

# 7 tips for DEALING WITH CORNERS

Make those right angles less obvious with these layout-tested techniques

By Dan Lewis • Photos by the author

**T**oday, most model railroads are constructed around the perimeter walls of the layout space, whether in a basement, a garage, an extra room, or a dedicated outbuilding. This means you have to deal with corners. Though you may consider corners a challenge, I prefer to view them as opportunities.

Some of the methods presented here are tried-and-true, such as bending tempered hardboard to cove corners. Others might be new to you, such as modeling a town scene with businesses and industries that aren't rail served.

The seven tips presented here are ones that I've used on my 18 x 24-foot N scale Milwaukee Road layout. Hopefully, one or

Dan Lewis shares seven creative ways he dealt with corners on his N scale Milwaukee Road North Montana Line layout. He used the space behind the tracks to model a city scene depicting Lewistown, Mont.

more of these ideas will work for your model railroad. By putting corner spaces to work, you can maximize your model railroad space without infringing on the aisles.

*You can learn more about Dan Lewis' N scale Milwaukee Road layout in the September 2011 Model Railroader.*



A curved piece of tempered hardboard helps the backdrop flow through the corner uninterrupted. Dan left a 1-inch gap between the top of the hardboard and the drop ceiling.

## 1: COVE THE BACKDROP

One of the most common methods for eliminating the angle where two walls meet is to cove the corner. Since this can be a messy process, do the work before the track, scenery, and structures are installed.

There are various ways to hide corners. One technique is to use 1/4" drywall. This material can be wet and bent to the curve. However, the flexibility of drywall is limited, and the risk of the material breaking is considerable.

Some modelers have used aluminum flashing and the reverse side of linoleum with success. Check out Lance Mindheim's article "Aluminum trim coil backdrops" in the June 2018 *Model Railroader* magazine for more on the former technique.

My go-to material for coved corners is tempered hardboard. The material can be bent without wetting and taped and plastered where it connects with drywall. It also offers a smooth surface for priming and painting.

To install the hardboard, start by removing a section of drywall at the corners. Locate a stud and make the cut directly over the center of it. I find it works best to make the cuts 2 feet from the corner on each side. You may wish to install a second stud on each side, which can be nailed directly to the stud you've uncovered. This will provide you with additional material to which you can attach the hardboard.

Next, install shims so the surfaces of the drywall and hardboard are flush. The hardboard can then be bent to the necessary curvature and secured with drywall screws.

Once the corner has been coved, mud and tape the seams where the hardboard meets the drywall. After sanding (or sponging), the hardboard can be primed and painted.

Expansion and contraction from humidity and temperature changes are absorbed by the curvature in the hardboard instead of at the seams. The coved corners on my layout have been in place about 20 years, and none of the seams have cracked.





Believe it or not, this scene at Judith Gap, Mont., is looking straight into a corner. Dan layered the scenery here so the foreground elements don't block out the items in the background.

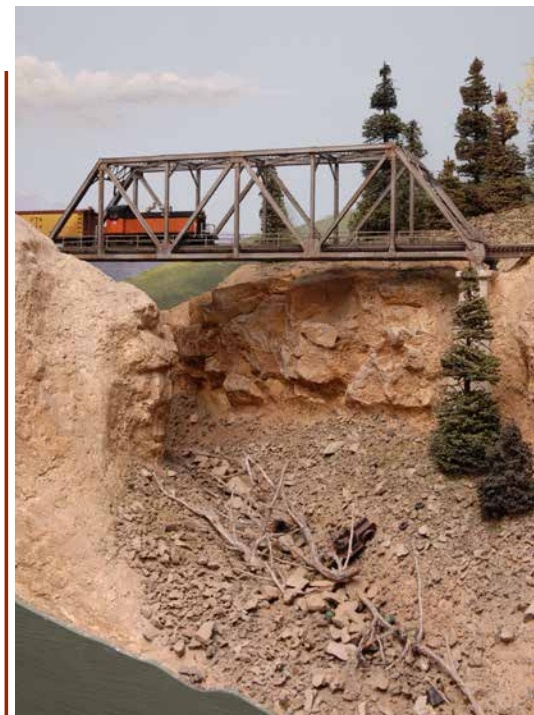
## 2: CREATE EXTRA SPACE

**Corners are prime real estate** for modeling deep scenes. These locations offer the chance to model eye-catching panoramas. Some of my corners expand from 12° to 36° or more before narrowing back down on the other side.

Instead of following the narrow width of the shelf through the corner, move the curvature outward. Creating this additional space will pay big visual dividends. Of course, any turnouts should be placed within easy arm's reach from the aisle. Structures or scenery may be damaged if you have to reach deep into a scene to line a turnout or operate a ground throw. If the turnouts have to be placed beyond an easy arm's reach in a scene, consider using a switch motor and a fascia-mounted controller.

When adding scenery to corners, build it up in layers so foreground elements don't block out items in the background. In the corner scene at Judith Gap, Mont., shown at left, I had sufficient space to model a prototype configuration where the Great Northern (GN) crosses over the Milwaukee Road (MILW) on an elevated deck girder bridge. There are several layers here, made possible because of the extra space in the corner.

In the immediate foreground, there is the MILW track and the highway. About midway through the scene is a dirt road to a ranch, a police car, cattle at a windmill and water tank, and a billboard. Higher up is the seven-span GN deck-girder bridge. Farther back are snow fences, some low hills, and then the Judith Mountains painted on the backdrop. By layering the scenery, visitors and operators are pulled into the scene step by step.



This small corner scene is only 13" deep, but the landforms aren't flush with the backdrop. The crest of the hill behind the bridge is about 2 1/2" from the backdrop. The trees on the top of the crest further disguise the seam.



Hanover, Mont., is another corner scene on Dan's layout. Behind the train passing over Teton Gorge is a lift-out section that provides access to a hidden track. The two bare tree trunks (stained bamboo skewers) serve as handles for removing the liftout.

## 3: DISGUISE HIDDEN TRACK

**All along I've been advocating** the usefulness of extra space in corners. This is especially true when a branch line wraps around a corner and parallels the main line. I wanted to avoid running through the same scene twice, so I hid the branch line in the corner by constructing a large bluff. Beneath this bluff, the branch follows along out of sight until it emerges on the other side.

As is always the case with hidden track, even if relatively short, you must be able to maintain it. After more than 15 years of operation, I've never had a derailment on this line. However, the track requires periodic cleaning, so I made it easy to reach. I built the substructure beneath the scenery with layers of extruded-foam insulation board so the lift-out would be lightweight.

Since the top section of bluff is populated with trees, I installed two bare tree trunks (stained bamboo skewers) deep in the foam. These serve as handles when I need to remove the lift-out and clean the track.

## 4: MASK THE SEAM

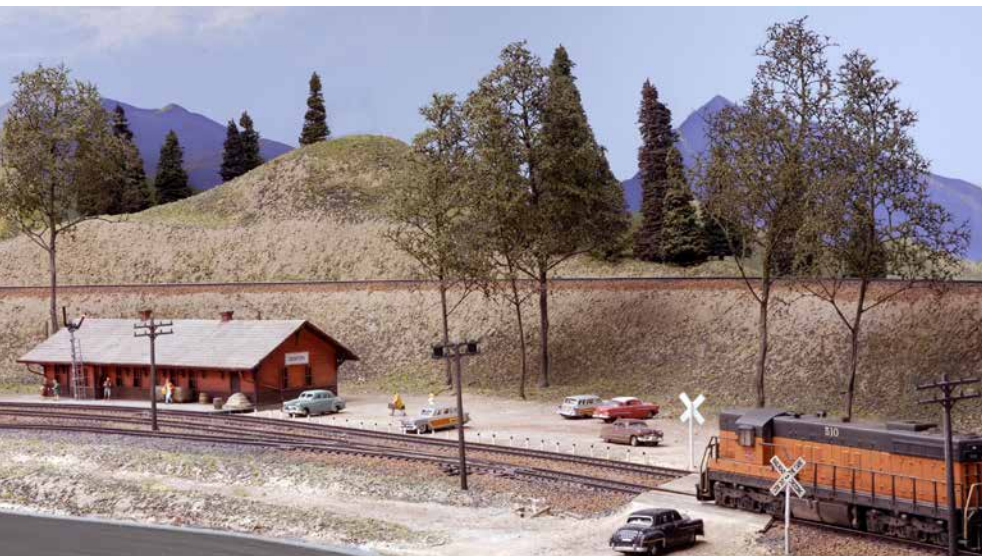
**A challenge for all modelers** is the transition between the three-dimensional layout and the two-dimensional backdrop. This is true whether or not you're dealing with a corner. However, since corners are deeper, they offer better options for disguising the seam.

Probably the most important way to disguise the transition is to match colors between the layout and backdrop. If you're painting the backdrop, purchase ground foam, trees, and other scenic items first. Then match the backdrop colors to those items. If you use commercially printed backdrops or make your own photo backdrops, color match the foreground elements to the backdrop.

Small elevations are another way to conceal the horizontal seam between the layout and backdrop. Place the hills near the backdrop, but not flush against it. This leaves enough space to slope the terrain down toward the backdrop. The crest should be an inch or more in front of the vertical plane. The terrain that slopes toward the backdrop will be largely unseen by the viewer, but that's OK. What's most important is that the seam between the layout and backdrop is hidden from the viewer.

Other elements, such as trees, fences, shrubs, and structures, can also be used to hide the seam.





This corner scene depicts the Denton, Mont., Milwaukee Road station. Behind, and somewhat under, the hill in the background is a track Dan uses to simulate the run between Falls Yard and Great Falls, Mont.

## 5: HIDE STAGING TRACKS

**Most often, we think of staging** as the link between our model railroad and the outside world. Typically, staging is set up at the beginning and/or end of the layout space. I do the same.

However, I needed hidden staging for the Industrial Job that ran from Falls Yard into the city of Great Falls, Mont. On the prototype, the freight

yard was some 5 miles outside the city. Though I model the yard, I don't model the city. A daily turn to and from the yard into hidden staging representing the city simulates this arrangement.

I was able to find space for a hidden Great Falls track in one of my corners. The corner had sufficient space to

create a sizable hill behind the Denton station. Obscured by the hill is the track representing the run into the city.

When the Industrial Job disappears behind the scenery in the corner, the suspension of disbelief is successful. The Industrial Job has left Falls Yard with its consist of cars to deliver to the industries in the city.

## 6: GAIN ELEVATION

**Also at Judith Gap, Mont.,** the Milwaukee Road track (lower) has room to form a large balloon curve. This is important, as it's working up a 2 percent grade that will eventually connect with the Great Northern line above at a junction. The extra space in the corner makes it possible to gain elevation while decreasing the percentage of the grade.

Prototype railroads also used large balloon curves to gain elevation. You may not have the corner space to model the Pennsylvania RR's (now Norfolk Southern's) famous Horseshoe Curve. However, you might have enough space to re-create Union Pacific's Tehachapi Loop in California or the Milwaukee Road's former Red Coulee Curve in central Montana.



This photo, looking in the opposite direction of the image at Judith Gap, Mont., on page 30, shows a Milwaukee Road train climbing a 2 percent grade. Electro-Motive Division SD7 no. 510 is in front of the caboose to help the train up the grade.



The depth of the Lewistown, Mont., scene begins at 18" wide and broadens out to 42" in the middle of the corner. The covered corner is behind the tree grouping in the upper right. The rest of the Lewistown scene can be seen in the photo on page 28.

## 7: CREATE A TOWN SCENE

**When building a layout,** we usually focus our efforts on trackside scenes but are less apt to model what lies beyond it. Re-creating a town or city is a viable option if you put the space in corners to use.

In one of my corners, I modeled Lewistown, Mont. I resisted the temptation to fill this space with more track, a trap some modelers fall into. Remember, on prototype railroads every track has to have a purpose. Track materials, installation, and maintenance are all expenses. If a switch, siding, or line is no longer necessary, it's removed.

Another reason I kept the track near the front edge of the layout is to avoid reaching over buildings to uncouple freight cars.

Beyond the track and immediate foreground buildings in the photo above is a sizable town scene. In addition to trackside industries, I included a city street and a variety of structures, suggesting that Lewistown is an active community beyond the railroad. Leaving space between the foreground structures enables the viewer to see through the first layer and into the rest of the scene. [LBR](#)

