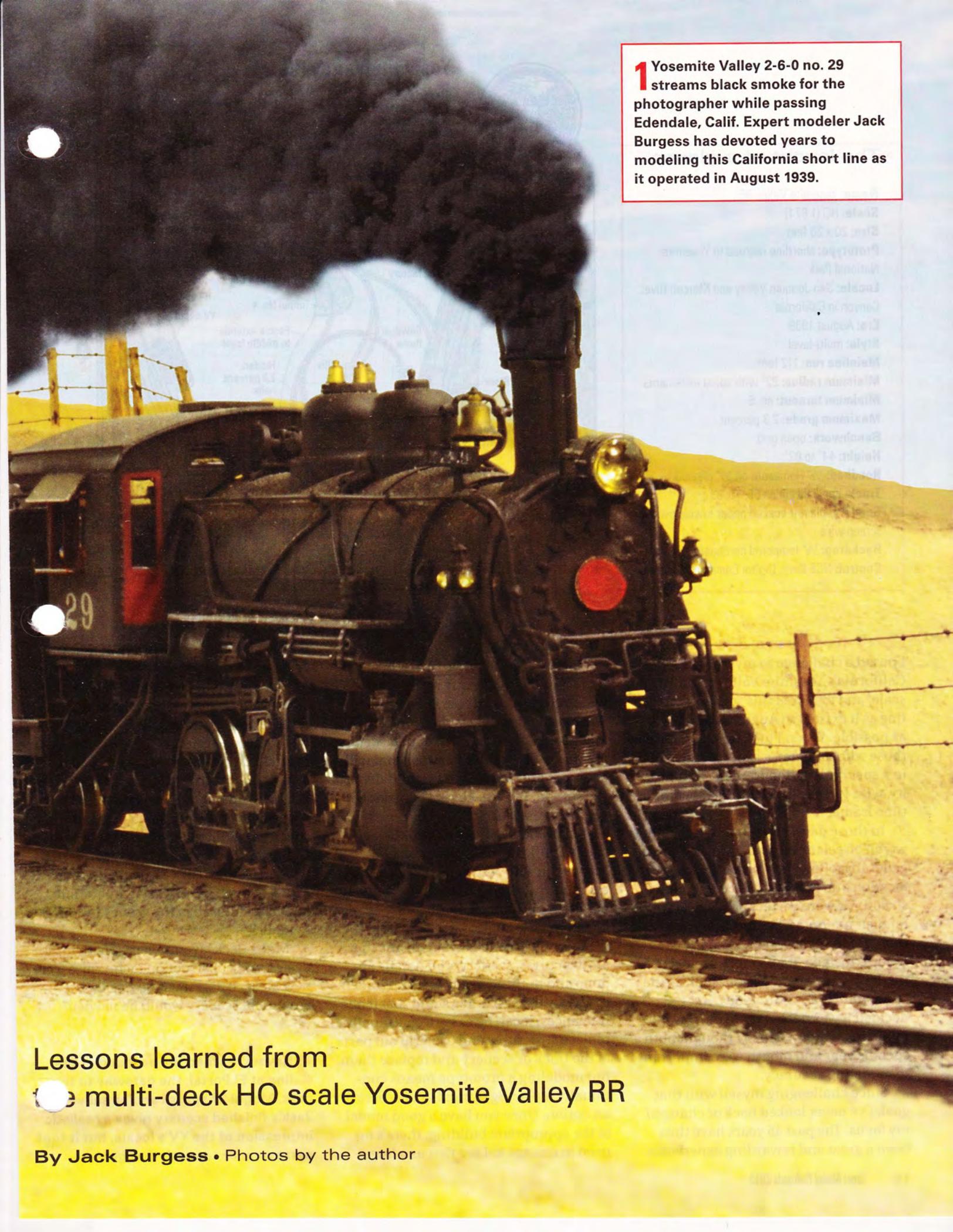




>> **Finished,
but not done**



1 Yosemite Valley 2-6-0 no. 29 streams black smoke for the photographer while passing Edendale, Calif. Expert modeler Jack Burgess has devoted years to modeling this California short line as it operated in August 1939.

Lessons learned from
the multi-deck HO scale Yosemite Valley RR

By Jack Burgess • Photos by the author

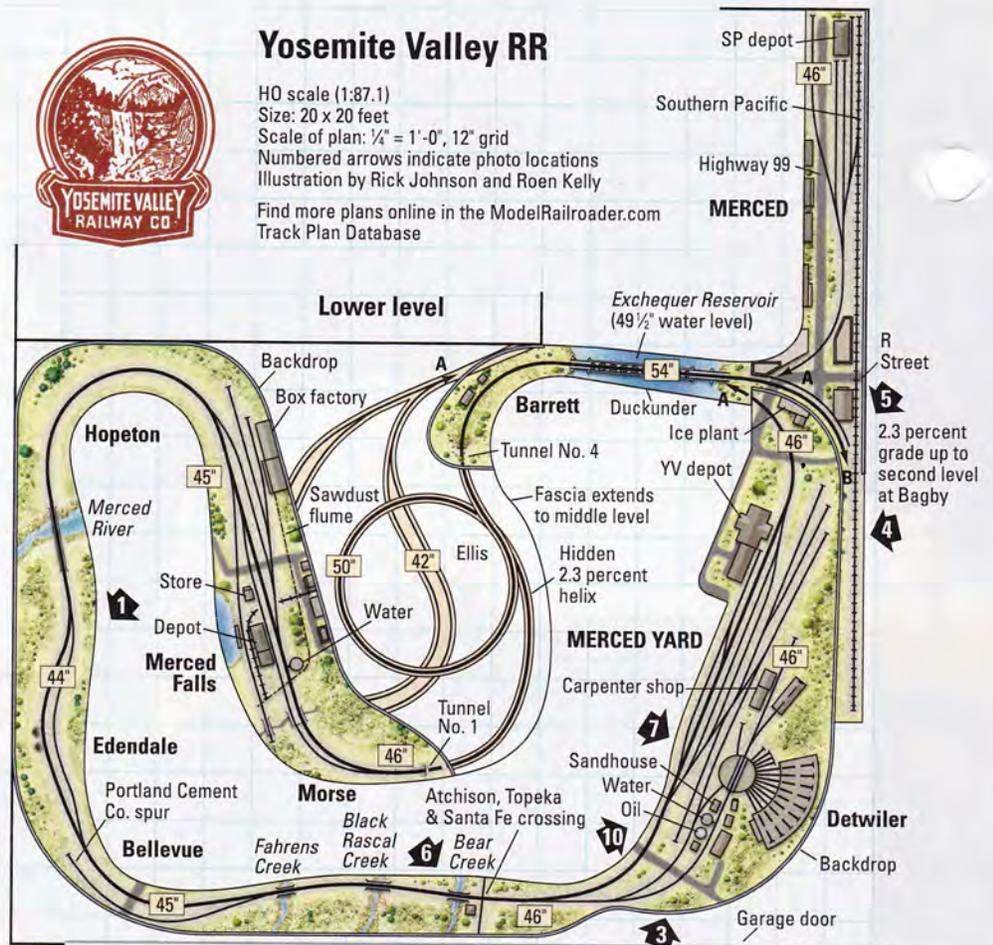
>>The layout at a glance

Name: Yosemite Valley RR
Scale: HO (1.87:1)
Size: 20 x 20 feet
Prototype: shortline railroad to Yosemite National Park
Locale: San Joaquin Valley and Merced River Canyon in California
Era: August 1939
Style: multi-level
Mainline run: 112 feet
Minimum radius: 22" with spiral easements
Minimum turnout: no. 5
Maximum grade: 2.3 percent
Benchwork: open grid
Height: 44" to 82"
Roadbed: 1/2" Homasote on 1/2" plywood
Track: handlaid codes 55, 70, 83
Scenery: plaster-soaked paper towels over screen wire
Backdrop: 1/8" tempered hardboard
Control: NCE Corp. Digital Command Control



Yosemite Valley RR

HO scale (1.87:1)
 Size: 20 x 20 feet
 Scale of plan: 1/4" = 1'-0", 12" grid
 Numbered arrows indicate photo locations
 Illustration by Rick Johnson and Roen Kelly
 Find more plans online in the ModelRailroader.com Track Plan Database



Forty-five years ago, in 1967, I posed a challenge to myself: to model California's Yosemite Valley RR in HO scale, and to model this storied short line as it existed in August 1939 as closely as possible. When I took up that gauntlet, those who modeled a specific railroad in a specific location were in the minority, with fewer still selecting a specific time frame.

In those days, many hobbyists, if they weren't freelancers, were satisfied to only generally follow their prototype as to location and era. Even if scenery and structures were correct or at least typical for their prototype, few modelers restricted their modeling to a year, let alone a month. Instead, it was more typical to model just a general period, such as the "transition era" or the 1960s. But I decided it was necessary to narrow my modeling window, since I thought both a specific year and month were important to modeling accuracy.

Since challenging myself with that goal, I've never looked back or changed my focus. The past 45 years have thus been a great and rewarding experience.

Having a vision

There's a well-known proverb, prevalent since the beginning of the hobby, which claims "No layout is ever done." The idea behind that is that you can always add more details, rebuild scenes, and make other modifications that will keep you busy until the last train departs the station. But I've always questioned that assumption.

I'm probably atypical, but when I started building my present model railroad in 1980, my objective was to eventually finish it. That was a relatively obvious goal to me. I finally finished my layout in June 2011.

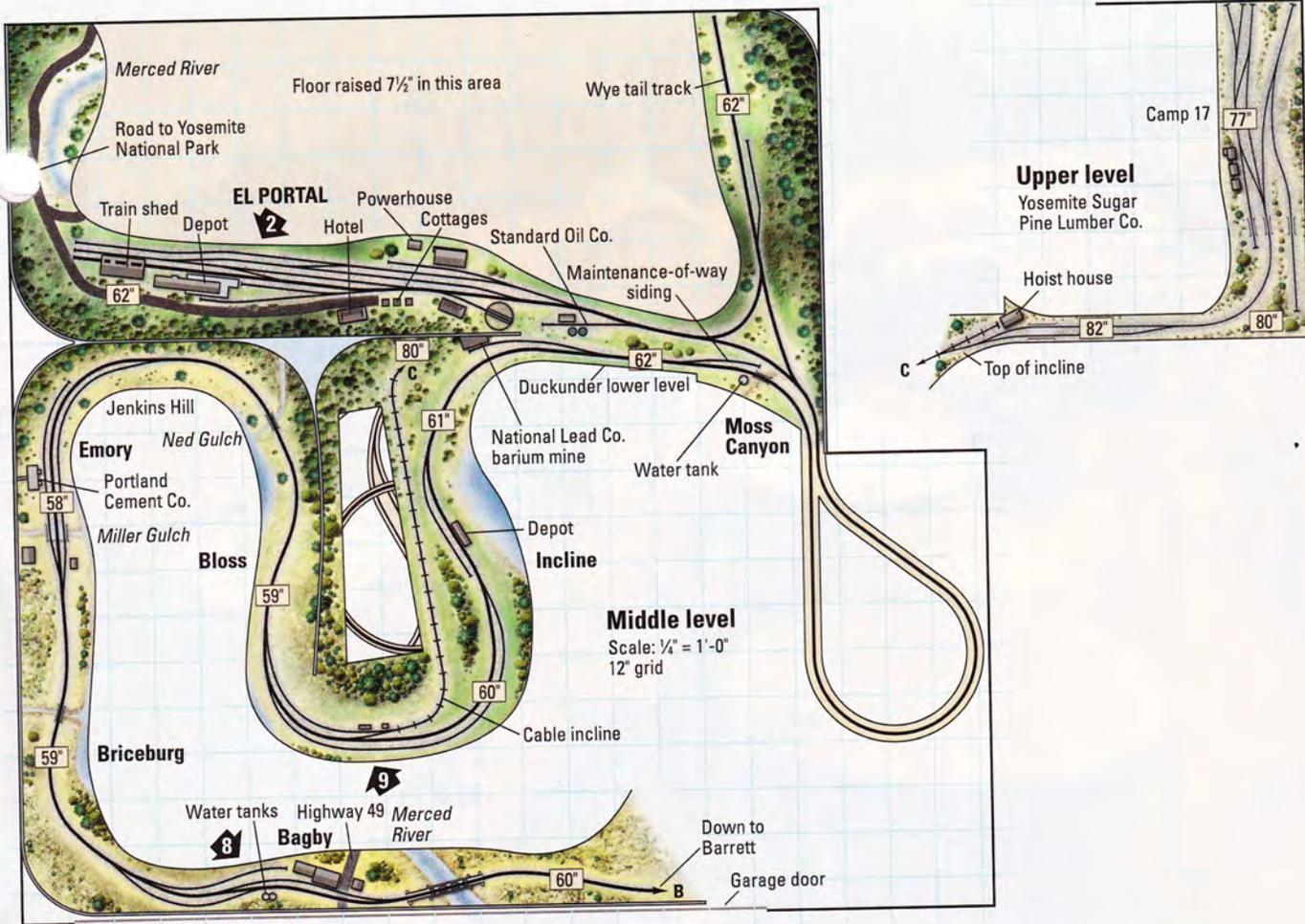
To me, a finished layout means that all structures, scenery, and details are done and nothing needs to be upgraded or changed. I can understand that if one freelance, it can be easy to continually replace structures and even rip out parts of the track or scenery and replace them. But modeling a prototype means continually replacing things isn't necessarily an option. Once you have a good model of the appropriate building, there's no need to change it. I see that as a huge

advantage, since I wanted to actually finish my layout someday!

I'm fortunate that when I started construction of my layout, I couldn't foresee how much time and effort would be required to finish it. While it was easy to study prototype photos and visualize how scenery and structures on the layout might ultimately appear, the actual scope of my project eluded me. Since my space was limited to a 20 x 20-foot California 2-car garage, I decided I needed a multi-deck layout to provide a long enough main line for operation and to include all of the scenes I wanted to model.

Multi-deck layouts were rare then, so design and construction techniques were new ideas. It also meant twice the amount of scenery would be needed.

2 Having reached the east end of the line at El Portal, the gateway to the park, Mogul 27 spots cars for delivery. Jack's finished scenery gives a realistic impression of the YV's locale, but it took perseverance to reach that goal.





3 The yard at Merced, Calif., was the operating base for the YVRR. Beyond the depot in the distance it connected with the Atchison, Topeka & Santa Fe and the Southern Pacific. In the left foreground, the line heads west toward Yosemite National Park.

4 Structure modeling is one of Jack's favorite activities, and his Merced station is a gem. This early morning view shows off the building's interior lighting. The station houses a periscope that gives visitors a view of the yard from inside the building.

When I started construction, I chose to handlay all of my track and turnouts since I could purchase ties, rail, and spikes and then lay track for several weeks for the cost of a single prefab turnout. The lack of good prefab track at the time might have also been a factor, but the cost of supplies was more important to me in those early days. However, I didn't realize that the spikes and the needlenose pliers wouldn't finally be put away until nine years after I started!

The first couple of decades after starting layout construction rolled by as I laid track, built some structures, and started on the scenery. While I'd built scenery on a couple of my previous layouts, this new model railroad was no longer a practice effort. I realized I'd never finish all of that scenery if I later had to later tear things out and rebuild areas that didn't meet my vision.

Persistence pays

It was very disconcerting when I quickly realized that the first section of scenery I built on the new layout didn't match my expectations. After the basic screen wire was in place and covered with a coat of plaster, I studied it for a couple of days before realizing that I needed to tear it out and start over. The replacement looked better and more closely conformed to the prototype terrain in the area I was modeling. But, while the scenery contours appeared more prototypical, I wasn't confident that the final product was going to be acceptable. Part of this problem is due to the wonderful model photos that show up every month in *Model Railroader* and other magazines. Such photos set a very high bar for scenery modeling.

But I kept going, adding rock castings and sieved dirt onto the basic plaster shell of my scene. I still wasn't inspired by the results, but, after adding some static grass, bushes, and a couple of trees, it seemed that my efforts were finally getting closer to my vision.



>> Always making lists

When large parts of a layout are still mostly benchwork with just track and some partial scenery, it probably doesn't seem worthwhile to start trying to quantify what remains to be done. However, I'm a habitual list-maker, and early on I started a list of all of the buildings I'd eventually need on my layout. Ideally, I'd have completed that list while designing the railroad in order to provide the room for the structures later. However, I didn't have that level of information as I designed my layout.

Over the years, I added a few buildings to this list as my collection of photos and information grew, and I deleted a couple that wouldn't fit. But the total never changed that much, staying just over 100 buildings and bridges.

Since all the structures I needed had to be scratchbuilt, the list made it easy to see that I was slowly making progress on completing buildings for the YV. It also made it easy to find a structure project that met my interests at any given time, whether that was a quick, one-night project or taking on a more complex building. I have another list of future projects that includes building models of all of the cabooses, boxcars, flatcars, passenger cars, and maintenance-of-way equipment that the YV owned in 1939.

Though I only work on one model or scene at a time to maintain my focus, I'm usually thinking about the next project while finishing the current one. While studying photos of the next project, I'll add any parts and supplies I'll need for that project to my hobby shopping list, so everything will be on hand when I'm ready to start building. I also use the hobby shop list to keep a stockpile of basic scratchbuilding supplies on hand, including sheet and scribed styrene, brass wire, and so forth.

For some more involved or detailed projects, such as a caboose or a series of YV boxcars, I'll start a list of details I want to be sure and add to the models while I'm studying prototype photos. This list can also help me mentally develop a construction sequence so that finishing one step doesn't make a later one more difficult.

List-making might seem more like work than a hobby. But I find lists a good way to harness the power of my spare time. — J.B.

>>Operation



5 Jack finds realistic operation is the key to satisfaction with his completed YV. Here 2-6-0 no. 25 switches cars for the SP connection at Merced. Prototypical track arrangements guarantee realistic movements.

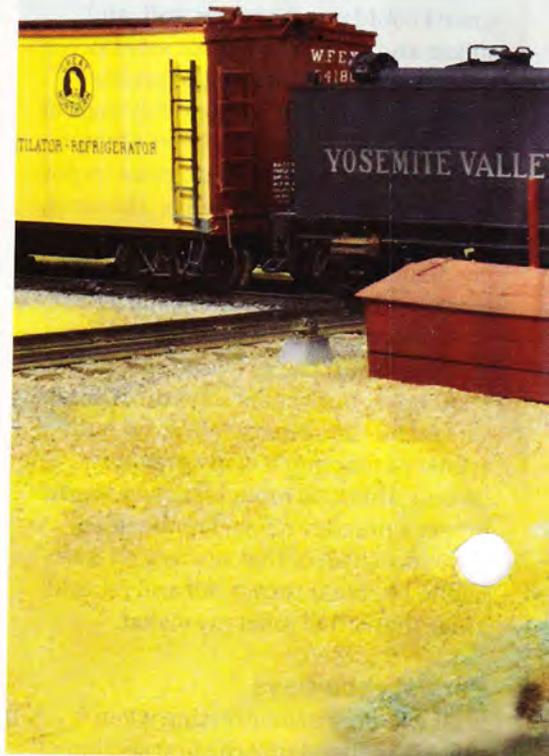
What will it take to keep your interests up long enough to actually finish your layout? Getting into operation is the obvious answer for many model railroaders. But ensuring that you enjoy satisfactory operation requires good layout design from the beginning. Fortunately, good layout design principles have been continually enumerated during the past several decades. In addition, the opportunities to operate on many other layouts, such as through the National Model Railroad Association's Operations Special Interest Group (OPSIG, www.opsig.org), has allowed modelers to better understand how good layout design can support enjoyable operations on their own layouts.

[Other good sources for information on layout design for operation include *Model Railroader* and its annual *Model Railroad Planning* magazine, and the NMRA's Layout Design SIG, www.ldsig.org. – Ed.]

Operations weren't a major design consideration for me when I drafted my layout plans in early 1980. The need for adequate staging was recognized in those days, but staging wasn't really a valid need for a layout based on a prototype that interchanged with a couple of Class 1 railroads at one end and then dead-ended 78 miles away at Yosemite National Park. However, I did think that, by replicating the prototype yards and switching locations on my layout, future operations would be rewarding and prototypical. When I began formal operating sessions nearly two decades after I'd started construction, it was gratifying to find that assumption was correct. By following my prototype as closely as possible, I didn't find need to change any of my original trackwork for operation.

For many modelers, however, a better approach might be to start operations as soon as all of the track has been laid in order to uncover operational problems and fix them before moving on to scenery and other tasks.

I always envisioned operating my layout with visitors rather than a dedicated train crew. While that might be a vague design goal, it can also be something to think about during design. A "sincere," once-through-each-scene track plan is easy to follow and logical for operators. I like a clean fascia without lots of distractions, but I do have all of the yard and place names on the fascia. The local freights work with prototypical YV switch lists, just like the crews did on the full-size railroad. I think this is easier for visiting operators rather than working with a handful of car cards. The backside of the switch lists also includes a line map of the layout with station and siding names to help orient operators. – J.B.



I learned from these first efforts that it can take perseverance to get over that initial disappointment when your work isn't matching your expectations. Scenery can seem to be much less demanding than building freight cars or structures, but it does have its own challenges. When you run into this "wall," it's important to persist until you achieve the results that you want.

One scene at a time

A popular approach to building scenery for a large model railroad is what I call the "shotgun" technique. Once the track is laid, scenery is roughed in and maybe some initial mock-ups or "good enough" structures and details are added. Later, better models replace those stand-in buildings and more details are added and the scenery improved, sometimes almost continually.



I didn't follow this approach. When I'd finish a bridge and install it on the layout, I'd also finish all of the scenery in the vicinity of that bridge. That meant not only the obvious ground cover, but also bushes, trees, and any appropriate details such as a handcar setout or oil stains on the ties from a nearby flange oiler. After completing and installing a structure on the layout, I added the details around it that showed up in prototype photos of that building.

Finishing individual scenes to this degree of completion as the layout progresses can be a great motivator and also very satisfying. At least for me, it made me want to immediately get busy another unfinished area of the layout.

Finding the time

A number of factors work against modelers being able to finish a layout.

Many hobbyists find it difficult to find the time needed to work on a layout or build models, given the demands of their profession, family, and other obligations. I always kept in mind a sign that a fellow modeler posted above his workbench many years ago that read, "Harness the Power of Your Spare Time."

Another friend, also a Yosemite Valley modeler, has spent only an hour a night, Monday through Thursday, along with an occasional late Sunday afternoon, on model building. During the past 4 years, he's scratchbuilt about 40 YV-prototype structures! He's convinced that success depends on good time management as well as focusing on what you want to achieve in each building session.

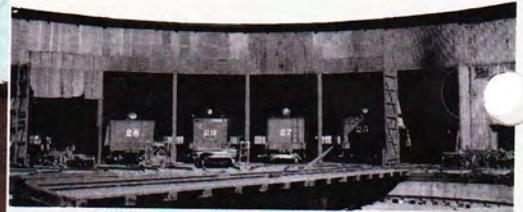
A life-long obsession

Yes, I consider my hobby of model railroading an obsession. I have other

6 Engine 27 leads the westbound local freight past the AT&SF crossing and tower, and across Bear Creek. Jack found he got the most accomplished when he completely finished a scene such as this one before moving on to another part of the layout. He prefers this approach to the "shotgun" technique.

hobbies, but model railroading takes up a majority of my spare time at home. One major reason for this obsession, other than the fact that I love building models, is that I made that early decision to model a specific prototype.

After some limited model railroading efforts in my youth back in the late 1950s, I returned to model railroading in 1965, defaulting to freelancing a fictitious railroad set in northern California. However, I soon became interested in scratchbuilding prototypical freight cars that I'd measured and photographed in



7 Comparing Jack's model scenes to the prototypes they represent demonstrates the fidelity of his modeling. Here we see Jack's version of the Merced roundhouse alongside the real thing. Prototype photo from author's collection



8 Mogul 28 leads the Merced Local past the distinctive twin water tanks at Bagby. Jack's accuracy in modeling prototype locations can sometimes make visitors think they recognize a scene in a prototype photo when they've really only seen the YV layout. Ken Kidder prototype photo from author's collection



9 Engine 28 again, but on this day it's arriving at Incline with a train of empty log cars. A cable incline here formed the YV's connection with the Yosemite Sugar Pine Lumber Co's logging railroad. Will Whitaker prototype photo from author's collection

the local Southern Pacific yard. In due course, I realized that I would enjoy the hobby much more if I modeled a particular prototype. After some research and consultation, I selected the YVRR as a prototype to model. This was an important decision, since it combined model building with the need for prototype research, which I also find rewarding.

I think the satisfaction you derive from a hobby is based on how much you're willing to put into it. Yes, this is a hobby and not work. But I continually find that the time that I spend on the hobby, whether scratchbuilding models, working on my layout, researching the YV, studying historic photos, or sharing those efforts with other modelers, has resulted in enormous rewards. And any hobby, whether model railroading or golf or fishing, should reward you for your time and effort.

But now what?

Finishing my layout logically leads to the question I'm often asked these days: Will I tear it out my model railroad and start over? No, I'm satisfied with the design and operation of the layout, and there's nothing on the layout that I feel a need to redo. But I have always been primarily a model builder.

I still plan to build a lot more models of YV freight cars, passenger cars, cabooses, and maintenance-of-way equipment. I might even build some of the YV stations that I couldn't find a place for on my layout; they will go directly into a display case. I also look forward to working my way through my stash of more than 100 resin "foreign-line" freight car kits, since I get tired of seeing the same cars on my layout all the time. As I finish these kits, I'll transfer cars on the layout into storage to make room for the new rolling stock.

I recognize that a goal of actually finishing a layout is not that important to many modelers. Even if their layout appears complete to visitors, many builders still like continually changing things and adding more detail. Others might find, by the time completion of their layout is within reach, their interests change and they want to scrap everything and start over. The trend during the past 20 to 25 years from freelancing and proto-freelancing to prototype modeling can also result in a decision to start a new



10 Engine 23 (shown in Merced Yard) is the result of a modeling project that Jack outlined in the August 2009 MR. He redetailed a ready-to-run Bachmann Spectrum 4-4-0 American to better match a YV prototype.

model railroad. Another factor might be the shift toward layouts better designed for operation.

Layout construction and completion may actually present a conundrum. If you're happy with your layout and enjoy the construction process, why hurry to finish it? But, at the same time, finishing trackwork, scenery, buildings, and details on a layout is not only rewarding but there can be a lot of satisfaction from completing things. One approach is to quickly finish the benchwork and the roadbed but then slow down and enjoy the ride. My friend Clark Propst wrote on an Internet chat list "I think it will be a sad day when I look at my layout and say to myself, 'Well, there's nothing left to do!'" [Clark also wrote "Modeling a "steam"-electric interchange" in *Model Railroad Planning 2009*, which is available from Kalmbach Publishing Co. - Ed.]

Maybe the answer depends on your age, the amount of time you have to devote to the hobby, and your interests. If you enjoy operation, a completed layout might seem liberating, as you no longer need to balance operating sessions with model building or scenery installation. If you love model building as I do, it's good to still have 15 or 20 years worth of model projects you look forward to tackling. If you love research as I do, there will always be more things to learn and new photos to uncover.

Even with a completed layout, this is a hobby that can provide a lifetime of satisfaction and enjoyment. GMR

>>Meet Jack Burgess

YOSEMITE VALLEY R.R. Co.

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Jack has been a model builder for as long as he can remember. He built a couple of shelf switching railroads before deciding to model the Yosemite Valley, then built a first YV layout as a test-bed for his multi-level YVRR shown here. He's written numerous articles for *Model Railroader* and other publications. His research on the YV led to his writing *Trains to Yosemite*, a book published by Signature Press in 2005.

Jack retired after a 39-year career as a civil engineer for the city of Newark, California. His wife, Jacque, shares an interest in trains. Her garden railroad was featured in the September 1995 issue of MR.