

Scenery AP Certificate

article by *Larry Smith, MMR* and *Dan Lewis, MMR* photographs by Dan Lewis, MMR

The Master Builder-Scenery certificate is under the “Railroad Setting” category. The requirements for MMR state that you must have at least one certificate from each of the four categories. Structures, the first certificate in this category, was covered last month in *SCALE RAILS*. The scenery certificate was added in 1963 and became the seventh certificate in the program. It is also a very popular certificate as 333 MMRs have it or 82 percent of the 404 MMRs. It is also a fun certificate to obtain: Where else can you play in the dirt and get rewarded for it? Scenery is also a category where there is no right way or wrong way of doing things because everyone has his or her own way of working. As you will see later on, it is the final product that we are looking for and not the path that was chosen to get there.

The presenters of the Master Builder of scenery are Dan Lewis and Larry Smith:

Dan Lewis lives in Rochester Hills, Michigan, and is a member of Division 8 of the North Central Region, NMRA. He is MMR 268, which he completed about a decade ago, with certificates in Scenery, Author, Dispatcher, Cars, Volunteer, Official, Structures, and Electrical. He is currently making good progress on his remaining three. He currently serves as the photo chairman for the NCR and the AP guy for his Division (formerly he chaired the AP for the NCR and served as superintendent of his division). He has been published in *Model Railroader*, *Railroad Model Craftsman*, *Narrow Gauge & Short Line Gazette*, *N-Scale*, *N Scale Railroading*, *SCALE RAILS*, *NMRA BULLETIN*, and *The Milwaukee Railroader*. He models the North Montana Line of the Milwaukee Road in central Montana in N scale.

Larry Smith lives in Pelham, Alabama, and is a member of the Steel City Division of the Southeastern Region. He is MMR 185, which was completed and awarded in 1992 with certificates in Civil Engineering, Electrical Engineering, Scenery, Cars,

Left: This scene on Scott Kremer's HO scale pike is clearly set in the Northwest. Even disregarding the Great Northern locomotives, the conifer-covered hills and mountainous background set the locale. Notice how the colors are muted on the backdrop, giving the scene remarkable depth. Trackside details, like signals and line poles, add realism and prototype conformity.

Author, Volunteer, and Official. He has been published in *Model Railroading* (contributing editor), *Model Railroad News* (contributing writer), *Railroad Model Craftsman*, and *Timber Times*. He models in HO_{n3} a proto-freelanced narrow gauge railroad based on the East Broad Top and Manns Creek in western Virginia.

Requirements

To Qualify for the Master Builder — Scenery Certificate:

1. Construct a completed section of a model railroad of at least 60 square feet in O scale, 45 square feet in S scale, 32 square feet in HO scale, 18 square feet in N scale, or other scales in proportional relationship to HO scale. This completed section must contain the necessary scenic elements of terrain, structures, background, lighting, and realism/conformity as combined to achieve a realistic effect using applicable NMRA standards in that particular model railroad scene. The intent of this category is the prototypical rendering of the scenic elements from the ground up.

It is not necessary to qualify for this certificate by constructing a single section of layout. You can construct several different scenes (such as modules), each of which must be at least eight square feet and of Merit Award quality. Note that modules which earn 87½ or more points using the NMRA's module contest judging sheet count toward the Master Builder Scenery certificate.

Outdoor (garden) railways may qualify for the Master Builder - Scenery certificate. However, modelers must show that they have worked to create a miniature railroad, not just run some track through the flowerbeds. For example, bridges should be modeled after prototype bridges (just as they are in other scales), not just track running across a plank.

The definitions of the various elements (which may be combined to comprise the setting for the model railroad) shall be:

1. Terrain (35 pts)

The ground and all natural features such as rocks, water, trees, hills, and depressions, as well as man-made features such as railroad roadbed, cuts, fills, drainage ditches, embankments, streets and roads, and so forth.

Also remember different types of vegetation and the effects of weather and animals. Remember the detail on streets and roads, whether in urban or rural areas: sewers/storm drains, man-hole covers, shoulders, drainage ditches, cracks, patches, road wear marks, oil stains, and tire ruts in dirt roads.

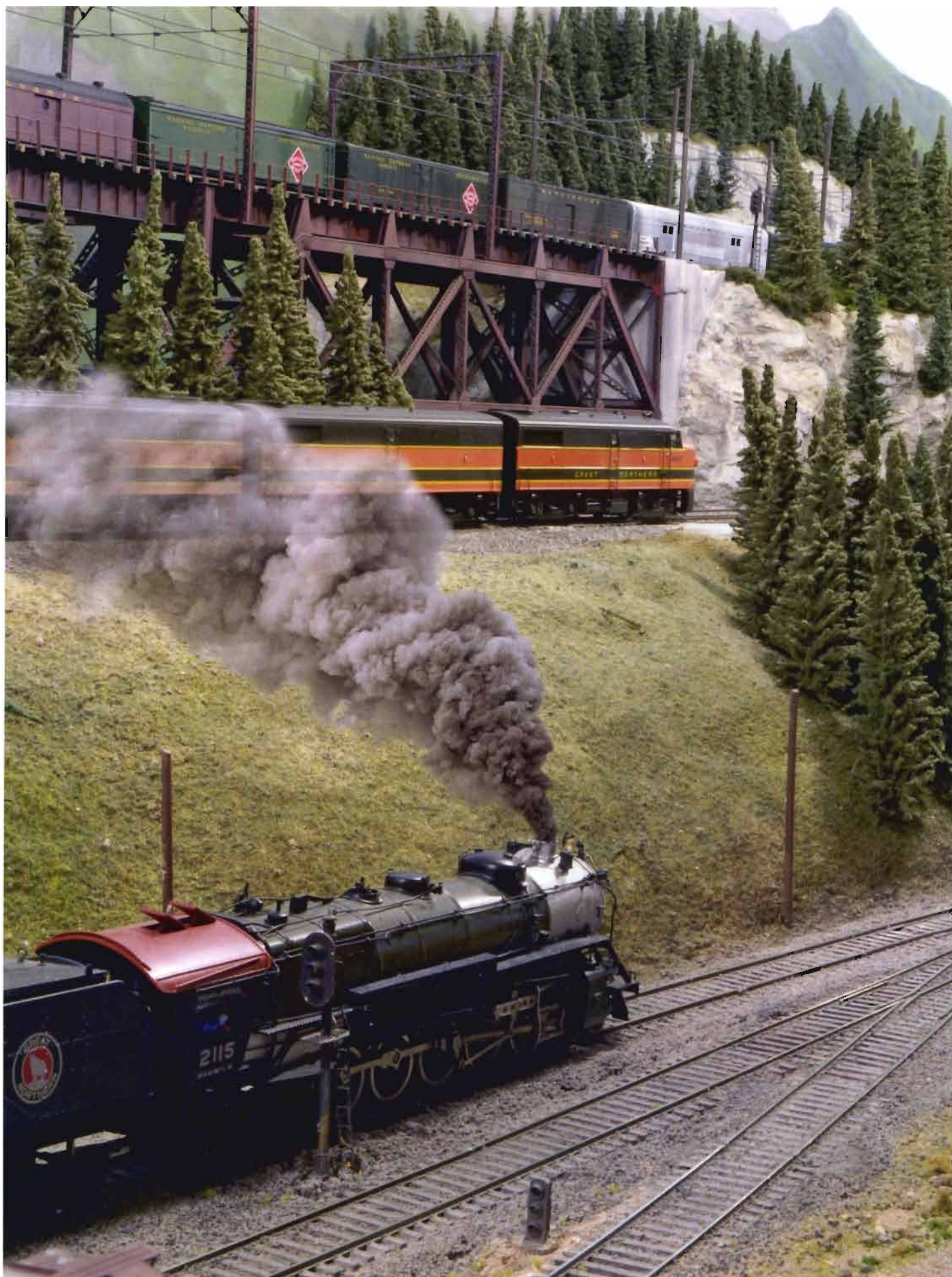
Make the transitions between different types of terrain as smooth as possible. Avoid glaring inconsistencies, such as a New England farmhouse surrounded by palm trees. If you are going to have different scenes on your layout, use backdrop dividers or other view blockers to separate them.

2. Structures (20 pts)

Structures are considered from the standpoint of prototypical suitability, placement, and appearance as scenic effects, not as to construction (which is covered under Master Builder — Structures). This includes bridges, trestles, and culverts, buildings, and all other types of structures (towers, power lines, signs, fences, retaining walls, and the like), track and right-of-way features such as turnout controls, signaling structures, crossing gates and shanties, turntables and other service structures, and the list goes on. These are but a few examples — additional features are encouraged. Remember that structures should be in the ground, not sitting on top of it. Make sure that the appearance of your structures is consistent with your scenery. At the very least, weather them enough to take off the “out-of-the-box plastic shine.” Switch machines, if not under the table, should be well disguised (this is one detail that will cause your application to be returned if it is not done). Remember details such as lights over the doors of commercial buildings.

3. Background (25 pts)

Background is the treatment of the wall, backdrop, and/or ceiling to realistically depict depth, distance, horizon, and sky. This doesn't mean that you have to have a photographic or landscape artist quality background. However, your background should continue the “illusion of reality” that you are trying to create with your scenery. The background should match the scenery, and the transition where the two meet should be smooth and/or hidden. One good question to ask yourself is:





Is there enough good background to allow a photo to be taken without showing other parts of the room? If a wall is the backdrop, make sure that the texture is appropriate, as well as the color (a concrete block wall painted sky-blue still looks like a concrete block wall).

4. Lighting (20 pts)

You must include illumination effects from three aspects:

1. Railroad cars, signals, and the like.
2. Buildings, streets, and roads, and so forth.
3. Overall lighting effects — day and/or night.

An entirely daylight scene is acceptable. This lighting information must be included in the material prepared for Section 4 below. Note that a fully day-lit scene is perfectly acceptable (although you may get more points for a scene that allows you to show off additional lighting elements). However, even in a day-lit scene, there may be evidence of lighting, even if it is not operational (non-illuminated streetlights, for example.)

Also note that not every scene will contain all of these elements. If the scene you are modeling is in the middle of the desert,

there may not be any buildings or streets there to light!

5. Realism / Conformity (25 pts)

In the other four judging areas, the judges evaluate what you were trying to do, what you remembered to include in your scene. In this one, they evaluate how well you did what you were trying to do. Your entire layout does not have to be finished to be judged — just enough to meet the minimum space requirements given above. However, the areas which are not to be judged should be blocked off (visually) from those that are.

1. Prepare a set of photographs (video tape presentation is acceptable) and a written description clearly describing the intended setting of the model railroad and the scenic details, including towns or cities in the area being judged. These photos don't have to be professional quality — that isn't what is being judged. However, there should be at least one overall picture of the layout, and pictures of all the parts that are being judged. Each picture should have an accompanying written description.

2. Prepare a description of the materials and methods of construction used in creat-

Above: The detailing on Dan Lewis' pike works toward extra points in realism/conformity. However, the details must work logically. Observing how such details function in real life will go a long way toward determining how you should use them on your railroad. Notice also the mirror that is angled so as not to betray the face of the viewer, and the way the edges of the mirror are disguised by piping and an overhead structure.

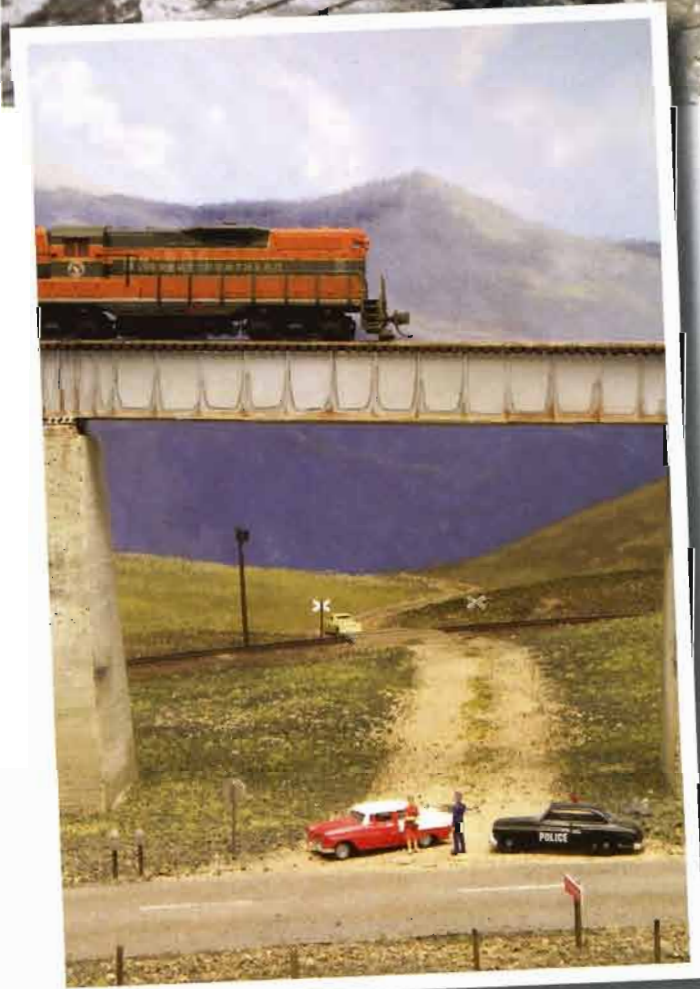
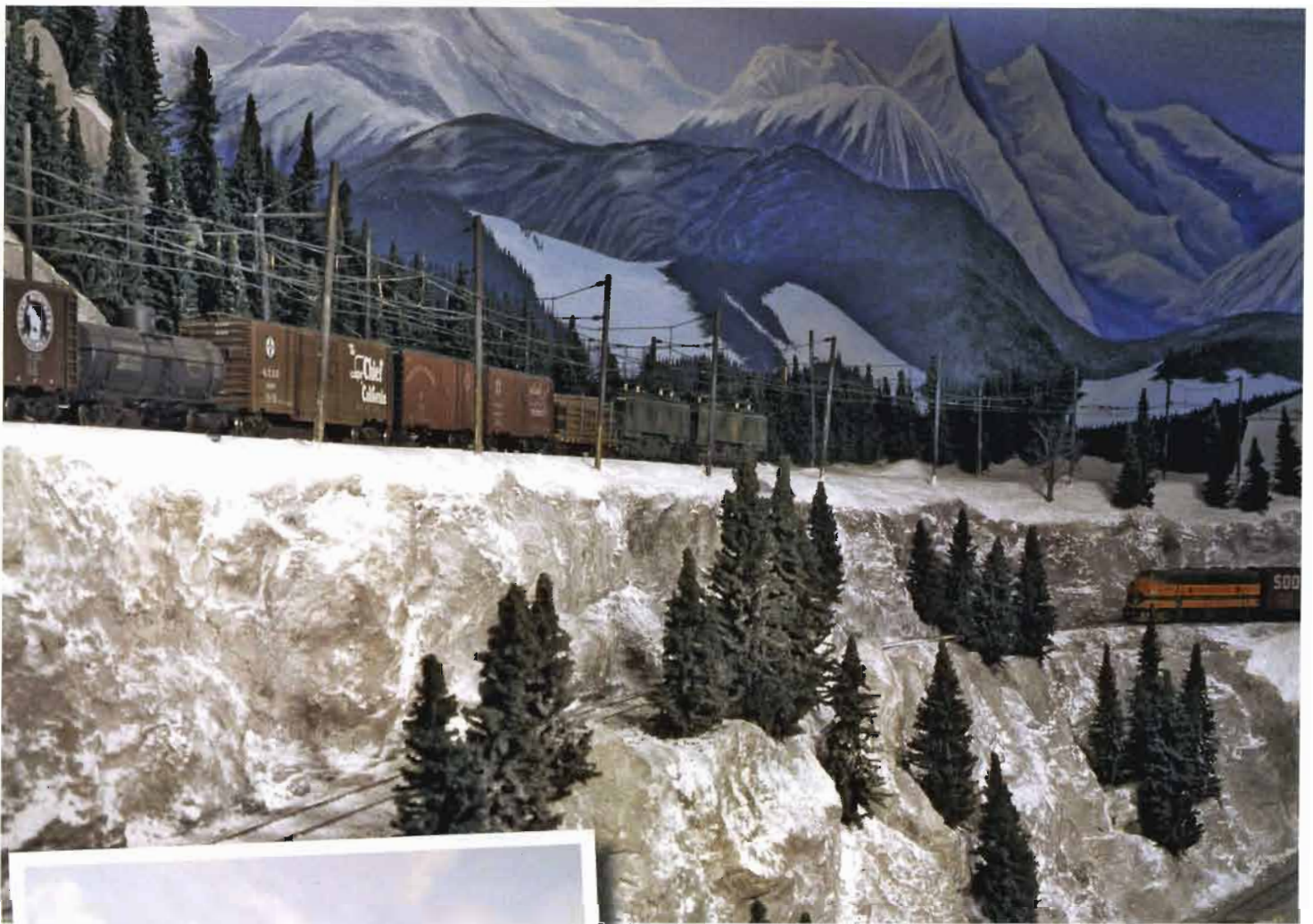
ing various features of terrain, background, and lighting. These can be simple statements — nothing elaborate is required.

3. Attach one copy of the materials in Sections 2 and 3 to the Statement of Qualification (SOQ) for use by the judges in determining the effectiveness of the craftsmanship displayed by the member requesting certification.

4. Earn a Merit Award of at least 87.5 points on the section of layout being judged.

5. Submit a completed Statement of Qualifications (SOQ) including the attachments for Sections 2 and 3 and the signed merit judging forms and/or copies of the Merit Award certificates from Section 5.

Now that you have read the requirements, we would like to show you what we as judges look for so that you can better understand them. In the text that follows, we will discuss each of the areas and give our



Above: Scott Kremer's snow backdrops, which he painted himself, show the careful research work of finding photographic references from which to paint. The blue cast of the snow makes the scene look especially cold. This is the "wow" factor that Larry talks about!

Left: Here is an example of a three-dimensional road running into a two-dimensional backdrop on Dan Lewis' layout. The two dimensions meet just beyond the far motor vehicle, and as you can see, the road immediately curves into the painted backdrop. From virtually any angle, this road maintains the proper perspective.

personal experiences as examples of what we did to get our certificates. Our comments also will illustrate that you really must plan your scenery with an eye toward what you see in your mind as the finished area.

What do you look for when judging scenery?

Dan: The first factor, of course, is size. The AP Scenery qualification requires a minimum of square footage of fully scenicked layout, the size of which is prorated for the various major scales. I remember when I was qualifying for this certificate, I had a shelf layout in N scale — much of it only 8-inches wide! Believe me, you can run a lot of shelving 8-inches wide before you accumulate the required 18 square feet for N scale! I ended up with a shelf layout across one wall of our living room, through a hole in the living room wall into the hallway, and on into the foyer of our home. In all, there were five sections, and I entered each of them in regional contests in the "diorama/module" category for five consecutive years, one section each year (each section earned more than 87½ points). By the end of the fifth year, I had my



Above: Brooks Stover's S scale pike features a logging branchline that wandered through the woods in the Appalachians. The low-profile roadbed is prototypical for such a line. Notice the retaining wall that holds the embankment for the road bridge. Also, Brooks was careful to use eastern deciduous trees and shrubbery to help define the locale.

minimum square footage completed. This is only to say that there is no particular shape of the square footage requirement, only total square footage. In HO, for instance, where 32 square feet are required, the shape could be 4x8 feet, but 1x32 feet would work equally well or 2x16 feet or even some other shape.

Larry: When a judge first enters a layout to be judged, he/she can quickly tell if there is enough scenery to be judged; however, I have encountered too much scenery to be judged, far in excess of the requirements. (I can see the raised eyebrows on that comment.) "How can you have too much?" is often asked. Let me give a true example. A member of my model railroad club asked to have his layout judged for scenery. Bob Beaty, another MMR and a close friend, and I agreed. When we arrived we asked what he wanted to have judged. He said the entire layout. The layout size was more than double the required square footage in HO. Upon a quick evaluation of the layout, we suggested that judging the whole layout wasn't a good

idea because there were some issues in some of the areas that could adversely affect his score. (These issues mainly had to do with oversized items that were marketed as HO scale and had been included on his layout.) Once he understood what we were telling him, we were able to define the areas to be judged, and he received his certificate. The point is this: Don't build just the minimum, but if you do more, define the area you want judged ahead of time, and if you have any questions about it, ask!

Once the square footage is determined, then we move on to the five sub-categories: terrain, structures, background, lighting and realism/conformity. The larger goal, of course, is to get as many points as possible in order to surpass a total of 87½ out of 125 possible points. Of that total, each category has an incremental share, terrain offering a possible 35 points, structures 20 points, background 25 points, lighting 20 points, and realism/conformity 25 points.

Terrain

Dan: When judging terrain, I first want to know what era and locale the layout is intended to represent. Natural features, such as earth texture and color, plant life, rock formations, and so forth, differ from

locale to locale. The basic elements of the terrain should be appropriate for the region modeled. Granite rock outcroppings in the Rocky Mountains, for instance, are quite different from the sedimentary shale in the eastern Smokies. Deciduous trees are typical of the Northeast, conifers of the Northwest. I usually look to see whether the modeler has taken the trouble to create root structures for trees or simply stuck the trunks into the ground. Details like that make for more points. If water is modeled, I look at the color. Rarely is water blue, since it takes on the color of the surrounding terrain (usually water surrounded by hills and woods is a dark green or even dark brown). I would like to see that the modeler has done his "homework" well in modeling ground cover, weeds, grasses, bushes, and trees. Terrain is every bit as much a model as is a locomotive, and research is required for both. Color is also important. Modelers frequently use colors that are too garish and unnatural, especially if they model autumn scenes. I also

Right: The color of the water matches the color of the surrounding terrain on Larry Wright's HO scale railroad. The three primary areas in this scene — the water in the foreground, the heavily wooded hills in the middleground, and the painted backdrop in the background — are all carefully color matched with the same basic tones. Here is truly the work of a master!



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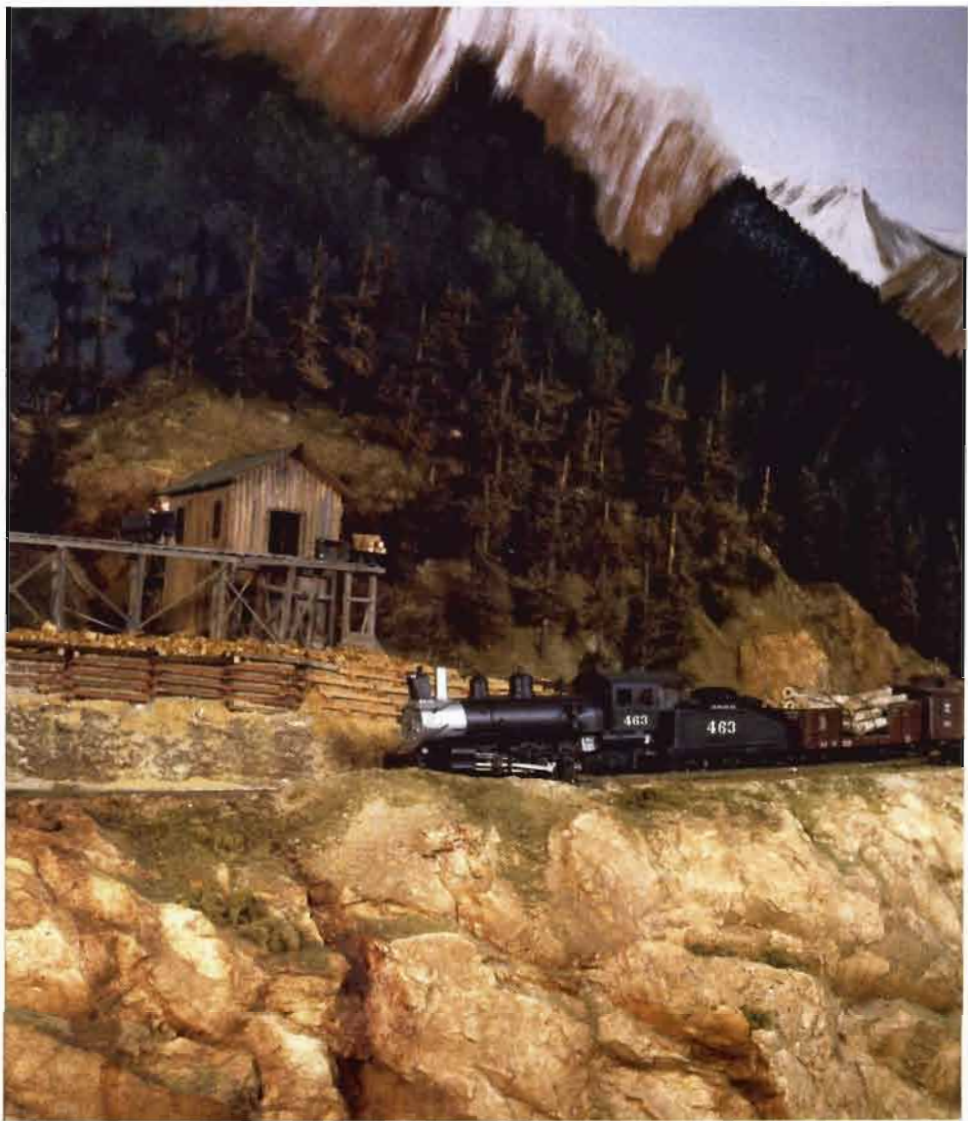
Right: The effect of water on terrain as well as on structures is an important feature. Here, Jim Clements has modeled a seep that stains the cliff on his HO_n3 layout. The cribbing below the trestle prevents the collapse of the embankment. The rocky escarpment, created with plaster in rubber molds, is convincing. No one doubts that this is the Colorado high country!

want to see if the modeler has shown the effects of weather, such as erosion. Rocky areas will have talus near the bottom of the slopes, and run-off water creates gullies. All these sorts of things, when modeled well, pay big dividends in points awarded.

Of course, man-made features are also part of the terrain. If the modeler follows a Class I railroad, then the roadbed should reflect the type of graded ballast typical of a heavily used line. If he/she represents a down-and-out logging route into the backwoods, then a high profile roadbed would be inappropriate. Primary roads should be crowned with drainage ditches along the sides. Embankments near the railroad right-of-way will often have retaining walls. Streets will have signage along the sides and/or near intersections, and vehicle traffic wears patterns on the surface and creates the discoloration of oil spillage. Dirt roads will have ruts. When roads turn, they do so gradually, not abruptly. All these are the sorts of things that work toward getting additional points for terrain.

Larry: Before I begin judging the elements of scenery, I like to talk to the modeler and get some feedback on his/her layout. Where is it located? What is the era? While I don't require them, it is nice to have photos of the region they are modeling to show what they are trying to replicate. For the East, I'm looking for rounded hills and striated rock seams with different layers of rock showing, such as shale, coal, limestone, and sandstone. For the West, I look for sharper rock definitions with granite colors and large boulders. Choice of soil colors is also considered, as is ground cover. If the modeler is modeling, say, a log loading area, I look for the debris from the logs, broken cables, animal paths, and scarred earth that might be present at such an operation.

For streams, I look to see if the water has a sense of flow. By that I mean does it look like its moving or standing still? I look for debris in the stream and the banks of the stream. Does the watercourse fit or does it look like the modeler has just cut a hole in his scenery for a stream? I also look at color. Unless a stream represents a very large body of water, it isn't black, and if it is black, it's only toward the deeper parts of the stream. Case in point: I saw a very renowned modeler paint a river black straight up to the



banks. There was no indication of the bank fading into the depths, only a very sharp drop-off indicating the water went straight down. Be very diligent when making water scenes for your layout.

Improbable situations can distract from your overall effect, as well. Remember that dirt hillsides can only hold firm below a certain degree of angle, especially if it is foreground scenery. Above that you need to have rock outcroppings, retaining walls, and cribbing, and the latter two should be to scale. If it doesn't feel right to you, then it won't be right for the judge either.

Structures

Dan: For structures, the function of buildings as part of the scenery is most important. Here, I am not looking necessarily for tight corner joints and super-detailing (though these will help the overall effect) as much as for weathering and the suitability of the structure in its environment. Does the structure function appropriately

in the scene? Can a motor vehicle actually get there? (You'd be surprised at how often buildings with loading docks, such as storage sheds, appear on layouts in such isolated ways that no truck could ever get there!) Is the building anchored into the ground cover (i.e., has the modeler brought the ground cover up to the foundation so that the building doesn't look as though it is floating on a cushion of air). The various structures in a scene should make sense as if they were to occur in real life. If a fence is used, it should be a fence that has a logical purpose. If telephone poles are used, they should be spaced properly and in the same relationship to roads or the railroad as would happen in real life. If one models the 1920s, most houses still had privies. If one models the modern period, trackside paraphernalia, like electrical relay boxes, will reflect the era.

Pay attention to functional details on buildings. If the door into a building is more than half a dozen inches from the ground, then steps will be required. If a building is



Left: Notice how Ken Chick has brought the ground cover up to the foundations of these buildings so that they look solidly anchored. Observe also how the backdrop of this N scale scene blends with the three-dimensional elements. The colors have been carefully chosen so that there is no disparity between what one sees “up front” and what one sees in the distance.

in town along a sidewalk, it is likely to have gutters and downspouts — but in the country, such details are less likely. Flat roofs, in particular, will need a drainage mechanism, such as, downspouts. Many structures will have outside light fixtures over doorways. Windows may have window shades or blinds or curtains — but unless the building is simply a warehouse, windows usually are not just staring, empty holes. Also, period

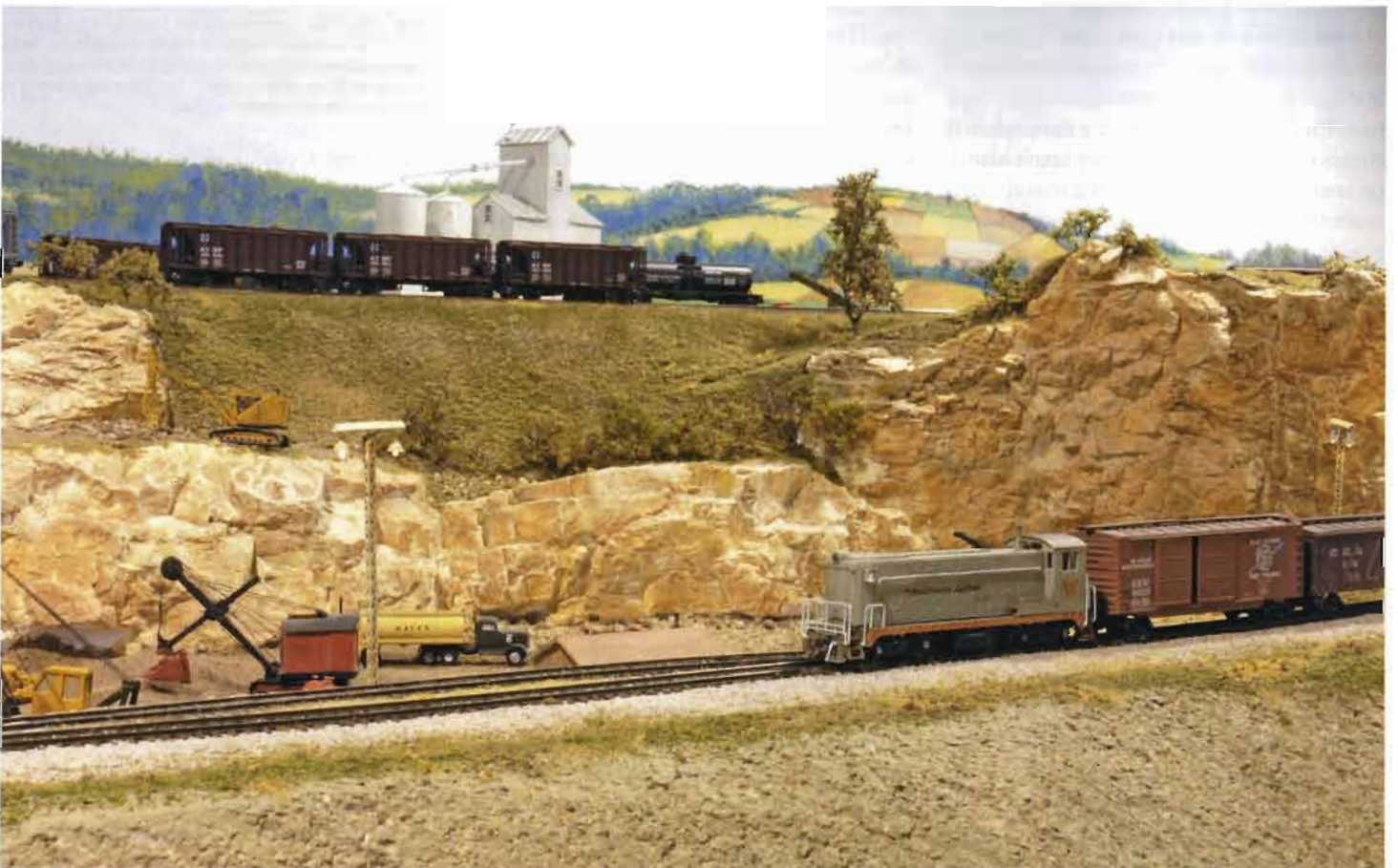
signs go a long way toward establishing a scene in a particular era.

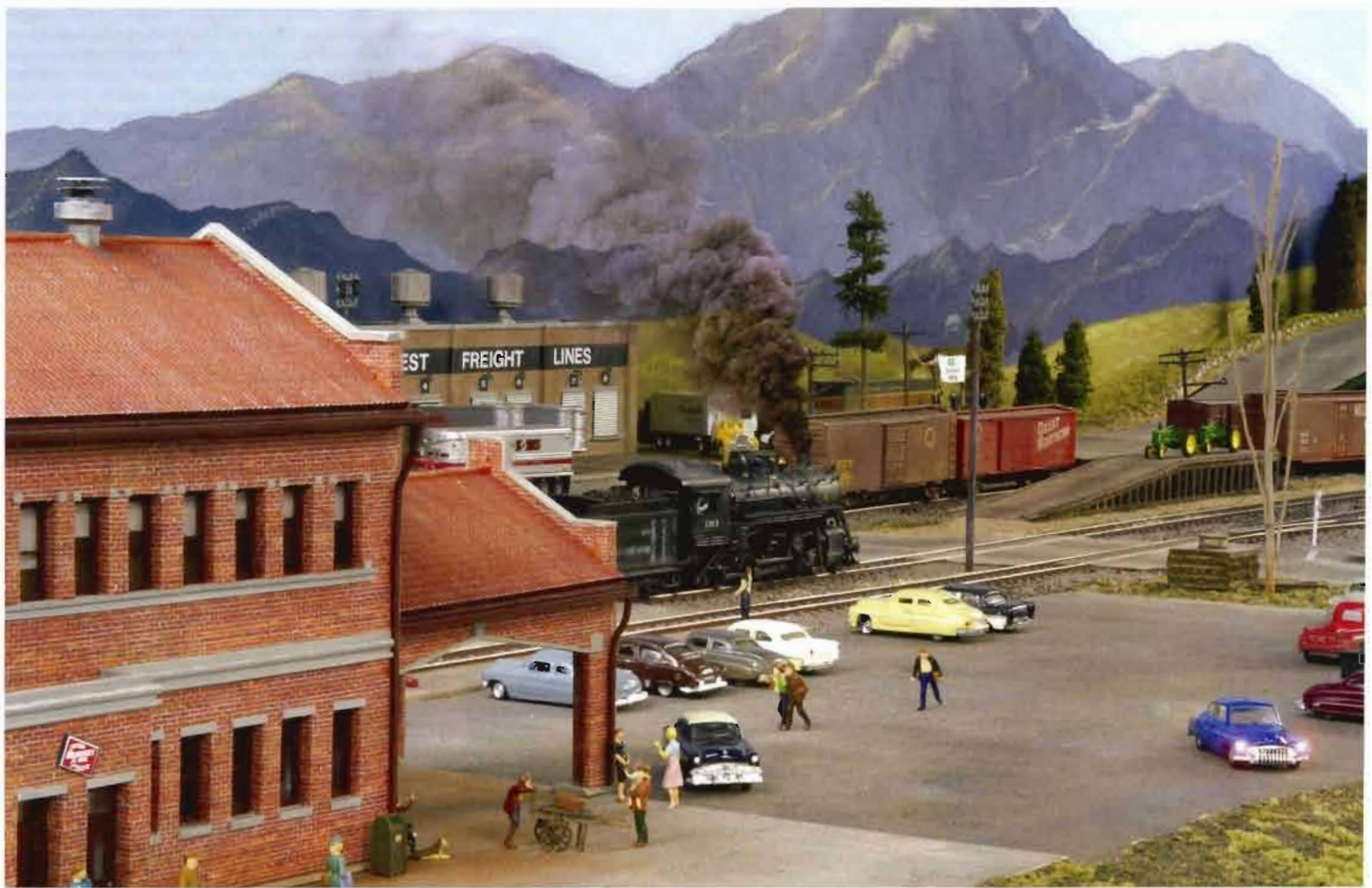
Railroad structures are most common near yards, and the placement of such things as engine servicing facilities should show awareness of how such facilities actually worked. If one runs steam, the yard should have a place for dumping the fire, for instance, or for filling tenders with water or sand domes with sand. If one runs diesels,

Bottom: This scene on Marv Linke’s N scale layout smacks of the Midwest. The cultivated farmland painted on the backdrop, not to mention the elevator and quarry, puts this panorama in the central states. Notice the detailing in the quarry — the use of special equipment to help set the scene. Also, notice the roadbed profile depicting a well-maintained right-of-way.

a fueling facility or tank is in order. Diesels also may need access to Bunker C oil. Yards, especially, are grimy places, so heavy weathering in yards is to be expected.

Larry: Structures tell the story of your railroad. They identify your era and location quicker than anything else on the layout. I’m not looking at the quality of your structures: they can be plastic kits or even ready-built, it doesn’t really matter, although something that is poorly done can distract from the rest of your work. I’m looking to see how well you have blended them into the scenery: Are they planted into the ground or do they look like they have just been set into place? Are they weathered? Are they appropriate to the era? Are they detailed? Is their placement logical? These are all items that I look for in judging. I also look for window





dressings to indicate that the building is occupied. While interiors aren't necessary, they would be nice in foreground structures and will gain you extra points.

The problem that I see the most when it comes to structures is that they aren't blended into the scenery. Gaps at the foundations make the structures look like they have been placed on the layout to fill in space. Those gaps also let light escape from underneath the structure. If you put lights in your structures, make sure there is a block to prevent the light from making the structure look like a Christmas ornament.

Last but not least, make sure you weather your structures to look like they fit into the scene. Use the same dirt and colors that you use for your scenery to weather the buildings to make them blend in better. If you are in the era of coal fired stoves, make sure you have soot over everything, heavier in some spots than others. I recently read a story where the mom would race outside to gather her wash in whenever she heard a steam engine coming. Just think how that steam exhaust would blanket every thing in its path — that is the effect you want to try to achieve, and by the way, diesels weren't much better either!

Background

Dan: Background is a bit frightening to many modelers, since it seems to require artistic skill. However, one doesn't have to be Da Vinci to produce an acceptable backdrop. In the first place, the wall surface behind the layout should be painted sky blue. Be sure to keep the blue tone reasonably light, since the atmosphere mutes the part of the sky that is nearest the horizon and is lighter than the deeper blue color one sees overhead. If you feel competent to do so, you might even want to make a gradual transition from a medium blue to a very light blue as the sky nears the horizon. Clouds are fine, but they are not required. Many modelers have found that they can produce quite effective clouds by using stencils and spray cans. Others use photo mural backdrops taken from actual photos or use commercially produced backdrops. In any and all cases, the modeler should take care to match the colors between the backdrop and the modeled three-dimensional part of the layout, which usually has colored ground foam and foliage. Also, the colors for backdrops should be muted, since one views the background elements through much more atmospheric haze than those elements that are close up. Light, high tone colors are in

Above: This is the "I'd like to walk through this town" effect at Lewistown on Dan Lewis' layout. Scenery is a combination of various elements, both man-made and natural. Motor vehicles usually date a layout as does rolling stock. Weathering is critical to achieve the appearance of age.

order; bright, dark and low tone colors are generally to be avoided.

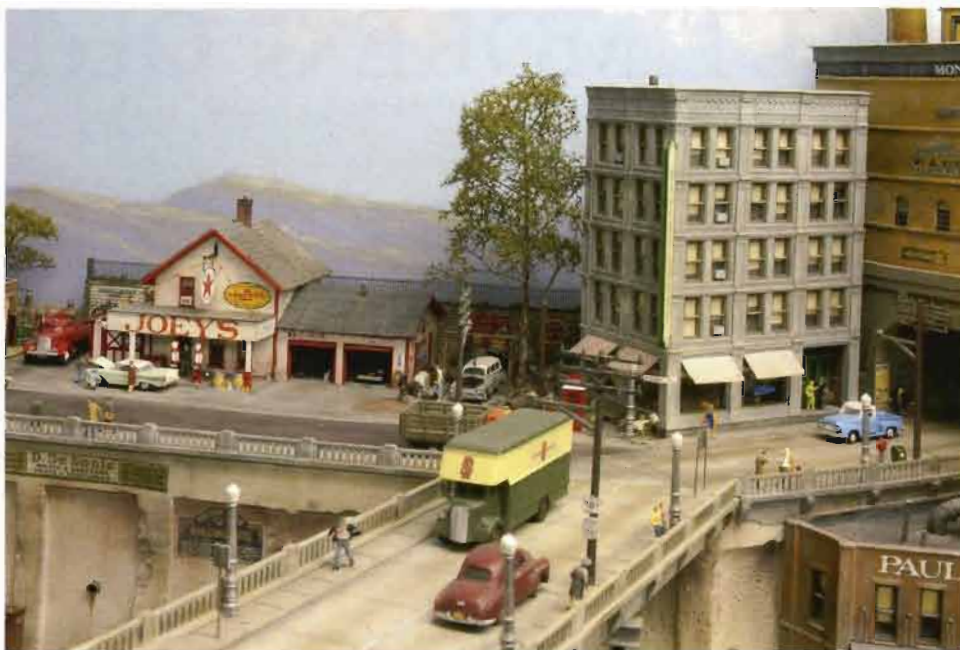
One of the challenges is the transition between the three-dimensional layout and the two-dimensional plane of the backdrop. This transition can be disguised by structures, fences, receding hills, foliage and the like, but it works best to keep these elements an inch or two (or more) away from the backdrop rather than putting them right up against it. A low hill whose crest is still a couple of inches from the backdrop is visually much better than a hill whose crest visibly adjoins the backdrop. When roads move between the three-dimensional modeled space and the two-dimensional backdrop, it usually helps to angle the road into the backdrop and create a curve where the horizontal and vertical planes meet. A road that goes straight into the backdrop creates perspective problems. Of course, if a road disappears behind some other scenic element, like a structure or a hill, all the better!

Larry: The question may arise: What if I don't have an around the wall layout with a backdrop? How do I take care of this requirement? For my layout that was judged for scenery, I built a divider down the center of the layout out of Masonite to above eye-level. I painted both sides a sky blue and then built my scenery up to the backdrop. I then covered the hillsides with dense forest, taking it up to the backdrop. For distant hills, remember I'm modeling the Appalachian Mountains, and they are tree covered. I used stencils and painted them on the backdrop. I over-sprayed with white to give the illusion of distance. This is just one of the ways to create a backdrop.

If the thought of using anything more than a spray can frightens you, then you can use commercial backdrops for your area; however, I would suggest you cut out the scenery portion of the backdrop and glue it to your painted sky board, as most printed backdrops will never match your color. Also if you use them, make sure they represent the area of the country you are modeling. Don't try to justify a snow-capped mountain in West Virginia on your backdrop. Another effective method of doing backdrops is to use pictures from magazines. I have seen this technique used on four layouts, and with proper positioning, one cannot tell where the photo ends and the backdrop begins. Remember, as a judge I'm looking for how well you carry off the transition from foreground to backdrop.

Lighting

Dan: For lighting, three aspects are specially listed in the requirements: railroad features (lighted cars, signals, and the like), non-railroad features (structures in towns, streetlights, signs, and so forth) and natural light (sunshine or night lighting). For any sort of lighting that comes from the inside of plastic walls and shines through windows, such as in passenger cars or buildings, you may want to paint the inside of the car or structure so that the light doesn't glow through the walls (flat black works well). Any building in which the interior light creates glowing walls and looks like it's full of radioactive waste is to be avoided. Judges have to use common sense when evaluating lighting, of course. They shouldn't expect streetlights on a country lane or ABS signaling on a dark line. Also, as the rules state, it is perfectly acceptable to model a daylight scene, but if you have the capacity to change it to a night scene, you may garner more points.



Above: Structures are scenery, too! Realism in this city scene on Dan Lewis' N scale layout is achieved by paying attention to such details as the discoloration of the traffic lanes, the water stains, the street signs, and weathering. While the streetlights are "dummies," they still count toward lighting effects.

Larry: Even if you are modeling a daylight scene, there is a lot you can do with lighting to earn points over and above the ones that Dan pointed out. Special effects lighting can be used for simulating fires or welding flashes to gain extra points. If you are modeling a steam locomotive facility, you can have a glowing ashpit. Blacksmith shops can have glowing hearths. I have a slash burner that I'm installing on my new layout, and it has a large flame-maker in it to indicate a raging fire inside. Fifty-five gallon drums were used to burn trash up until the 1960s around homes and factories. A few of these would be nice to have if you model that era. A moonshine still with a fire under the cooker is another idea for those of you who model earlier times. Every application of special light effects just adds to your score.

Realism/conformity

Dan: Realism/conformity is the final category. The modeled work should be convincing with respect to era, geography, and naturalness. Clearly demarcate where are the boundaries of the part of your layout you want to be judged. The rules even suggest visually blocking out any parts of the layout that are not to be judged, so the final effect of the modeled portion is not compromised by distracting elements of unfinished sections elsewhere. When judging such a category, I try to mentally shrink myself into the size of a scale person and "walk through" the layout.

Does what is modeled seem to reflect real life? Does everything make sense? If I were a scale-sized person walking through this area, would I be caught wondering about features that don't seem to fit?

Larry: For this area, I look for the "wow" factor. What I mean by that is, does it look real? Have I seen this in the real world? On my club's sectional layout, we have had people walk up to us and ask where the town is located. They express the feeling that they have been through a similar town in Alabama before, they just can't place it. That's the effect you are trying to achieve. A simple trick that will help you with your modeling is to take a photo of the scene. (You have to take them anyway for your documentation, so why not use them to improve your scene?) The camera sees things that you and I miss with the naked eye. It is a more critical judge than any you will ever find in any model contest or AP judging!

Now that you have survived the judging, you should have the judges review your paperwork to be submitted. This is mainly to see if you have included everything and to help you do it in a concise manner. You do not have to write a book on your scenery, but you do need to explain to someone who hasn't seen your layout what you did and how you did it. The more precise you are, the quicker your paperwork will move through the system and you will get recognition for your work.

We appreciate the opportunity to share with you our thoughts on scenery! If you have any questions please send them to the editor of *SCALE RAILS*, and he will forward them to either Dan or Larry. 📧