



The Switch Tower

Vol. 28 No 1

January 2021

Seacoast Division NMRA www.seacoastnmra.org



Seacoast Division NMRA Zoom On-line Event
Saturday, January 9, 2021, 10:00am-12:00pm
On-line Zoom Event

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1890 era Tiffany Refrigerator Car. Car kits were produced by Bob McGlone and John Canfield of Virginia Foundry & Model Works, Va. Beach, VA..

1890's era Union Tank Line carj. Car kit produced by Silver Crash Car Works .

1902 40' Fruit Growers Express (FGE) Refrigerator Car. Car kit was jointly produced by Bob McGlone and John Canfield of Virginia Foundry & Model Works, Va. Beach, VA.

Models and photo by Bill Gaver for the Union, NH Heritage Park Railroad Museum's 1909 era Boston & Maine HO scale model railroad exhibit.

Enjoy a trip through the [Seacoast Division's Web Site](http://www.seacoastnmra.org).

The President's Lantern by Tage Erickson

Christmas and New Years are just around the corner and then it will be time for our January Winter Virtual Meeting. I want to wish each of you a very happy Holiday Season. For most of us, I think it will be very good to put this year in the rear view mirror. It looks like 2021 will be a better time coming as our country begins the long inoculation process for Covid19. Based on the latest information that I get from the news, I am thinking the earliest we might consider restarting the Division in-person Events will be for the October Fall Event. If we feel it is safe enough to have the Summer Event, then we will do it then.

Presidents Report for 2020

2020 has certainly been an interesting year for most of us. The Division started off very well with our Winter Event, held at the Westbrook Community Center in Westbrook, Maine on January 4, 2020. But once the pandemic hit the world, around the middle of March, everything came to an abrupt halt. We had to cancel our Spring and Summer Events, but we were able to have a Virtual Fall Event on Saturday, October 24, 2020. And as mentioned above, our next Virtual Event will be on Saturday, January 9, 2021 at 10:00 AM.

But in spite of the pandemic, the Division was functioning. We managed to get the Chip Faulter Fund organized by getting the charter written and approved by the Board of Directors. But the pandemic has effected the Faulter Fund by shutting down all of the organizations that the Fund would target for possible support. It is hoped that these organizations will be back in business later this coming year, so that we can get busy with the business of the Fund. The Division was also able to receive approval from the US Internal Revenue Service as a 501(c)(3) non-profit organization. This will make it easier for the Division to receive or accept donations from other sources.

The Division Board of Directors was able to hold several Virtual Board meetings this year. These meetings occurred on April 2, May 29, July 15, September 2, October 14, and November 10. Seacoast Division Board of Directors meetings are open to all Seacoast Division members. If you have an issue or item where you feel the need to address the Board of Directors, or if you just want to listen in to one of the BOD meetings, please contact me and I will send you the meeting information. We don't have a set published schedule for BOD meetings. We try to have a BOD meeting during the week prior to each Virtual Event, but sometimes that doesn't work for various reasons. We also have meetings at other times, when deemed necessary. The next BOD meeting is scheduled for Tuesday, January 5, 2021 at 10:00 AM. So please contact me if you need to attend a BOD meeting.

This year, we have been encouraging all of you to share your modeling projects with us by submitting them to our webmaster, Steve Russo, so they can be listed and shown on our website. To those of you that have done so, thank you very much for your efforts and your support. With most of us being cooped up this year, I am thinking there are many of you that have been working steadily on your layouts or a favorite modeling project. Please consider doing a clinic or providing a short briefing for one of our Virtual Events. If you can do that, please contact Glenn Mitchell and let him know about it, so he can get you included on the schedule. Sharing your work with others is one of the important things that you can do to promote our great hobby.

Due to the pandemic, all of the local Model Train Shows in Maine and New Hampshire were cancelled or postponed until further notice. This will certainly carry over into year 2021. There is no way to know when these gatherings will be restarted. When they do resume, our Seacoast Division will support every show that we are able to. Sadly, the annual January Train Show in Springfield, MA has been cancelled for 2021. Without a doubt, I am looking forward to the day that I can report to you about our modeling endeavors, without having to reference something related to Covid19.

The President's Lantern by Tage Erickson

In spite of it all, our hobby continues. I feel that our Division is very strong and is flourishing quite well in spite of the obstacles. This Division and the entire NMRA is about **the trains**. When we concentrate our efforts on that one thing, everything else seems to fall in place very well. So I want to encourage each of you to keep working on your layouts and enjoying the many benefits of this great hobby and your membership in the NMRA. Please think about sharing some of your efforts with the rest of us.

Our quarterly publication, The Switchtower, continues to get great reviews by all that read it, both inside and outside of the Division. But our editor Geoff Anthony, is always looking for articles and pictures to publish. These articles and pictures come from all of you, our members. Please consider writing an article or sending a picture with captions and descriptions to Geoff Anthony. Thank you!

2021 Elections

As you all should know by now, our 2021 election process is underway. By this time, I was hoping to have more ballots submitted, then there is presently. If you haven't voted yet, please take the time to submit a ballot either by mail or by email. It is important that we get as many members to participate as possible. Regardless of the fact that we only have 3 candidates for the 3 positions, we think that this may be the best way for the Division to vote in all future elections. So please show your support for this by sending the Division Secretary your voting ballot. I have again, enclosed the voting procedures with this message. All the ballots must be in the possession of the Division Secretary by Monday, January 4, 2021. This message and the Division Voting Procedures will also be listed on the Division web site, seacoastnmra.org. The election results will be announced at the Virtual Zoom meeting on January 9, 2021, and also published on the Division web site.

In closing, let me thank all of you for the continuous support that I get as your Division President. It means a lot to me, because this is your organization. Thank you! Again, I want to wish you all a very Happy Holiday Season and I wish you all the happiest of New Years and a prosperous, productive and healthy 2021.

Best regards,

Tage Erickson

Seacoast Division President



Seacoast Division Election Voting

For this coming year 2021, The Seacoast Division will not hold an actual Winter Event/Annual Meeting in January where our members vote to elect three members to the Board of Directors. Our annual election of 3 directors will be done differently this year. In lieu of voting in person at the Annual Meeting, a Seacoast Division member may cast one ballot using one of the two (2) following methods:

1. **MAIL:**

Ballots (below) found on the Division web site seacoastnmra.org, may be copied or cut out, filled in as desired, and mailed to the Division Secretary. The Seacoast member **MUST** write his/her Name and NMRA Membership Number on the outside of the envelope to certify the ballot enclosed. The ballot must be mailed to:

Seacoast Division Elections
% Tom Oxnard
5 Greenleaf Drive
Exeter, NH 03833

Mail ballots must be received by the Seacoast Division Secretary no later than Monday, January 4, 2021. The Secretary will verify the ballot and record the member as having voted.

2. **E-MAIL:**

A ballot may be cast by sending an e-mail to secretary@seacoastnmra.org.

The e-mail must be sent from the Seacoast member's official e-mail address that is on file with the NMRA and the Division Membership Chairman.

It is the responsibility of each Seacoast member to ensure the Membership Chairman has his/her correct e-mail address. Only one official e-mail address is allowed per member. You may confirm your official e-mail address by sending an e-mail to the Membership Chairman at: member-chair@seacoastnmra.org.

A valid e-mail Ballot **MUST** contain the Seacoast member's Name and NMRA Membership Number in the E-mail Subject Line. The names of the persons you are voting for must be entered in the body of the E-mail.

Enter **ONLY** the names of the three Candidates for whom the member is casting votes. The three names can be the candidate names included on the ballot or write-in candidates. Write-in candidates must be members in Good Standing of the NMRA Seacoast Division.

E-mail ballots must be received by the Secretary no later than Monday, January 4, 2021. The Secretary will verify the ballot and record the member as having voted

Seacoast Division Election Voting**2020 SEACOAST DIVISION BALLOT**
(see instructions above)

Board of Directors (3-year terms)

Vote for up to three candidates:

_____ Glenn Mitchell
_____ Ralph Brown
_____ Jack Lutz
_____ write in: _____
_____ write in: _____
_____ write in: _____

Glenn Mitchell seeks the position of Director of the Seacoast Division. He has been a Director for the past 4 years and Vice - President since January 2019. In the spring of 2018 he took on the role of Seacoast Activities Coordinator for NH. He has filled in as the Seacoast Activities Coordinator for Maine, which is currently vacant, and has organized all of the quarterly Seacoast Events since then. He resides in Concord, NH.

He has been a NMRA member since 2008 and has earned one AP Certificate, Chief Dispatcher, and is working on several more Certificates. He has been a member of the Bedford Boomers since the early 80's. His retirement in 2015 from BAE Systems where he was an electrical engineer and project manager for 34 years has made time available to step up and give back to the hobby and the NMRA. His modeling has been primarily limited to HO scale modules until 2015 when he purchased a new base-ment (with home attached). He has been planning and has begun building his HO scale C&NW Illinois Division layout, which is based on the C&NW and EJ&E in Illinois and Indiana in the 1975.



Glenn Mitchell

Seacoast Division Election Voting

I joined the NMRA in 1998. I was a member of the Seacoast Division for 10 years, moved to the HUB Division for 7 years, then returned to the Seacoast Division in 2015. I attended my first NMRA division meeting (Seacoast) in South Portland in January 2017 and have maintained the Seacoast's website calendar since then. I have found motivation and inspiration at Division meetings from clinics and show & tell sessions. That has promoted progress (slow as it is) on my layout. I am also slowly getting to know other members of the Seacoast Division and have even attended a couple of operating sessions on a member's layout. Since January of 2020, I have been serving as a member of the Seacoast Division Board of Directors, filling in the unexpired term of past member Chip Faulter. I would like to continue my service as a Board member for a new 3 year term.



Jack Lutz

I was appointed to the Board of Directors effective December 1, 2016 to fill the unexpired term of Peter McKenney after he resigned due his move out of the Division, and am now finishing my first three year elected term. I am again running for the Seacoast Division Board of Directors for a three year term. I joined the NMRA (MER and New Jersey Division) while stationed in Atlantic City, and have been a life member since 1971.

In addition to serving on the Seacoast Division Board of Directors, I serve on the NER Convention Committee. During the 1980s, I served on the NMRA Promotion Committee, representing the NMRA at various model railroad events in Maine and New Hampshire, and providing an educational model railroad exhibit to the Portland Public Library for Model Railroad Month each November for several years.

My interest in railroad modeling began at age 5 with a Lionel train set at Christmas. I migrated from tinplate O to O-Scale, and then made the change to HO scale in 1968. My modeling is focused on the Pennsylvania Railroad and the related Long Island Rail Road and Pennsylvania-Reading Seashore Lines (WJ&S) during the first half of the 20th Century. Planning for a revised multi-deck PRR/LIRR "Keystone & Sunrise Division" is well underway



Ralph Brown

Seacoast Division NMRA Zoom On-line Event

Saturday, January 9, 2021, 10:00am-12:00pm

A New Kind of Event – On-Line with Zoom

Since Covid-19 continues to be a major health risk, especially to older people, the Seacoast Division Board of Directors has made the decision to cancel “in person” events for the foreseeable future. The BOD has also decided to help fill the void by holding on-line Zoom meetings. Many of you are already familiar with Zoom since other organizations are already starting to use it.

Zoom is one of several video conferencing applications available for use on your computer that is connected to the internet. For several years, lap top computers have been equipped with a camera that faces the user, a microphone, and speakers. The computer with the camera/microphone / speaker combination lets the user take advantage of the full capability of Zoom. If you don't have a computer with the camera/microphone /speaker you can still use your computer to view the event and you can communicate with everyone using a phone. Finally, a smart-phone can also be used to participate in a Zoom video conference.

New users will have to go to zoom.us and then download “Zoom Client for Meetings” if you use a computer, or download the Zoom Mobile apps for iPhone or Android from the APP store. You will not have to register for an account. The host of the Zoom Meeting, in our case Seacoast President Tage Erickson, will send out an email with a meeting invitation which includes a link to the meeting. The non-host attendees will click on the link a few minutes prior to the meeting to get connected to the Zoom meeting. The host will then accept you into the meeting and you will be able to see all the attendees that have cameras and you will be able to hear all the attendees that have microphones or have called in on the telephone.

President's Welcome by Tage Erickson

Tage will address the members of the Seacoast Division.

Presentations

Detailing a B&M Doodlebug by Tom Oxnard, MMR

Doodlebugs were common in the 1920s and 30s. They were the predecessor of the RDC. Many railroads had them. Tom will show you how he took a Bachmann B&M Doodlebug and upgraded it to look like the prototype with some fairly simple steps.

Cardstock Structures by Jim Gore, MMR

Cardstock structures - A survey of cardstock models as craftsman-level entities. Jim will describe cardstock modeling, the necessary tools and glues, new techniques that must be mastered, as well as examples of structures, vehicles, and rolling stock made from cardstock. There will be a more extensive examination of the construction of John Allen's engine house at Gorre to demonstrate the techniques.

Seacoast Division NMRA Zoom On-line Event Saturday, January 9, 2021, 10:00am-12:00pm

Video Layout Tours

Since we can't tour member's layouts in person, we'll be doing the next best thing – seeing layouts on video. Seacoast members Victor Hand and Herm Botzow recorded video tours of their layouts for the NERx regional event held in early December, 2020. Victor and Herm will be here to introduce their layout videos.

Buckeye Railroad by Herm Botzow

New York Central – Harmon to Cold Spring by Victor Hand

What's On Your Workbench?

We invite members to show a few photos, PowerPoint slides, or even a short video of what you are working on or a layout tour etc. Send me an email to sign up and describe what you will be presenting. Please limit your presentation to about 5 minutes in length. If you have a longer presentation, let me know and I can schedule it in a future Zoom meeting.

Open Forum

Let's discuss what members would like to see in future Zoom Events.

Next Event: TBD

Mark your calendar and save the date!!

www.seacoastnmra.org



Models and photo by Bill Gaver resin freight car kits for the Union, NH Heritage Park Railroad Museum's 1909 era Boston & Maine HO scale model railroad exhibit.

Deshler Station ,adventure's in CAD and 3D printing

By James Mingo

Replicating a Distant Structure, the story of my attempt to create a model of the Deshler, Ohio, Baltimore & Ohio, passenger station.

It is funny how circumstances can conspire to generate modeling projects. This summer of 'stay at home' left me thousands of miles from my ongoing projects, my tools, and my modeling supplies. I didn't want to try to duplicate everything but didn't want to sit entirely idle. Searching for something to fill the time led me to Rail Cams. I'd seen the Trains Magazine Rochelle, Illinois camera before, but had never explored further. Boredom led me to YouTube and the cameras at Deshler, Ohio, Fort Madison, Iowa, and Santa Fe Junction in Kansas City, Missouri. While Fort Madison and Santa Fe Junction are busier, at Deshler, the buildings in the frame kept drawing me back.

The passenger station, and an old control tower now serving as storage for track crews, both loom prominently in the Deshler cam view. The tower is a fairly standard rectangle with some interesting details. Deshler's old B&O station also appears pretty standard at first glance. It is also kind of beaten up, which makes it more intriguing. Pure idle curiosity led me to do a Google Earth street view to take a run around the nearest streets to look at the building from all sides. Given my usual luck, I wasn't surprised that none of the street view images came anywhere near the station. I could get distant views only. That digital excursion further piqued my interest. I started looking for photos online.



Figure 1: This is a view of the station similar to what you see from the Deshler Rail Cam

Fairly quickly, I found Figure 2, showing that the two main lines intersecting in Deshler cross at 71 and 109 degrees. The photo also showed that the station was built with the walls facing the tracks, parallel to the tracks. That was enough to get me hooked. While I like constructing or detailing cars and locomotives, I love modeling oddball buildings. Now that I knew the station wasn't square, I wanted it in three dimensions, in HO scale.

Now, I've never, to my knowledge, been within a thousand miles of Deshler, and this summer I wasn't likely to make the journey to measure and photograph the station. That merely made figuring out how to generate a reasonable representation of the station more entertaining. Could I, using only material freely available on line, come up with enough data to produce a decent model of that curious building?

Deshler Station ,adventure's in CAD and 3D printing**By James Mingo**

Figure 2: Station is to the left and the Tower is partially beneath the box showing the angle

In a way, I'd already started that process when I gathered photos and looked over the station on street view. Now, in order to try to build the structure, I needed to study those photos in detail. This is the most dangerous part of the project. It is way too easy to get caught in a state I call 'research paralysis'. Sure, I had to spend some time gathering and reviewing photos. But I had to review them with the goal of finding some way to begin sizing the building.

The photo that gave me the angle of the tracks also gave me a known dimension-4'8". Well, given the blur that occurred once I enlarged the photo to usable scale, not only did the omitted half inch go away, I called the tracks five feet and kept the slop in that decision in mind as I laid out the structure. I had a clear shot of the station roof, and using that five foot number, I determined that the roof was about 32' across. Looking at the side views of the building I'd found, I decided that the roof overhang was somewhere in the area of four feet. If I went with four feet, deducting the overhangs would leave me a nice 24 foot wide building. Deciding the wings were 24 feet wide allowed me to estimate their length at 36 to 40 feet.

The next step was to try to confirm those numbers. I made my first stab at sizing the walls by trying to fit the windows and doors to them. There are some fairly standard sizes that appear again and again, 6'8" doors, for example, or windows that are 39" or 42" wide, and belt lines that are between three and four feet off the ground, or steps that are around eight inches in rise. Also often useful is the size of typical bricks, which with mortar, are about 3x4x8. Most of my photos of the station blurred when enlarged, making brick counting a problem. I could tell there was some fancy brick work in the building, but I couldn't count rows and columns.

I found an image of the station showing people around when it was still in use. Based on apparent heights of pedestrians, I had a bunch of 9 over 9 windows, that appeared to be more than 6 feet tall. If the windows were that tall, they were also more than 3 feet wide. I also had a shot showing the original loading door, which I guessed would be 8 feet tall and wide, or maybe a little less.

Between the overhead shot using track dimensions, a little counting of fuzzy brick, and some

Deshler Station ,adventure's in CAD and 3D printing**By James Mingo**

estimates based on guesstimates of window sizes, I began drawing walls and floor plans. Was my first drawing going to be my last? Highly unlikely. However, beginning to draw up scale plans seemed the best way to discover what I'd guessed wrong, or otherwise overlooked

After laying out estimated wall lengths and heights, I laid out estimated windows and doors. An eight foot wide (guesstimated) loading door allowed me to estimate window widths and spacing between the windows. Laying out the windows and doors with appropriate separations forced me to lengthen the main sides of the station.

The key wasn't whether I had the exact right size for the windows, the key was having the windows in proportion, not only for height to width but also with respect to positioning in the wall. In that first pass at drawing, the sizes for the windows provided me with a wall height.

Since the station wings appear to be symmetrical around a center line drawn through the middle of that big front window, I made certain my drawing was square by folding the drawing of the floor plan along the center line to confirm that the wings were exactly the same size and shape. Once I had confirmed that the drawing was square and equal, each change to the size of the structure could be made by adjusting the wings equally.

The foyer was a key design feature. When I began to really work out its dimensions, I was again and again forced adjust various dimensions. Initially, I guessed that the three faces of the entry foyer were all the same size. The roof above them suggests so, as do the various window treatments. My first guess at the length of these walls was nine feet. That lasted until I tried to fit two two foot wide columns on that wall and draw the big square window between them. The positioning of the windows and doors demanded resizing those walls to eleven feet wide. Which required a commensurate lengthening of the side walls to allow the windows in the side walls to be positioned a proper distance from the corners of the walls containing the main entry doors.

Deciding exactly where to place those three walls was a problem that would haunt me. It is evident that the walls containing the doors aren't parallel to the main sides or the tracks. My first stab at placing those walls had window facing the diamond a foot outside the point where the extended walls of the wings would intersect. That position appeared to give me the shallow slope I could see in some of the photos of the station.

I was quite proud of catching this issue early. I was wrong to celebrate my initial wall placement. After two or three rounds of adjusting walls to make the windows look like they were properly spaced, I tried standing up the station. Photocopying my drawings, I cut a floor and a ceiling out of foam core. The walls I cut from poster paper, mostly to keep them thin. Then I taped the walls to the faces of the foam core floor and ceiling. Two passes of this process got me a set of walls that seemed to work. This brought me to the point of trying to fit the roof.

The first question to answer when preparing to roof the station, was how much did the eaves extend beyond the face of the building walls? Was my initial four foot dimension correct? Based on the height of the space above the windows, I still thought the eaves had to be four feet. While I ultimately determined the four foot number to be about right, I discovered that I had adjust for the width of the gutter system that encircles the entire roof.

I sized the walls of the foyer at eleven feet wide and thirteen and half feet tall on my second stab at sizing the building, and never changed that number. I was happy with those walls right up until I tried to build the octagonal roof over them and tie it to the roof over the wings. Then I learned that the foyer wall facing the diamond had to move back until it was a foot behind the projected intersection of the side walls rather than a foot ahead of it. I also had to shorten the difference between the short walls and the tall ones to about two feet total.

Interestingly, this two foot movement of the foyer wall didn't directly translate to the side walls, Those were only going to have to get another foot longer to make room for the windows, bringing the main walls to about forty two feet long, which was as sensible as the twenty four foot width of the wings. That was a simple change. Yeah, right. Moving the walls means the floor and

Deshler Station ,adventure's in CAD and 3D printing by J Mingo

ceiling pieces have to get a foot longer. The roof sections over the wings have to get a foot longer... And...

All of which could have been caught by figuring out that the octagonal roof actually has exactly the same pitch as the roof on the wings. Once that becomes clear, it is possible to calculate the point where the eave has to be to place the point at the peak of the octagon in line with the ridge lines of the side roofs. The roof then will place the foyer walls, and all that long ago high school geometry might even help design that octagonal roof.

Of course, I made a huge mistake on my first run through. I looked at the short guy passing through the doorway in an old photo and convinced myself that the door to the station was more than 6'8" tall. I decided it was 7' 6" went with that dimension all the way through constructing a full paper and cardstock model to prove the concept. The door assumption actually held good until I tried to convince myself that the windows were as wide and tall as I'd drawn them. Suddenly my side walls were looking S scale tall and somewhat over length for HO as well. Going over the photos of the station again brought me back to that door. Remembering that the typical size was an old standard, I made it 6'8".



Figure 3 shows the difference in the cardboard mock ups . On the right is the station when sized off a 6' 8" door. The piece of foam core at the eave is way over scale at about 18", which makes the extra rise of the octagon walls appear shorter than than it is.

Once I fixed on the 6' 8" door, major building dimensions began to make good sense. The wall height became about 11'8", including the 6" to 8" of exposed concrete at the base of the brick, which also seemed to match the height of the step up to the doors. The shorter and narrower windows produced track sides and rear sides of the main wings that were the same length, which made perfect sense.

Another detail that finally became clear in the third attempt at drawing the station was the nature of the join between the section of the octagon that held the main doors and the window facing the diamond. The short stub walls connecting those three short walls to the wings weren't perpendicular to the wing. Instead, they were short segments of additional walls of the octagon. This discovery further supported my late conclusion that the entire roof at the lobby area is merely a complete octagon poking up through and between the two pitched roofs on the wings of the station.

Deshler Station, adventure's in CAD and 3D printing

By James Mingo

Figures 7 and 8 clarify that relationship

At last I had a good working drawing. Now for the details. Like many brick buildings from the late 1800s and early 1900s, the Deshler Station had some fancy details. Some soldier courses, some raised brick rows and so on. Those would be difficult to get right, but not impossible, if I could find the right varieties of sheet brick. The problem was that the doors and windows on that foyer weren't something I was going to be able to kit bash from anything on the market. Hand constructing them from stock styrene shapes was going to be a bear. I'd been through that aggravation when I built Bangor's Union Station. Fortunately, or so I thought, the modeling world has evolved since I built Bangor's station windows. Three dimensional printing was available and might be an answer. I'd bought and used some parts from a company called Shapeways that was set up to print items as drawn by their customers. Could I find a way to draw what I needed without purchasing an expensive CAD program?

My CAD search quickly led me to TinkerCAD. Free, browser based and seemingly not too difficult to use. Rather than drawing lines, the system was based on placing and stretching or warping shapes, and then adding or subtracting other shapes to devise the final desired item. A bunch of long narrow boxes would form window muntins. Windows then were just lots of boxes of different shapes all tied together. How tough could this be?

First of all, picking shapes and removing parts of them by turning other shapes into 'holes' was a different way of thinking. I was about half way into drawing my first window, in HO scale (and the hard way), when I discovered that someone had produced and made available a section of brick wall. The bricks were deliberately irregular, and irregularly spaced, but all that was adjustable. Even the bricks themselves could be resized.

That was my 'Hey, look, a squirrel' moment.

Everyone who reads this is probably familiar with scope creep. Well, when I found that piece of brick wall, scope creep grabbed my project in a big way. Over the ensuing month, I spent most of every day engrossed in TinkerCAD. To begin with, I ran tutorials and quickly decided to toss away my partial window. There are dozens, if not hundreds of tutorials out there. The ones I found most straight forward and understandable were by a guy presenting himself as PromoAmbitions. I book marked several of his videos and returned to them multiple times to gain better understanding of some of the TinkerCAD features. Time well spent, for certain.

I learned a lot from the tutorials. There were a couple of aspects or tricks I discovered in TinkerCAD that aren't covered in anything I saw. First, TinkerCAD gets slow and will bog down completely if you ask it to merge too many parts at once. In my first attempt to build my station walls, I made the little sample of brick into one big HO scale brick wall and inserted and soldier courses that I knew appeared everywhere. Then I just cut down, poked holes, and inserted more soldier courses and raised bricks to turn the big length of wall into the shorter walls I needed.

I shortly learned that TinkerCAD carries every single bit of the entire wall along on the road to the smaller wall, and it sees every brick as an individual construct. By the time I finished building my walls, I couldn't keep all of them in a single project, much less stand them up a look at the station. It was back to the drawing board to make short chunks of wall that had precisely matched brick sizes while not being much more than the size of the walls I needed. When making shorter walls, I learned it was important to calculate even numbers of courses and columns. You can only have full rows and courses, but can have any dimension for the overall wall width and height. Trying to produce half columns or part rows distorts the brick sizes so that the bricks don't line up at the corners. Make the wall a row or column oversize and cut it down. Figure 4 shows an incompletely rendered project. Figure 5, when enlarged, shows that the bricks in walls of different heights still line up perfectly.

Deshler Station ,adventure's in CAD and 3D printing

By James Mingo

One of the options in the TinkerCAD menu is to zoom to the chosen element, whether a box, cone or whatever. Seemed pretty useful, but if you're looking at an HO scale 8 foot door frame and want to see whether you've brought the corner together with the header, zooming in on the frame doesn't get you close enough to guarantee a perfect joint. Further, you have limited ability to zoom further after focusing on the wall. Once I found that my connections weren't as precise as I wanted or needed, I also discovered a way to get the tight zoom required to neaten up the details: Whenever I wanted a close look at a corner joint, a window frame, or whatever, I dropped a box beside the point of interest and made the box's largest dimension no more than 2mm. Zooming in on the box achieved a much tighter zoom than any other method and made that 2mm feature fill the screen. Once I was zoomed in tight, I could scroll across the drawing to the point I wanted to review. Whenever I waited and zoomed like this, I always found that pieces of the project weren't tightly aligned. Eventually I learned to just keep a little cone handy and drag it close to what I wanted to see.

A third tip involves the TinkerCAD snap feature that controls movement when you drag objects together. 1.0mm is the standard snap distance in TinkerCAD. Every time you load the program, it defaults to this. Since an inch is less than 0.30mm, many of your dimensions will end up less than 1.0mm, making a 1.0mm snap an aggravation. If you're working in HO you'll almost certainly want to set the 'snap to' dimension to 0.1mm, and at times you'll want to turn it off entirely.

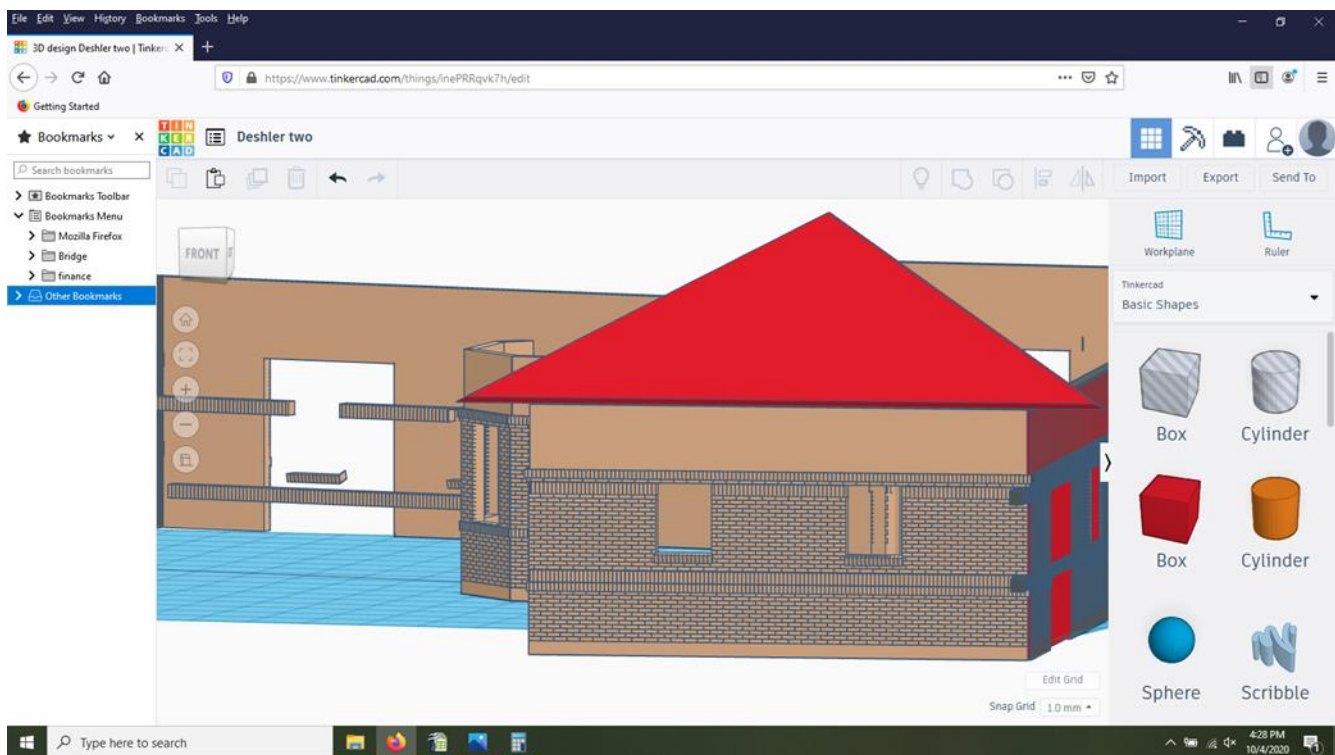


Figure 4: Here's a view showing how the size of the project impacted the program's ability to render my project as a complete building. The bars to the left should be soldier courses and sills in a wall, and the roof section shouldn't be red. Items remain red while the system is dealing with them, or when it gives up trying to deal with them

Deshler Station ,adventure's in CAD and 3D printing

By James Mingo

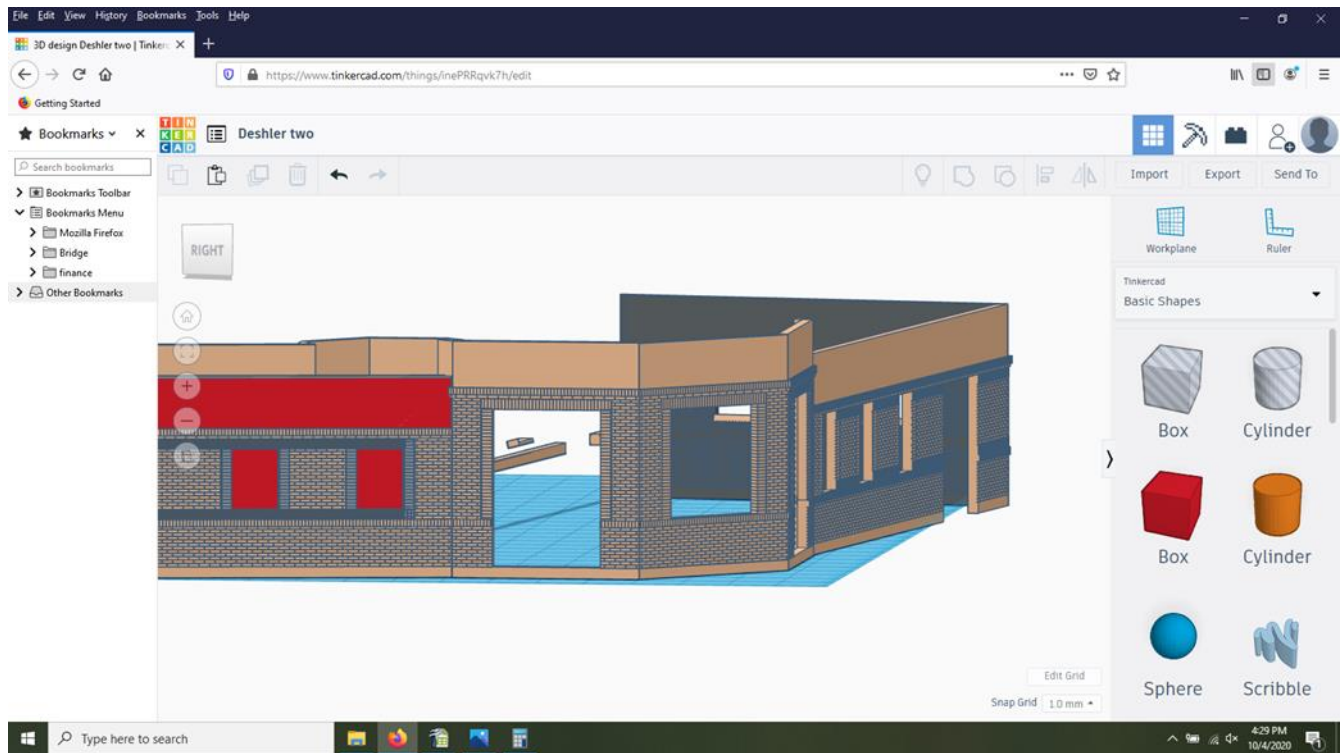
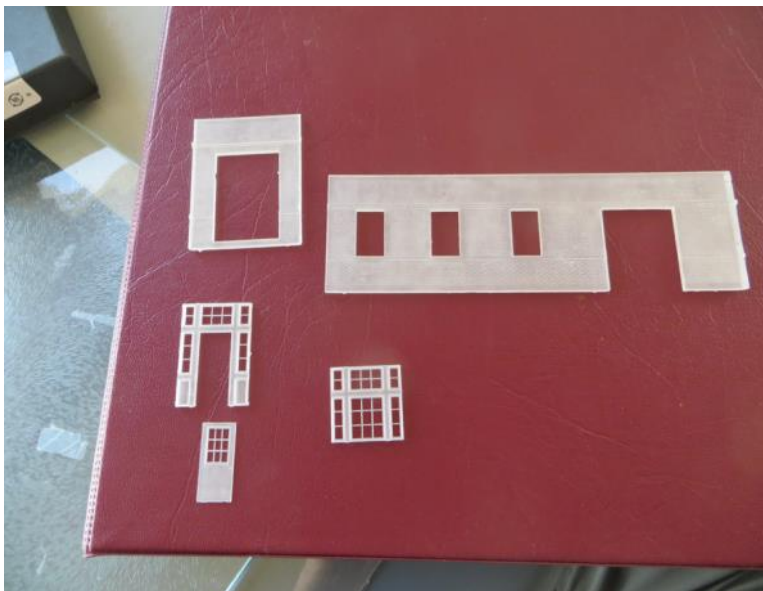


Figure 5: The top of the front window and the tops of the windows above the doors are at the same height. That feature ultimately defined the wall widths and the additional height of the front walls versus the walls of the remainder of the station. The reddish area to the left is something that didn't fully load, and the open space behind the doorway is showing a spot where a wall didn't load at all.

Figure 6: A close up of the parts from Shapeways. These are all HO and impressively smooth and crisp



Would I have gone down this particular rabbit hole if I'd been home this summer? Probably not. I'd have continued to struggle with traditional means of constructing the projects I had in progress last fall. Do I regret diving into this? Not at all. The possibilities are almost endless. In between working on the station and another building, I've made a harp switch stand, the interior details (and the side juts) for one of the BAR troop sleeper cabooses, and a number of detail pieces for my Monson slate quarry portion of my Monson RR. Each and every one of those items is something I had become stuck on.

Deshler Station ,adventure's in CAD and 3D printing

By James Mingo

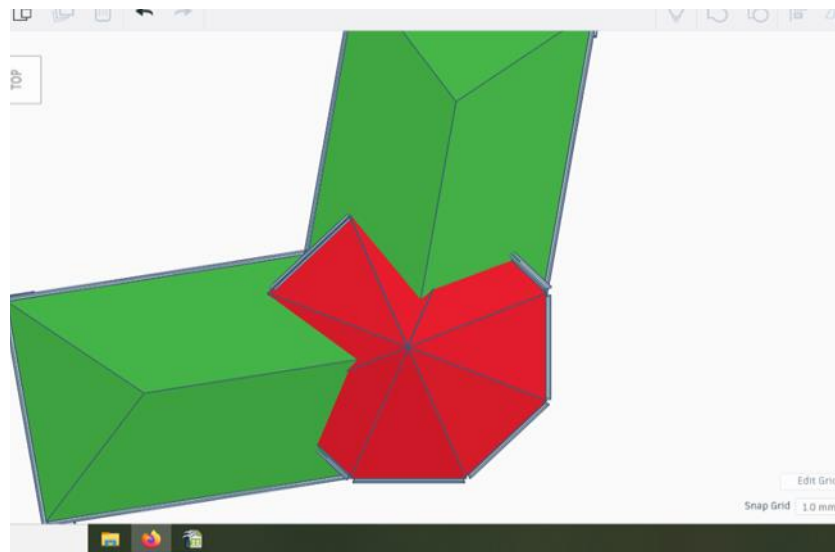


Figure 7 The octagonal roof in proper position relative to the roofs of the wings

What unique item is lurking in the back of your mental 'I wish I could figure out how to make this' list? TinkerCAD and 3D printing may be your solution. Oh, and as proof that TinkerCAD will handle some brick buildings, Next page are a couple of shots of my fully drawn and standing Winterport water works building. It still needs a chimney and probably a vent stack, but once I draw those, I'll lay it down flat and sprue it together and ship it off for printing. I had taken pictures of the structure that included a scale so there should have been none of the guess work involved in the Deshler Station. In the end though, I scaled and laid out this structure by counting bricks.

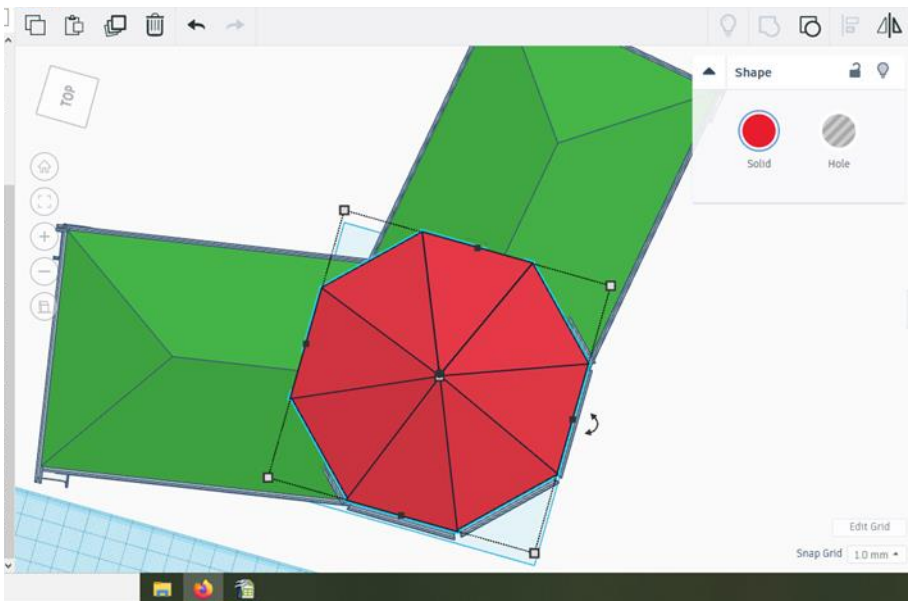
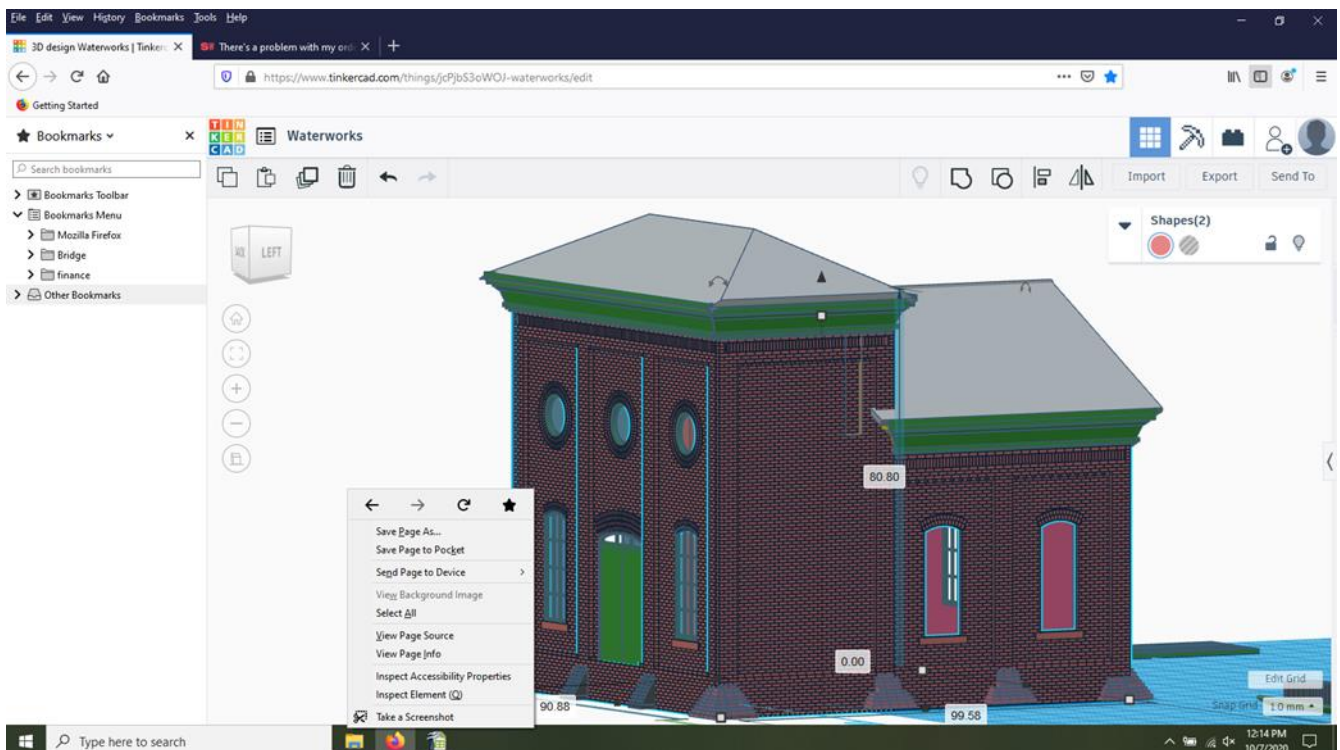
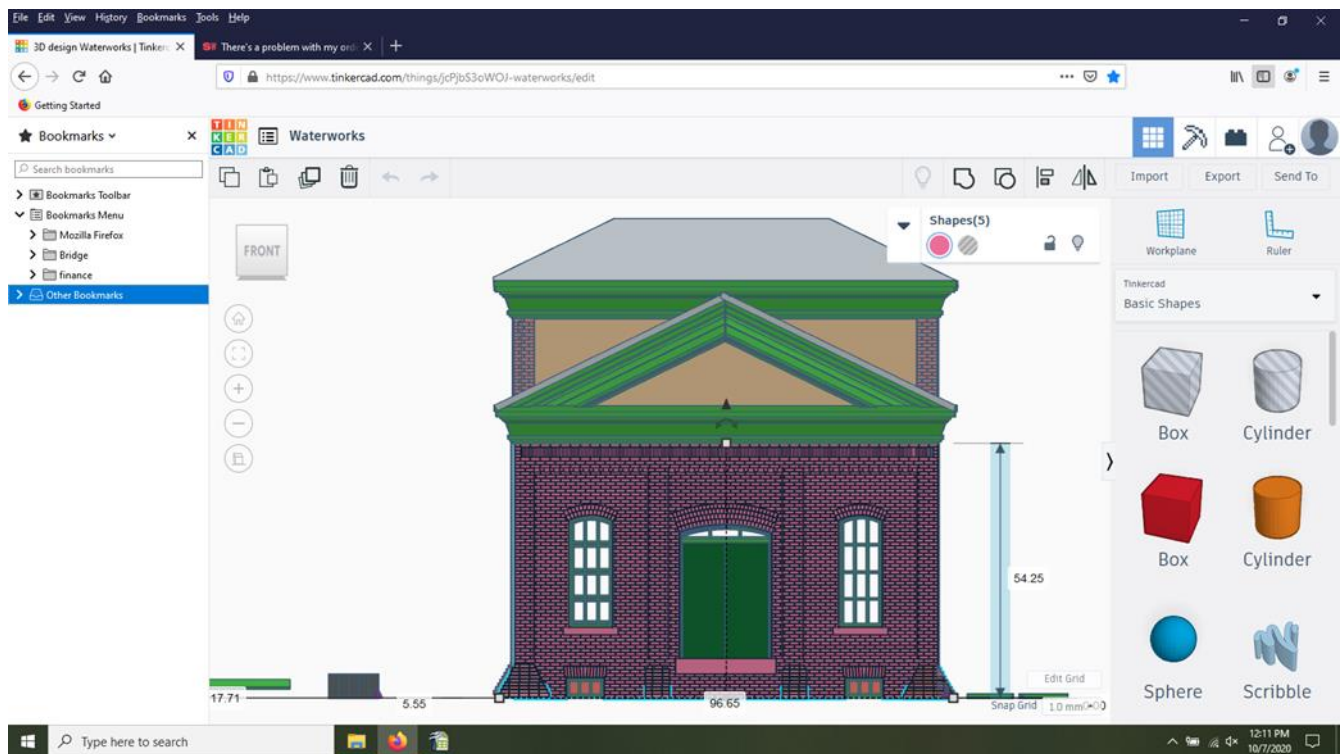


Figure 8: The octagonal roof raised about 8 feet to clear the peaks of the wings

Deshler Station ,adventure's in CAD and 3D printing

By James Mingo



Membership Siding by Lou Champagne

Annual Election of Officers and January Event

Don't forget to vote ... Ballots are due to Division Secretary by Jan. 4

Our Quarterly Event scheduled for Sat., 1/9/21, will once again take place virtually using Zoom as Covid is still with us ... this technology has proven to be easy to use & as well as very effective. This event also provides us with a **unique recruiting opportunity**. We need everyone's help to keep the NMRA and your Seacoast Division growing ... by keeping it in mind when talking with friends & acquaintances who currently don't belong to the NMRA. This virtual event gives us an opportunity to tell folks about the benefits of membership and then invite them to come view it with us ... for the guest, it's a chance to experience the Seacoast Division without having to travel ... & for us, it's a chance to share the event with a friend(s).

Should a non-Seacoast member wish to attend on their own, they should send an email requesting a Zoom invite to Tage Erickson at etagee11@earthlink.net ...and include their name, address, email & cell number.

New Seacoast NMRA Members: **Welcome Aboard !!!**

Maine:

John Weir, Falmouth

New Hampshire:

Siddarth Agrawal, West Lebanon

Seacoast Division & the NER Virtual Convention

NERx, the Region's recent virtual convention, was by all accounts a big success ... and our Seacoast Division was very well represented. The convention featured clinics, layout tours, photo & modeling contests and AP awards.

Layout Tours: Two Seacoast layouts were included ... Herm Botzow's "Buckeye RR" and Victor Hand's "NY Central Hudson & Electric Division".

Herm's is a 40x56 foot 2 rail "O" scale layout that is built for operations and has fully completed scenery. It is built on the premise that the NYC is providing service to Pittsburg and has been featured in several magazines including "Model Railroader" and "Great Model Railroads". The video highlights beautiful equipment & scenes and ends with a great cab ride over the layout.

Victor's is an 1800 sq foot HO NY Central layout that accurately represents an actual prototype ... the NYC between Harmon & Cold Springs, NY in the 50s. This locale, just north of NYC was where they changed electric locomotives leaving the city to steam or diesel **power** (& vice-versa) ... so, the railroad features all three types of locomotives. Every track that was in Harmon is included. The video shows impressive structures, scenery, track work signaling and control systems as well as beautiful rolling stock. Cudos to Geoff Anthony & Tage Erickson for a very well done video. Edited by Jim Seroskie

Contests: Winners in the photography and modeling contest were announced every evening.

Membership Siding by Lou Champagne

In the Model Structure contest, [Tom Oxnard, MMR, of Exeter, NH](#) was a 2nd place winner with his "Bradford Station" ...and for those of you that have seen this model, you know it was tough to beat !

The Model Diorama contest saw [Jim Gore, MMR, of Center Conway, NH](#) taking 1st Place with his "Pueblo Stage @ Totavie, NM". Those of you who attended our last event saw what an outstanding piece of work this is.

Achievement Program Awards: The Achievement Program is designed to help us gain & master the skills required for different facets of our great hobby. Members who submitted documentation of success during the last 12 months were recognized with Certificates and included ...

Association Volunteer: [Geoff Anthony](#), [Tage Erickson](#), [Ralph Brown](#)

Our AP Coordinators, [Larry Cannon \(ME\)](#) and [Tom Oxnard \(NH\)](#) were also recognized ... both are Master Model Railroaders.

If you missed it or want to see it again ...

NERx has provided the following great tool ... click on the link to what you would like to watch and it will take you to the beginning of that segment !

Day 1;

[Clinic: Foreground Trees with Leaves by Jeff Gerow](#)

[Layout: Clinch Mountain Railroad by Dave MacPherson](#)

[Clinic: Bringing the Railroad to Life Using Layers by Lou McIntyre](#)

[Awards: Achievement Program and Contests by Kaylee Zheng and Bill Brown](#)

[Clinic: Building Bar Mills Magee's Tire Repair Shop by Andy Reynolds](#)

[Layout: Danby Ludlow & Springfield RR by Ned Spiller](#)

[Clinic: Modeling An Operating Pre WWII Grade Crossing Signal by Steve Perry](#)

[Layout: Western Adirondack Model Railroaders by Ed Olszewski](#)

Day 2:

[Clinic: Basic Scenery Tips by Doug Dederick](#)

[Layout: Buckeye Railroad by Herm Botzow](#)

[Clinic: Coal Cod & Cash by Steve Erickson](#)

[Awards: Achievement Program and Contests by Kaylee Zheng and Bill Brown](#)

[Clinic: Using Paper to Build that Model for your Railroad by Jim Fairbanks](#)

[Layout: Maine and Western Railroad by Gordon Spalty](#)

[Clinic: Let's learn to operate local train POFR for the beginner-Part 1 by Bruce Robinson](#)

[Clinic: Let's learn to operate local train POFR for the beginner-Part 2 by Bruce Robinson](#)

[Layout: South Shore Model Railway Club by Mike Dolan](#)

Membership Siding by Lou Champagne

Day 3:

Clinic: My Big Fat Clinic. Or, How to Weigh Cars Like the Prototype by Chuck Diljak

Layout: Rails Across Marshfield by Mike Tylick

Clinic: The Welsh Highland Railway by Edward Koehler

Awards: Achievement Program and Contests by Kaylee Zheng and Bill Brown

Clinic: Take Two! Module Building Lessons Learned by John Doehring

Layout: New York Central by Victor Hand

Clinic: Just Build an Inglenook by Jeff Faust

Layout: Great Northern Railway, Kalispell Division by Doug Dederick

Day 4:

Clinic: Building Stone City Heights by John Feraca

Layout: Binghamton Society of Model Engineers by Bob Peterson

Clinic: Introduction to NeoPixels by James Kline

Awards: Achievement Program and Contests by Kaylee Zheng and Bill Brown

Clinic: Paints, 3D Printing by Jon Silhavey

Layout: Stone Canyon Railroad by John Feraca

Clinic: My Miniatur Wunderland by Irwin Nathanson

Layout:
von Sankt-
omä by Jef-
cHan



Kofferbahn
Barthol-
frey Ma-

A.P. Report

Larry Cannon Maine

Tom Oxnard New Hampshire

Timetable

You should check with the show presenter before traveling. Most shows have been canceled . Everybody please follow the CDC guidelines and stay safe so we can once again enjoy our hobby with our fellow model rail-
roaders

Tom Oxnard has had no activity in New Hampshire. Larry Canon reports 2 members have gotten achievement certificates this quarter .

Geoff Anthony for Association Volunteer

Ralph Brown for Association Volunteer

Thanks to Ralph for all the work he has done for the division

My thanks to Tage for pointing out that I had enough time for my volunteer certificate and helping me walk through the paperwork. Geoff Anthony Editor

Editor's Ramblings by Geoff Anthony

As we come up on the new year I am grateful for the number of articles I have received and have a couple that I can use for the next issue. I would still like to have some more modeling stories or just pictures of what's on your work bench to use . So please help me and the division maintain the quality of the Switch Tower.

I have been learning a version of Publisher and it is getting easier so I hope that the presentation is getting better . It's a improved program but there is always some different little tricks one needs to learn.

I have been building Bangor and Aroostook chip cars for my club to sell and selling 3 estates on eBay and elsewhere . Not having train shows is a real manifestation of how bad this year is. Not only does it make it harder to sell stuff, I miss the interaction of the people and the friends that I see mostly at train shows. I hope that by the Fall we will have gotten the vaccine and we can start to have shows again.

If you have not seen the NMRAX videos on YOU TUBE for the conventions I highly recommend them. There are some great layouts and clinics on there that are worth the time to view. I have gained a lot by watching them. A big shout out to Gordy Robinson and his crew for all the time and effort they have put in to make it happen. It's a world wide effort and quite astonishing considering that people from the UK , Australia and the US are all actively involved in the production.

I hope that 2021 is a better year for all and that you stay well. May all your signals be green.

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