too shiny and smooth to me. While many Vitrolite® tile panels have a smooth glass like finish, others have a more wavy look. To achieve this, I hand brushed a mix of Vallejo acrylic varnish in a ratio of about 2:1 gloss to matt. Up close this looks a bit too textured but father away it nicely replicates the effect.

The stucco south and east walls were given a thin coat of Liquitex® Ceramic Stucco Texture Gel. When first applied, this product looks a little coarse for HO scale, but once dry and sanded smooth, it really looks the part. I tried several different colors on these sides and finally settled on medium gray.

## Final Trim

The last item to make was the streamline trim. This is much easier than it appears. It is made by gluing two pieces of .040 half-round styrene parallel on to a .10 x .080 styrene strip. Paint the assembly silver or chrome and glue it in place once the structure is painted.

## Conclusion

If you are just starting out scratch building or have never tried it, finding a small simple structure like this is a good place to begin. Don't be afraid to make changes. If you start down a path and it's not working out, stop, regroup, and start again. Styrene is a very easy medium to work with and changes are easily made.

This was a fun project. I will admit I did not build it in one sitting; in fact, I've been working on it for about four years, starting when I lived in Idaho. It was something I could always pick up and work on when I needed to take a break from or ran into problems with another project. I did have a lot of starts, stops, and rebuilt some things several times to either make it fit better or look better.

### **Parts, Material and Tool List**

Note- This is not an all-encompassing list. I used materials from my scrap bins and probably other glues and paints but these are the main materials and tools used in construction.

Part numbers at in ( )

#### Basic Materials

Evergreen Scale Models Styrene

- .015 x .020 Strip (110)
- .040 Half Round (240)
- .060 Half Round (241)
- .080 Half Round (242)
- .125 Half Round (244)
- ½" Round Tubing (235)
- .188 Angle (396)
- ¼ x ¼ Tile (4505)
- ½ x ½ Tile (4507)
- .040 Sheet styrene (9040)

Plastruct

- .075 clear tile (PSC-43)

#### Paint and Adhesives

Tamiya Fine Surface Primer, (87044)

Vallejo/Acrylicos Vallejo

- Vallejo Gloss Varnish (70.510)
- Vallejo Matt Acrylic Varnish (70.520)
- Vallejo Silver (70.997)
- Vallejo Oily Steel (70.865)
- Vallejo Neutral Grey (70.992)

Liquitex® Ceramic Stucco Texture Gel Item (D240007S)

Tamiya Extra Thin Cement (87182 - Green cap)

Gorilla Super Glue (blue cap)

BSI Insta-Cure+ Super Glue (BSI-106 purple cap)

Pacer Formula 560 Canopy Glue

#### Tools

Coffman 4" Right clamp (AC-5-1)

Micro-Mark Tru-Sander (replaced by Sand-It Micro-Mark 84048)

Micro-Mark Magnetic Gluing Jig (60304)

Wen 123 Blocks (10423)

Swan-Morton #3 scalpel with #11 blade

X-ACTO #1 handle with #11 or #17 blades

Mascot Model Railroader Scale Rule (H711)

Staedtler 12-Inches Engineer Aluminum Triangular Scale (987M1834BK)

VINCA Digital Caliper (DCLA-0605)

Zone L-Square Ruler (37-434)

3" Machinist Square

Sanding Sticks- assorted grits

*More Photos on page 16*







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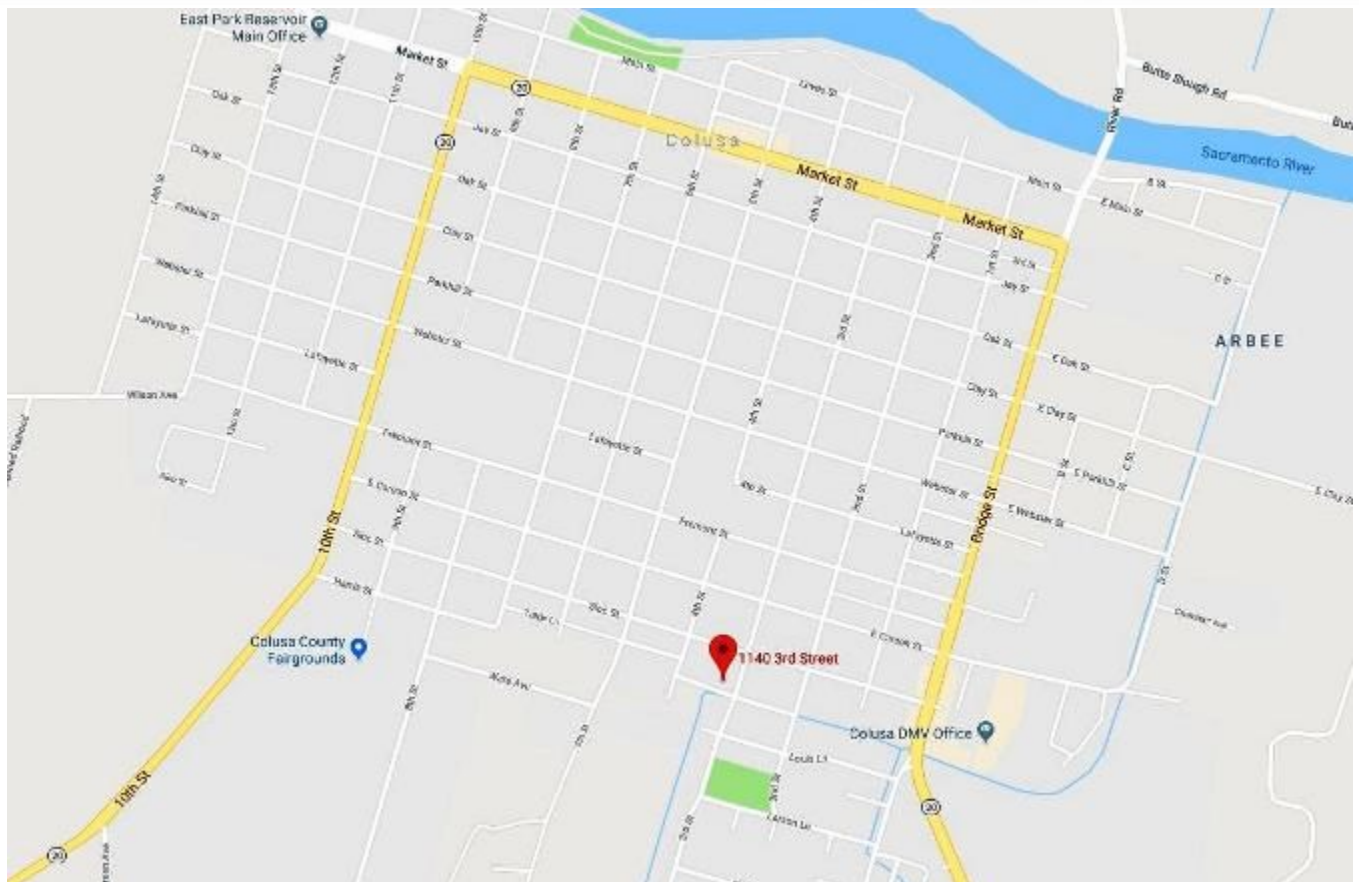
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## Our Future



One-of-a-Kind Mortar Board - 'er Railroad Hat  
Chico High School Commencement - 2024



The Graduate, Riley Bestor

Sierra Division's youngest member, 18-year-old Riley Bestor, joined the NMRA December 12, 2023. To celebrate his high school graduation, Riley displayed his life-long passion for model railroading with a special tribute atop his cap during the Chico High School commencement ceremonies.

To illustrate what we mean by "life-long", see the photos below. Below left are your editor and Riley in 2009, and again in 2024. Both have aged just a little.



Scene From Riley's Layout

The Sierra Division, PCR-NMRA is making available to Sierra Division members a “kit” containing the necessary tools and instructions to complete the part 3 requirements of the NMRA Model Railroad Engineer – Civil Certificate. More information on the requirement is at: [www.nmra.org/civil](http://www.nmra.org/civil)

#### The Kit:

The kit includes tools and templates sufficient to create the following (you only need to construct 3):

- HO Scale #5, Code 83 Right-hand turnout
- HO Scale #5, Code 83 Left-hand turnout
- HO Scale #5, Code 83 Single crossover
- HO Scale #5, Code 83 Double crossover
- HO Scale #5, Code 83 Crossing 14 degree

#### How the System Works:

- Reservations are on a first-come, first-served basis. All reservations will be for a calendar month. Requests must be sent to [louiesqd@att.net](mailto:louiesqd@att.net).
- The kit will be shipped via UPS on the first day of the month. Arrival should be within 2-3 days.
- The member may use the kit for what should be, **about** three weeks.
- The member must ship the kit back, postage pre-paid by the 25<sup>th</sup> of the month. This will allow us time to check and clean the kit and still send it out again on the first of the month. Zip ties and address information will be included in the kit. Return the kit to:  
**Lou Anderson, 100 Buddy Drive, Woodland, CA 95776.**

#### Reservations:

The rental fee and deposit must be received by the 15<sup>th</sup> of the preceding month.

The rental fee for the kit is \$25.00 by separate check. This will cover the cost of shipping the kit to the member, cleaning costs and additional packaging as needed.

A deposit in the amount of \$500.00 must be included by separate check. This check will **NOT** be deposited unless the kit is not returned. When the kit is returned, the check will be destroyed.

Mail both checks, made payable to the Sierra Division, to:

**Lou Anderson, 100 Buddy Drive, Woodland, CA 95776.**

#### Preparation/Supplies:

Be prepared. Have all supplies ready and on-hand in advance of the arrival of the kit. You will need:

Micro-Engineering Code 83 NON-weathered rail, have extra on hand.

Small diameter solder.

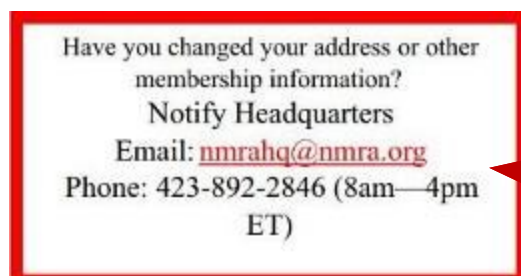
Soldering iron, min 35 watts.

Instructions and a DVD are including in the kit or you can go to <https://www.handlaidtrack.com/> for more information.

#### Responsibilities:

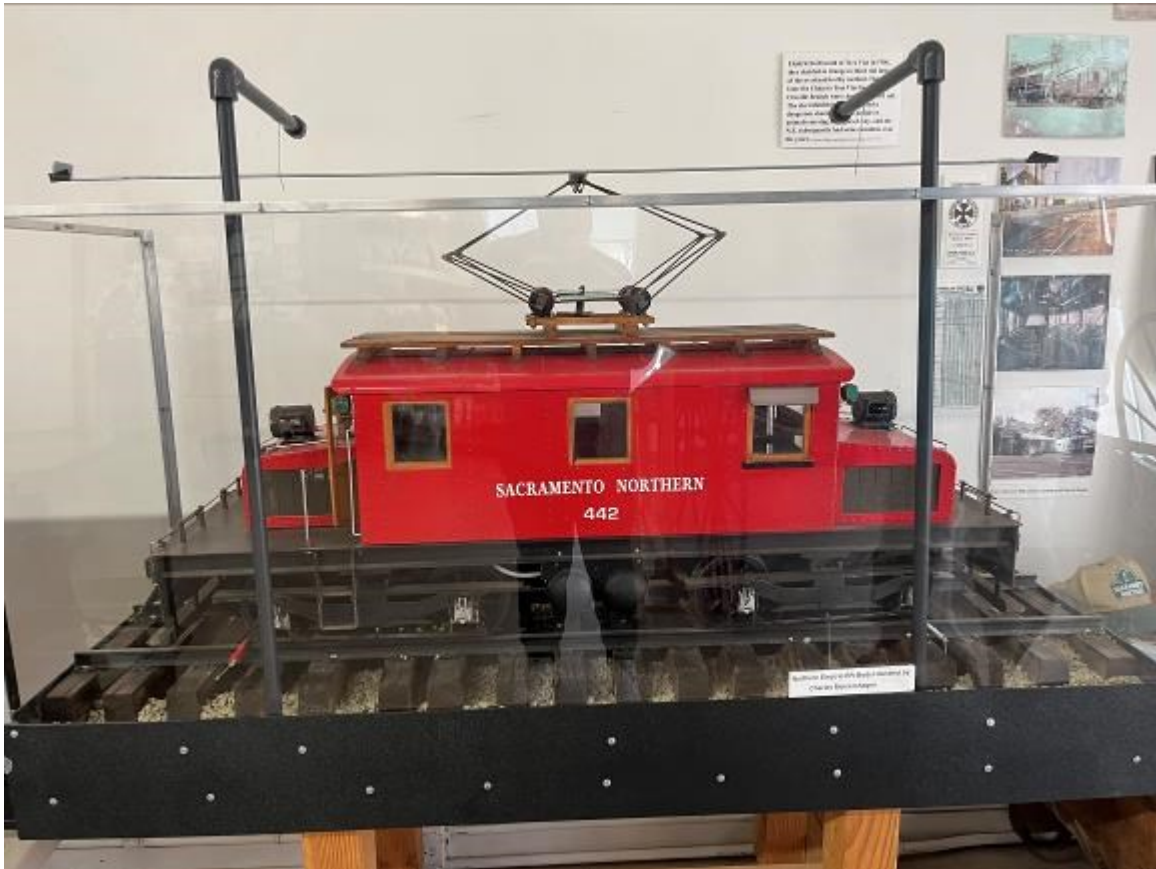
- The member is responsible for loss and all damage to the contents of the kit. If you break it, or damage it beyond further use, notify us immediately at [louiesqd@att.net](mailto:louiesqd@att.net). Be prepared to include a check in the amounts listed above to cover the cost of replacement.
- Please notify us as soon as possible if you wish to cancel your reservation so that we can offer it to another member.

If you have questions, please direct them to Lou Anderson at [louiesqd@att.net](mailto:louiesqd@att.net). or Chip Meriam at [chipmeriam@comcast.net](mailto:chipmeriam@comcast.net).



**IMPORTANT !!!!**

# Around And About



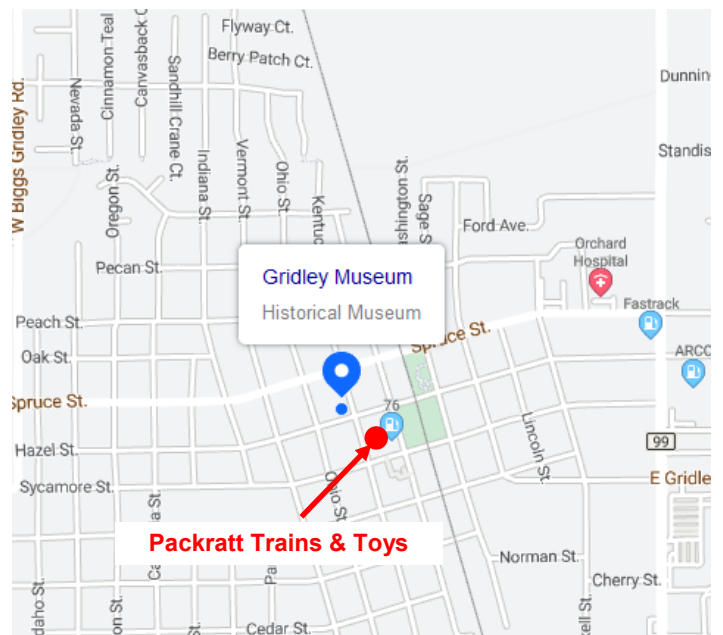
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