

# NARROW GAUGE AND SHORT LINE GAZETTE

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art of railway photography in the 1950s, and he continued this art while traveling over almost the entire world before his death. However, that Denver, South Park & Pacific (South Park) photo stood out as the most engaging and unforgettable image of railroading I had ever seen.

During the next several years, I spent time drawing layout plans representing the South Park – and looking for more information. Youthful exuberance led to improbable plans such as one that included the entire system and would fill a warehouse. By 1963, I was building my third layout, and my first Western based system, which provided a great learning

platform for my later On3 South Park layout. This third layout taught me important lessons about space, grades, and elevations – distance, and the reality of working in a limited space, while trying to model something in the real world.

All the well known issues of growing into adulthood, family, and outside distractions kept me from actively pursuing a South Park layout in a meaningful way until our family moved back from Germany in 1987. My original HO/HOn3 layout of the Rio Grande was seen for what it was, a total disaster. I had come to the conclusion, while in Germany, that it had to be totally rebuilt, or I had to do something

else. It was then I discovered that Overland Models, Inc. was selling several versions of South Park Mason Bogies in On3.

I was able to purchase several Bogies with their original arched cab windows and Nesmith smokestacks. The Overland Models Bogies fit the early time period of the railroad I wished to model. I could model late 1882, and still keep the Nesmith stacks, Eames vacuum brakes, and model several buildings under construction, and have End of Track just past the outskirts of Breckenridge, Colorado. In 1883, the Nesmith stacks would be replaced by Congdon stacks, and Westinghouse brakes began to make their ap-



Above: This scene on the author's On3 Denver, South Park & Pacific layout was inspired by his favorite photo of the prototype that appears on page 7 of the book, *Pictorial Supplement to Denver, South Park & Pacific*.

Right: Number 3, ORO CITY, originally arrived on the South Park as an 0-6-6T, but was later fitted with a pony truck while still retaining its Nesmith stack and arched cab windows.





*Above:* Modeling the prototype requires compromises such as not being able to include wyes where appropriate. Because of this, my Breckenridge Branch, and the line west to Leadville and Gunnison, leave Como in the same direction – and not too far apart. To fool the eye, the westbound staging track on the right runs down a slight downgrade behind some trees where it just “disappears.”

*Left:* Railroads are always in need of repairs, such as I depicted in this scene at Deansbury. Because I modeled the South Park during its early days of construction, I always included work and supply trains in my operations.

pearance then also. So, the fall of 1882 was the cut-off date for my layout.

I decided my On3 layout would be point-to-point, based on the prototype with representations of several towns between Denver and Como, and the new branch over Boreas Pass down to the End of Track. Although I could reasonably fit only a few compressed areas into the space I had available in my basement, I wanted a large area devoted to the Platte Canyon, the Kenosha Pass area, Como, Boreas Pass, and Breckenridge. Because the modeled area on Boreas Pass would cover such a large area, I also could include the line west from Como to Buena Vista, Gunnison, and Leadville as a staging area.

In the design and layout of each area I modeled, I relied heavily on books about

the South Park. They provided important information on what buildings were located in each area, and changes that occurred on the South Park’s system over time – since no railroad is static. As important as the texts were, the old saying that “a picture is worth a thousand words” was never more true. The photographic record of the line is spotty in many periods, but the best documented times were in the early 1880s and mid-1930s. This was another reason I chose to model 1882.

I have learned that in modeling a prototype, no matter how thorough you think your research is, someone will find new material the day after you finish an area – placing your efforts in question. The best defense against this is to select the best-documented areas to model. It is easy to change a color on a depot or car, but

dealing with major structures or railroad facilities is another story. If you can access photos that are alike from different sources, you can feel confident that the captions are correct, and you are on safe ground in your modeling projects.

I also wanted to run narrow gauge trains through mountains over spindly trestles, and through numerous tunnels. My objective was to portray the prototype running in canyons using correctly modeled bridges, over broad passes, and through Colorado’s expansive South Park with its rolling hills surrounded by mountains.

While the photos proved invaluable, they had their limitations because they are only two-dimensional, black and white images. What color were the rocks? And what about the plant life?

What about visual perspectives – how are things related to each other in space and distance? To answer these questions required field research. Vacations to Colorado to collect dirt and take photos of the landscape, and what remained of the railroad, were great adventures and most helpful. Although vegetation can change over a hundred years, its color and type do not, nor does the makeup of rocks.

I started building my On3 South Park layout in the late fall of 1990, and ran trains over my first piece of track by Christmas. Ten thousand plus spikes, and 7 or 8 years later, I finished the track work and built all my stub switches, including some three-way stubs (see my article on pages 94-97 of the April 2001 MODEL RAILROADER). I was able to reuse my

HO<sub>n3</sub> Code 70 rail, because it is close to 35-pound rail in On3. When I dismantled my HO layout, I saved the rails from both the narrow gauge and the Code 100 rails used on the standard gauge portion of my old layout. The Code 100 rail was put to good use on my new Colorado Midland layout, and matches its 60-pound rail.

In building the scenery, I reverted to the old 1940-1950's plaster-over-screen-wire technique. I chose this method because of its stability, ease of construction, and because it would eliminate fire hazards, silver fish, and mold. What really made screen wire acceptable, was the introduction of the staple gun. I did not have to contend with mashed thumbs and fingers, that in the "Old days" resulted from hammering in all those little bitty tacks.

With the plasterwork done, I did all the rockwork with castings made from a local metamorphic rock called Quartzite. This rock resembles the granite rock formations common in Colorado. I used dirt and small stones collected from the localities modeled for ground cover. Dried sediment covered in ground foam provided the bushes. I built my first pine trees following the techniques of John Allen, Paul Scoles, and Jack Work. But several years later when I wanted to add some 1,000 trees, I decided to go to bottle brush trees.

During the 20 plus years of building and operating my railroad, I initially made my aisles only 3 feet wide. Since model railroaders are generally not the skinniest

(text continued on page 81)



Above: Kenosha Pass, between Denver and Como, was located in a saddle without any steep walls or bridging. This type of pass was common on the line at such locations as Trout Creek Pass, Fremont Pass, and Boreas Pass. Only the line built to Gunnison required a tunnel – the Alpine Tunnel.



Right: When deciding to model the Como area, I wanted to capture the "feeling" expressed in a statement I found in a 1900 Colorado & Southern publication: "Imagine yourself standing upon the summit of a mountain overlooking a plateau nearly twice as large as the state of Connecticut ... with undulating hills, green meadows and many glittering lakes ..."



*Above:* A 2-8-6T Mason Bogie crossing the upper South Platte River on fill and rocks collected on a field trip to Colorado.



*Left:* Code 70 rails salvaged from my HO<sub>n3</sub> layout were perfect for my On3 South Park line. Properly sized rail really improves the look of a scene, but the wrong size rail could quickly spoil it.



Above: The GRANITE (#10) passing the Deer Creek water tank. A narrow aisle forced me to put the tank on the wrong side of the river. But I later corrected this.

Below: Since my layout was intended to be operated and represents a prototype, it was crucial that all the parts came together and created believable scenes. I learned through bitter experience that space limitations, and operational realities, make prototype grades difficult – if not impossible – to successfully model. With lesson learned, I designed most grades on my On3 layout at a maximum of 3 percent with most at 2.75 percent.



*(text continued from page 79)*

people, and operators need to get past one another, my narrow aisles at Deer Creek tank required me to put the tank on the right bank, opposite its position on the prototype. This arrangement always bothered me. Finally by 2007, I decided to fix the problem, by narrowing the aisle to about 20 inches. Since this was only a short area, I felt it would be acceptable to my operators.

However, there was one unforeseen result. The station at Webster, with its charcoal ovens, was a major part of the layout, and it was now cutoff due to the narrower aisle. This proved to enhance the “atmosphere” of the area, because now it felt more isolated and distant from the rest of the layout. As a narrow gauge modeler, I like the feel of areas on the layout being isolated or separated from each other.

One of the most important design and operational limits I placed on the layout was to have grades of 3 percent or less. I had seen the results of too steep a grade on my old HO layout, and how bad it looked. Locomotives would slow or even stall on my old 4 percent grades, and then race down the other side. I was determined not to have this happen on my South Park layout, and kept my grades at 3 percent or less. ■

# LOOKING BACK AT MY On3 DENVER, SOUTH PARK & PACIFIC LAYOUT

## PART 2: COMPRESSION

by Andrew Dodge  
Photos by the author

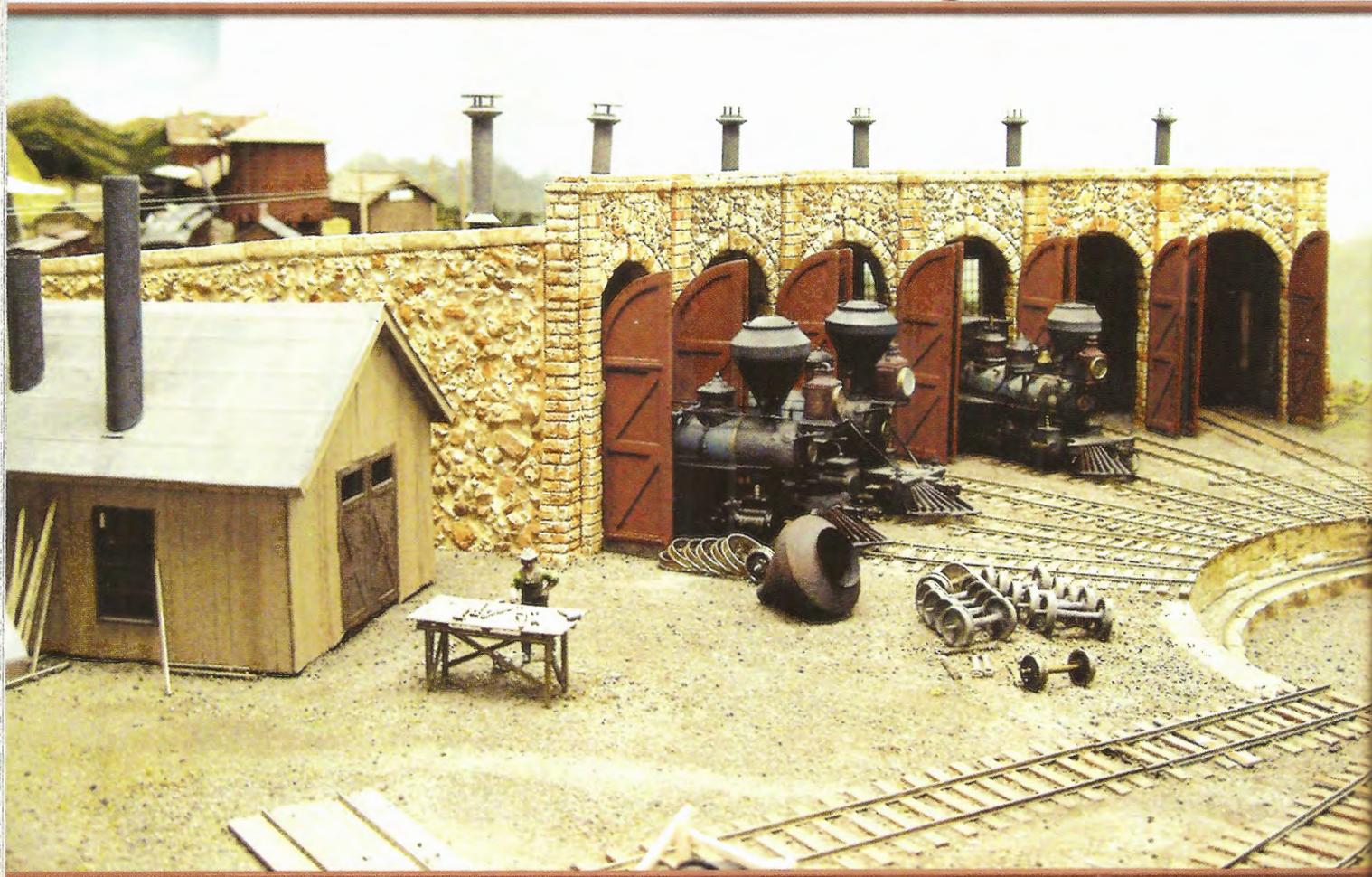
Here, I continue the story of my now-scraped On3 Denver, South Park & Pacific layout. In Part 1 in the July/August 2015 **GAZETTE**, I described how a photo I saw in a book when I was still a schoolboy inspired me to visualize – and then design that layout. Here, I want to describe some of the layout's scenes, and how I compressed them to make them fit.

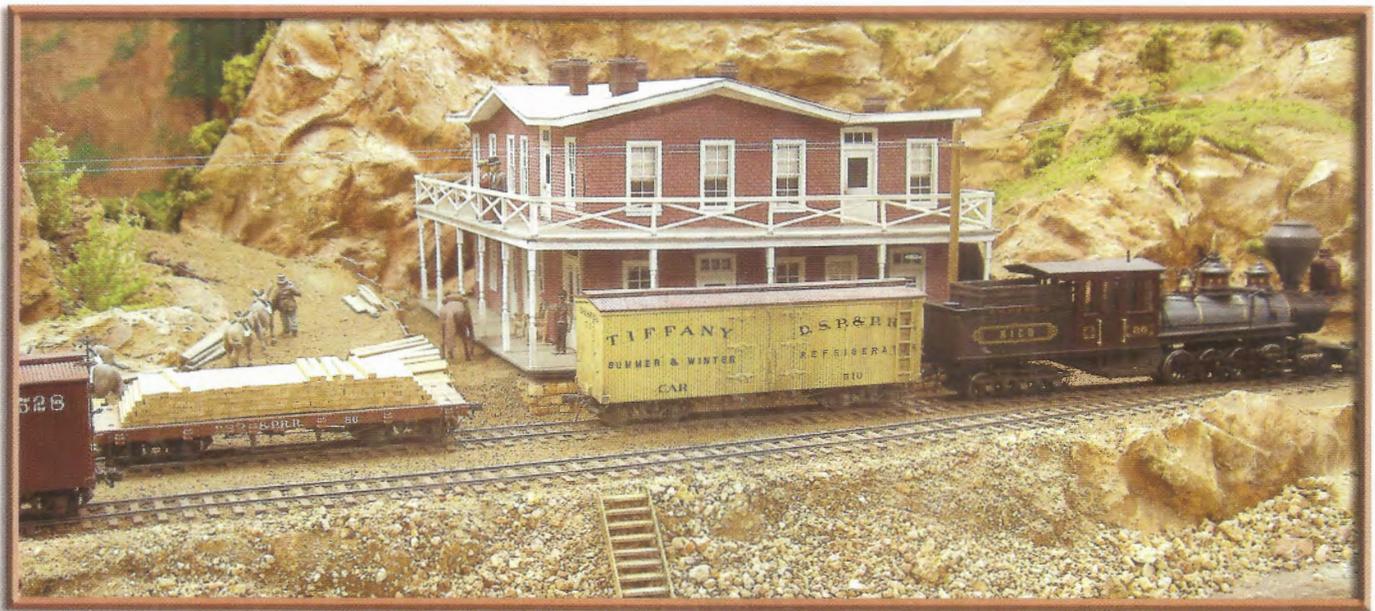
Our hobby requires a great amount of creativity to build a layout depicting a full-size railroad (or just small part of one) in a space that is, for most modelers, the size of a large room. Compression of distance, and of scenes, and structures is a necessity in model railroading. But it must be done without losing the ambiance and character of the prototype.

### DEANSBURY

The first area I modeled on my On3 South Park layout was the Platte Canyon and its Deansbury Hotel. Because of design and aisle issues, I could only make this scene 30 inches deep, including the river, double-track mainline, hotel, and the canyon wall. If I modeled the hotel full O scale, this area would have been at least 5 feet deep. By compressing the length of the walls, while retaining the correct number of doors and windows, and omitting the “less seen” rear addition, I was able to retain the essence of this historic hotel. I did have to reduce the number of columns along the sidewall from eight to six, but was sure no one would notice (unless they were a serious “rivet counter”).

*Below:* The six-stall stone roundhouse at Como was located with the back wall facing the yard area. This type of structure cannot be compressed except by eliminating stalls, which would have destroyed the very nature of the building.





Above: Operational and switching considerations required the elimination of the left canyon side wall in the Deansbury area, and compression of the Deansbury Hotel. When constructing and modeling an area, one has to be ready to make changes in the design.

Right: Details can really add life to a scene. Here, #16, one of my Denver, south Park & Pacific's heaviest Mason Bogies is heading up an Eastbound into Webster.



I originally wanted to model both walls of the canyon, with the railway next to the bank of the river. However, I realized that if I did that, I would not be able to switch cars – ruining operational possibilities. So, when I decided to rebuild the canyon area around the Deer Creek tank, (see Part 1) I realized that there was a way I could have my deep canyon scene without impacting operations. I would just “plant” so few trees on the canyon side that operators could see the tank, and know where to stop for water.

## WEBSTER

One of my favorite photos of the South Park was taken in 1879 by Charles Weiffle and depicts the front of the depot at Webster. For such a small place, Webster was well documented during the period I was modeling, including its water tank, depot, and charcoal ovens. When I rebuilt the space around Deer Creek, I also remodeled my Webster area – and

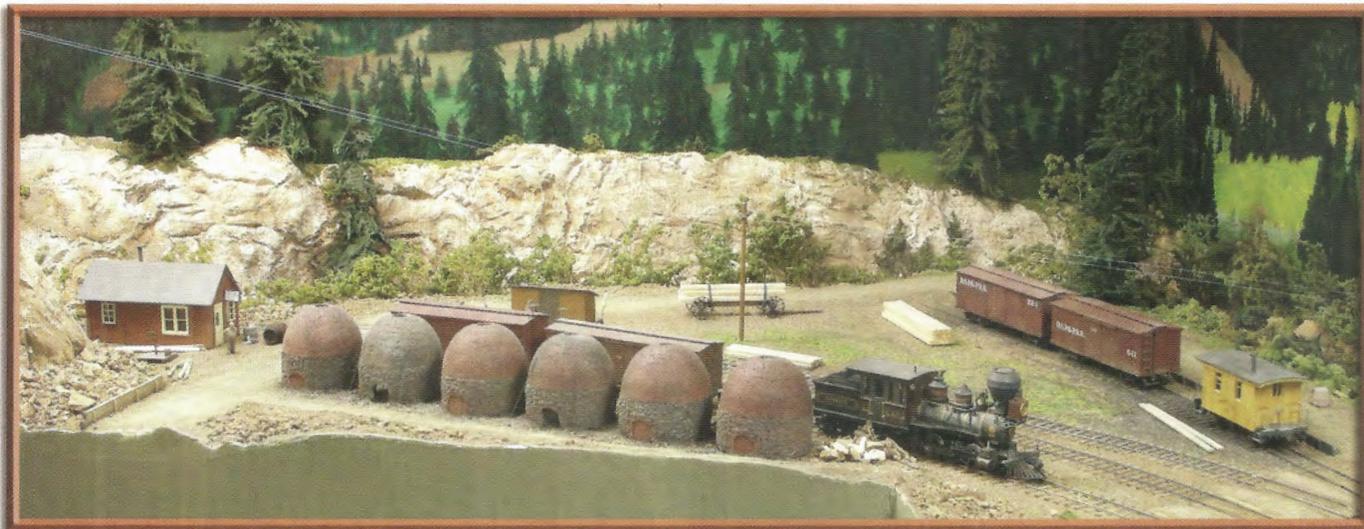
correctly modeled the headwaters of the South Platte River between the tracks and the mountains painted on the backdrop.

Fortunately, I could build a full-size O scale depot, and include lots of detailed parts and figures. I used a photo of my model Webster as the title photo in my article on page 66 in the 1997 MODEL RAILROAD PLANNING. All the details and figures gave my Webster a lot of texture and interest. However, I ran into an issue of limited space with the charcoal ovens. I had bought six cast models of ovens, but they were only 13 scale feet tall, while the prototype ovens appear from the photos to have been twice that tall. As

much as I tried, I could only squeeze in six small ones, but added details provided interest to the scene.

## COMO

The most important area of my layout was going to be Como. I allotted almost 30 feet for its yards and facilities. In anticipating tracks needed for storage, I built two sets of three tracks with crossovers between them. In front of depot, near the Gilman House, I have one through track, and one that is left open most of the time. This leaves me four tracks for storage and making-up trains. The crewmembers who



Above: The charcoal ovens at Webster are one of the area's biggest sources of freight traffic. Wood for the ovens is brought in, and charcoal is shipped out to different smelters served by the South Park. Another siding serves a local farm and mining areas to the north.

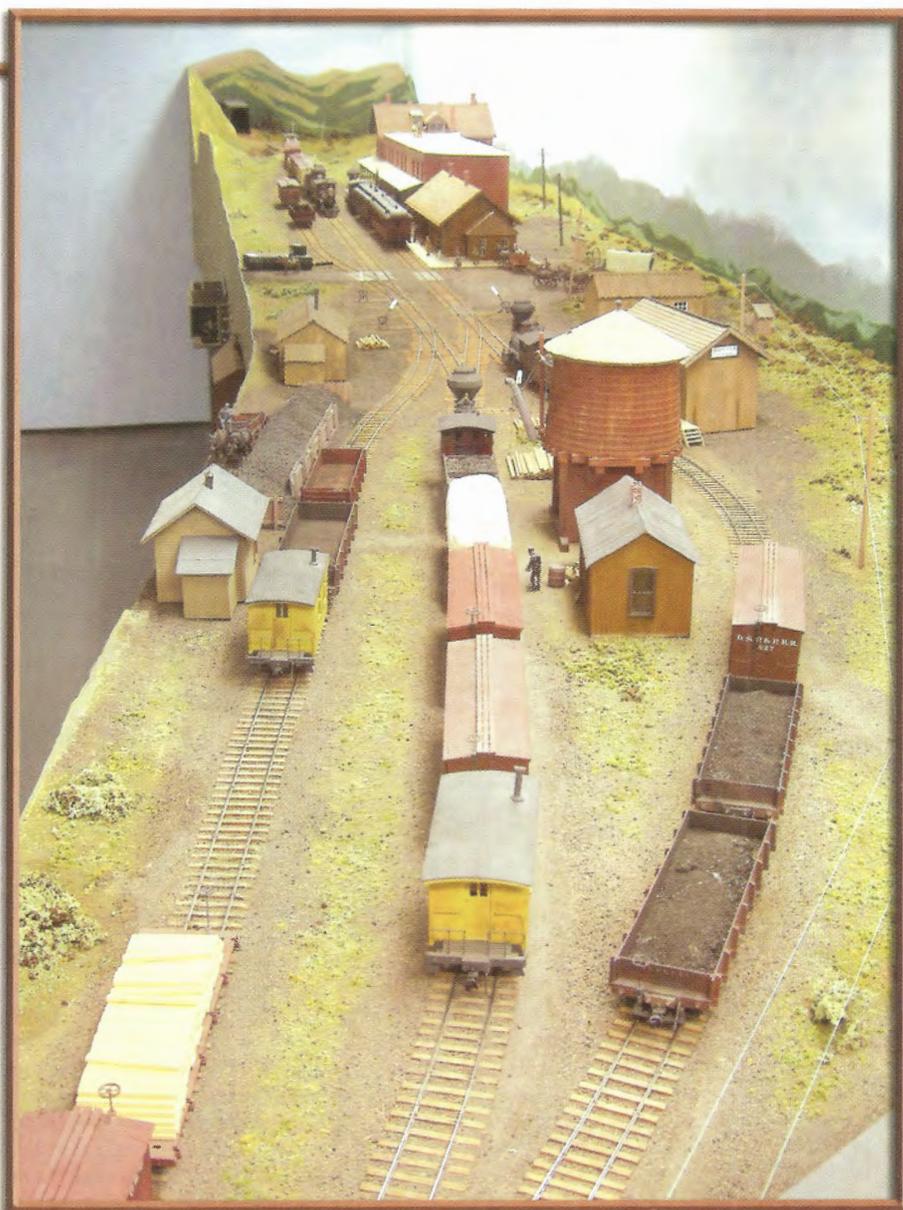
Below: This overhead photo of Como shows most of its facilities. The track in the right foreground was used for storage, and provided access for the line's Tiffany Reefers. Crews used the two tracks on the left for yard storage and making up trains. The center tracks were for through service.

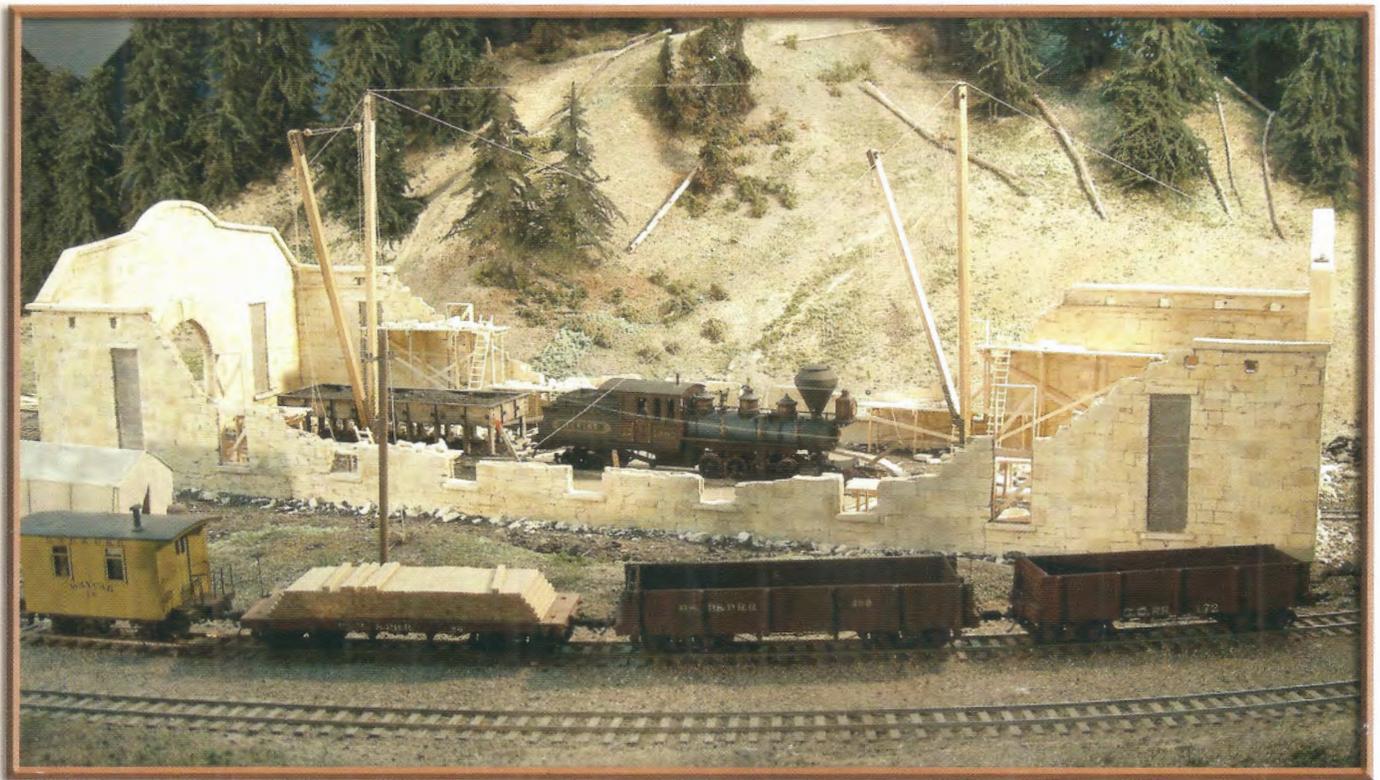
came to operate my layout loved Como because of its complexity, and because in every session, multiple trains would arrive at the same time causing plenty of jockeying for access to the water tank and coal dock. Following the installation of DCC, Como also provided helper service to crews with trains needing a helper. (You can read a more detailed description of motive power use and car movements in an article I co-authored with Paul J. Dolkos that appeared on page 76 of the 2009 issue of GREAT MODEL RAILROADS.)

The only way I could have compressed the Como roundhouse was to remove stalls, which I did not want to do. Since the original six-stall stone roundhouse is such a well-known feature of Como, I felt I had to model the entire structure, especially since its back wall would be facing the yards. Gilman House, later known as the Pacific Hotel, was at the opposite end of the yard. Because I was modeling the line in late 1882, when the hotel was undergoing a major expansion, I displayed it lacking a finished roof (as seen in an early 1883 photo). The hotel fit nicely into the scene with its large size providing a nice balance to the six-stall roundhouse.

### BOREAS AND ITS ENGINE HOUSE

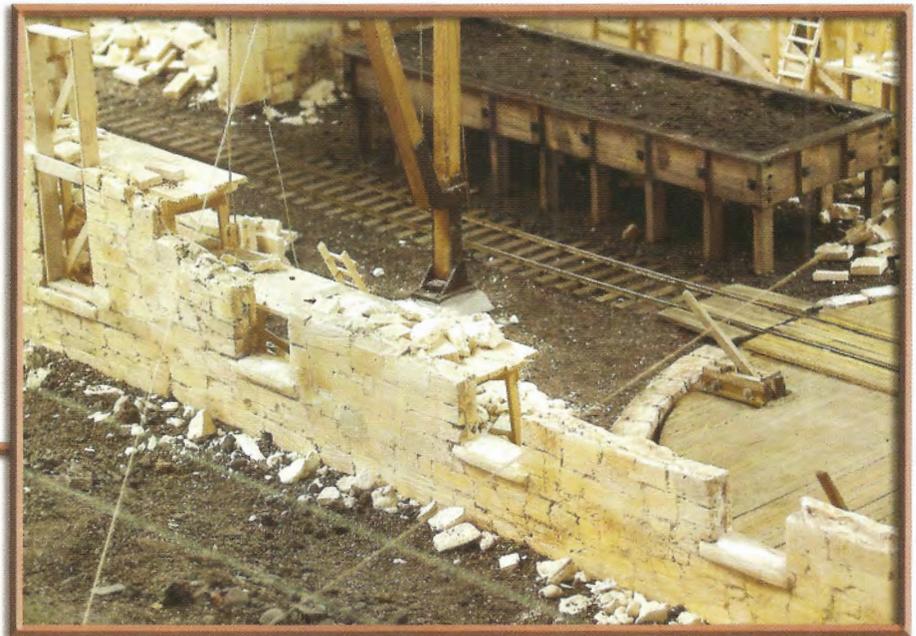
Second only to Como in importance to me, and the most interesting place to model, was Boreas Pass with its large stone engine house. Because of space issues, I could not model the engine house with a through track, but was able to build the engine house full-scale size. I solved





*Above:* This model of the engine house on Boreas Pass shows it under construction with a working turntable. Completing the structure was a difficult task but worth every minute. Operationally, it added an entirely new dimension for the crews.

*Right:* This close-up of the Boreas Pass engine house shows how the interior and exterior walls were finished and the cavity between them filled with rubble. I used 3/16-inch-thick Plexiglas, and glued the finished stone to the Kraft paper covering the Plexiglas.



the through track problem by modeling it with the north end door shut, and continued the track back to the mainline. This track was curved too sharply for locomotives, but a freight car could be shoved onto the siding by way of a turnout at the north end.

Since I was modeling Boreas in 1882, I could depict the engine house under construction. I found modeling the scaffolding and cranes around an under-construction stone engine house interesting, and used construction photos of the Alpine Tunnel engine house as a guide. The walls were made from two sheets of 3/16-inch-thick Plexiglas with rubble between them. Laying stones piece-by-piece inside and outside on these walls had its challenges. I glued each finished plaster block "stone" to the Kraft paper covering the Plexiglas with Elmer's Glue. (See my article, "How to Model Buildings in Plexiglas" on page

40 of the April 2014 MODEL RAILROADER.)

I was able to include the Boreas Pass coal dock, water tank, and an operating turntable. The turntable allowed operators to run trains with helpers up to the top of the pass, and then turn them for the return trip – just like on the prototype.

## BRECKENRIDGE

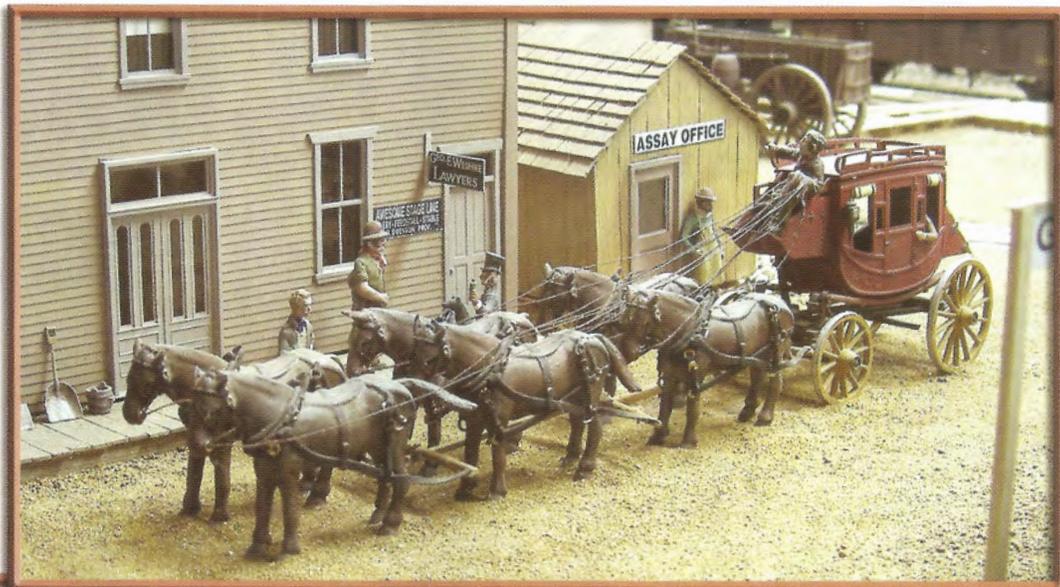
The final major location I modeled was Breckenridge. It was obviously too large to even think about building a full O scale model of the town, so Breckenridge took

some modeling license. "Necessity is the Mother of Invention" was never more true – space was in such short supply that I was forced to devise a 100 percent reliable remote system to operate three-way turnouts. (See my article, "Building a Three-Way Stub Switch" on page 94 of the April 2001 MODEL RAILROADER.) I was able to include a wye at Breckenridge, with one end being "End of Track" where a work gang was still laying track before the onset of winter. While the town had to be condensed, I decided to lay Breckenridge

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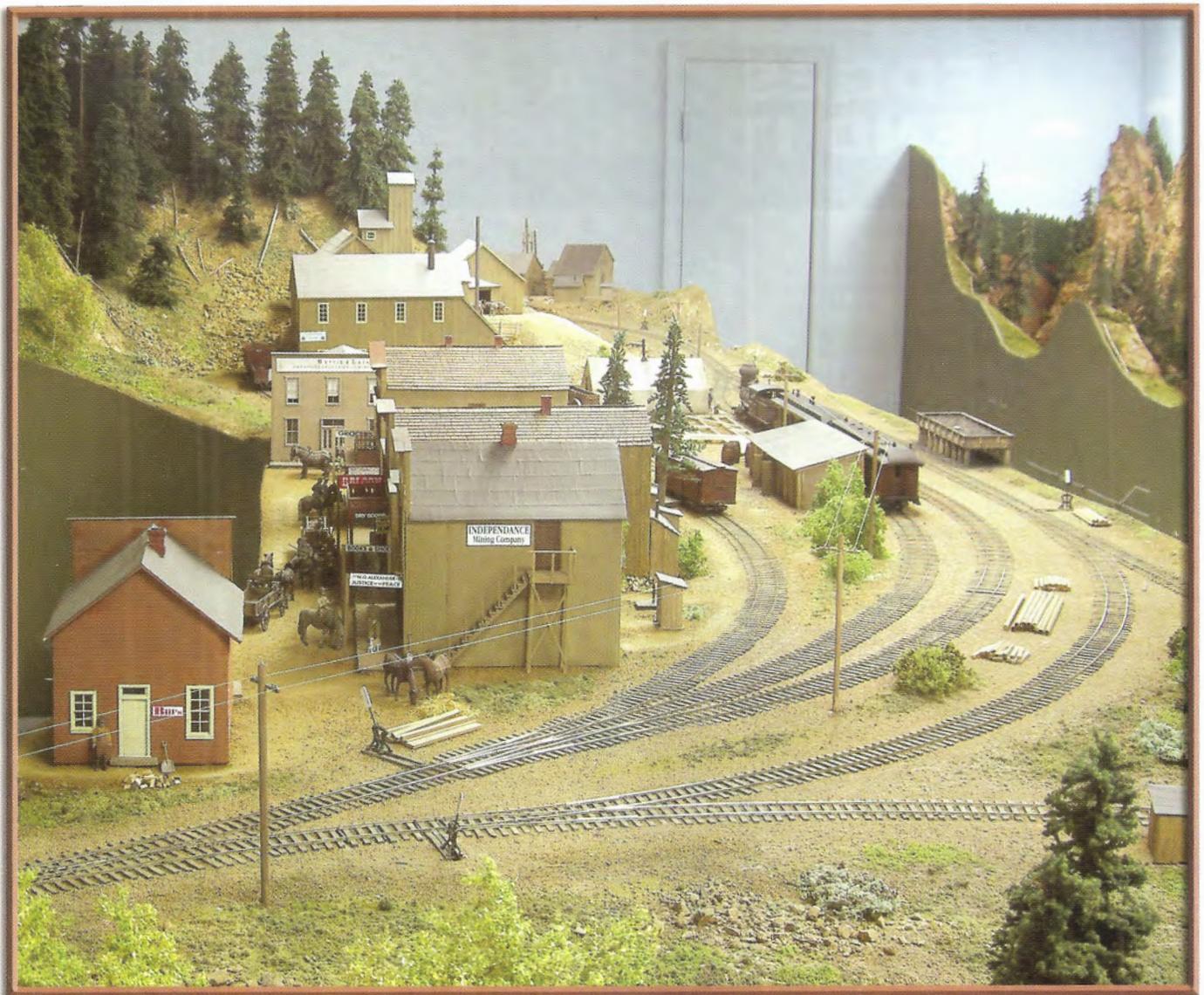
Above: During the era I was modeling, the South Park has just pushed its rails through Como, so I decided to model the temporary depot as a tent.



Above: With no rail service beyond the railroad in 1882, travelers had to rely on their own means of transport or take stage coaches serving many of the towns along the railroad including Webster and Como.



Left: For a final touch, and to depict the South Park under construction with historical accuracy, I added a construction gang working at End of Track.



Above: Breckenridge was the end of track in the fall of 1882. This overview shows my town and some mines. The wye is in the lower right, while the End of Track line goes off to left.

(text continued from page 79)

out so its one street scene, and the town's buildings could be viewed from both sides of the layout. Operators working the main yard area could see the back of the town's buildings, while operators standing in the access aisle could view the street side with its variety of stores, people, and wagons.

## FINISHED

By 2012, the layout had been finished for several years, and I saw no new projects on it that would hold my interest – so, with regret and nostalgia, I abandoned South Park. After my 52-year “love affair” with South Park, I decided it was time for a “divorce.” It did leave what might become a lasting legacy, a communication system for operators appropriate for the 1882 era modeled. During the layout's operating life, I introduced a telegraph communications system for operators to control train traffic. I had considered using the signal system that prototype railroads used, but felt that that was a step too far. Since radios and telephones had not yet been invented or introduced in 1882,

they would have seemed inappropriate. Utilizing a standardized system of signals based on Morse Code, allowed all crew members to have a better “feel” for the period modeled. (See “Running Trains by Telegraph Codes” on page 60 of the June 2001 MODEL RAILROADER.) I even went so far as to begin installing copper wires on the telegraph poles, but stopped once I realized I could not make the wires sag prototypically.

## THE FUTURE

My South Park layout is gone. I tried to save it, but to no avail. I re-did the room, and built a new layout based on the Colorado Midland as it was in 1897. Begun in January 2013 — my Colorado Midland was almost fully operational, with scenery “completed,” as of December 2014. Once the staging yard is in, and the locomotives have gone through a thorough shakedown period, I will go to DCC. With the Midland up and running, I will have achieved another goal – seeing and operating my equally loved Colorado Midland. ■