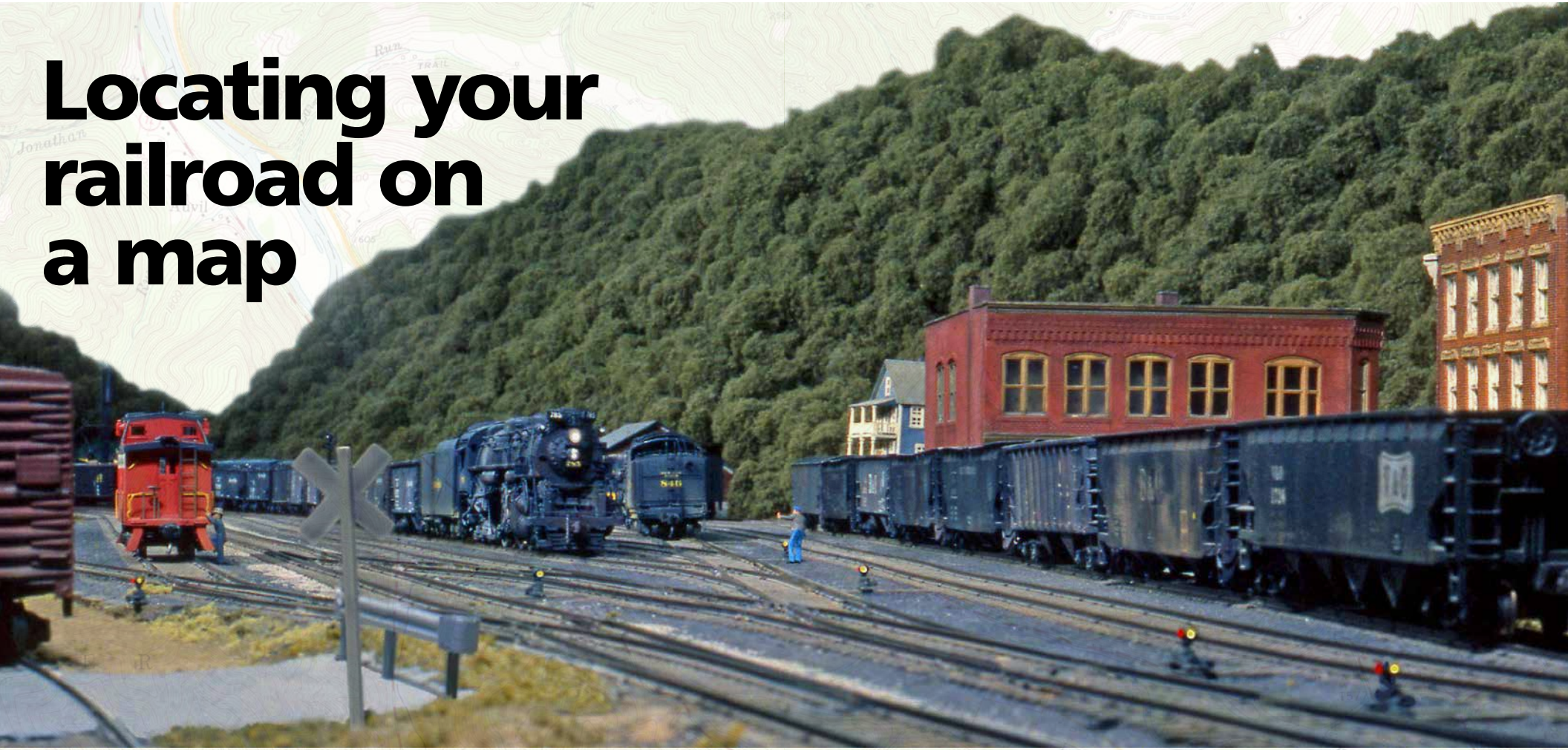
Locating your railroad on a map



Aiming to give your layout a feel of realism? Here's your first step

By Tony Koester

If you're planning to model a part of a prototype railroad, you almost naturally envision or actually look at a map of the railroad to find a section of it that appeals to you. You may be led there by photos of the prototype or by personal experiences – memories of railfanning your hometown railroad or watching trains at a family vacation spot, for example.

But the freelancer who wants to do her or his own thing may lack such specific guidance. I still have the plan for a freelanced railroad I designed for our first basement, and to this day I can't tell you what part of the country that railroad was supposed to represent. As a result, it was a mishmash of favorite scenes – a port, a coal mine, a bridge abutting a tunnel mouth, and so on.

I had no idea what the railroad did for a living, no concept of how it might fit into the North American rail network, what industries it served, or what types of rolling stock should therefore predominate on my roster.

In short, I had made one critical mistake: I had failed to consider where the railroad-to-be might have been located on a map.

The Allegheny Midland

That was 1971. By 1973, when we had moved into our newly built home, I had wised up. I think it was because I had met Allen McClelland and figured out what made his Virginian & Ohio stand head-and-shoulders above most other freelanced railroads: It all hung together as an enterprise.

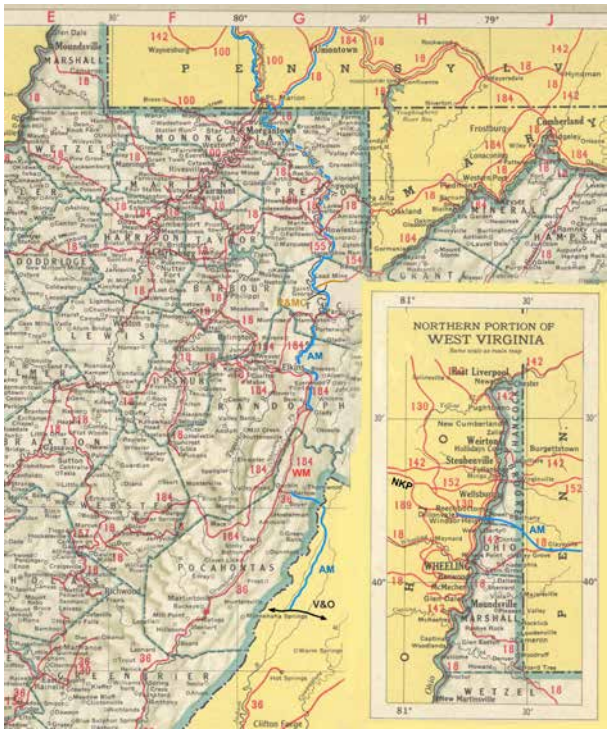
Allen had located the V&O on maps of Ohio, West Virginia, and Virginia to create a route from his home near Dayton, Ohio, to Afton and Staunton, Va., where it connected with the Chesapeake & Ohio, thus providing an outlet for tidewater-bound coal.

By doing so, he could study the territory abutting the V&O right-of-way to determine what industries were typical of the area and thus how the railroad would derive revenue, what type of rolling stock and motive power it would need, how the scenery and structures would look on the segments he chose to model, and so on. It all started with a map.

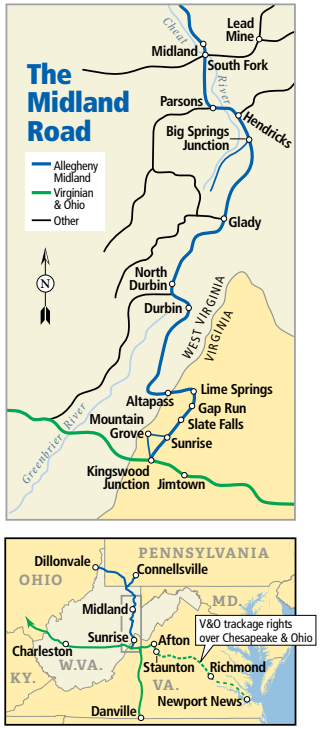
Our new home provided a roughly 24 x 30-foot room for a model railroad. My growing friendship with Allen suggested that a good premise for it would be to connect my personal favorite prototype, the Nickel Plate Road, which had acquired an extension into the southeastern Ohio coal fields, with Allen's V&O.

Now all I had to do was to plot a path from Dillonvale, Ohio, through the rugged Alleghenies southeastward to reach the V&O around Sunrise, Va.

The Allegheny Midland's coal-marshaling yard was at the midway point of the main line in South Fork on the south edge of a place logically called Midland, W.Va. The main classification yard at Midland was actually a partially hidden staging yard.



The portion of an undated but early railroad map of West Virginia shows the railroads in the area through which Tony routed the Allegheny Midland. Number 18 denotes the B&O, 155 the Rowlesburg & Southern (whose right-of-way Tony usurped between Rowlesburg and Parsons), and 184 the Western Maryland, over which the AM has trackage rights from Parsons to "North" Durbin. The freelanced Ridgeley & Midland County ran between "Midland" (St. George) and Lead Mine.



A system map of the freelanced Allegheny Midland RR shows how the fictional railroad connects Tony's favorite prototype, the Nickel Plate Road, in Ohio with the freelanced Virginian & Ohio in Virginia.

After the fiasco with the design of the first never-built layout, I checked official state highway maps (which often show railroad lines) for Ohio, West Virginia, and Virginia. The goal was to find a route that wasn't already occupied by an existing prototype railroad.

Most modelers would stop there, as that would give them a good sense of what towns, rivers, and so on their new railroad would be dealing with. Additional research would start to flesh out the picture.

Between when I was in college and the time I joined the staff of *Railroad Model Craftsman*, I managed the office of a small civil-engineering and land-surveying firm in Lafayette, Ind., so using maps was second nature to me. I ordered U.S. Geological Survey index maps for the three states, then ordered the appropriate "quadrangle" topographic maps that would give me a close-up view of the terrain. I actually went to the trouble of designing a route that could have been built.

That only segments of the right-of-way ever actually had rails suggests there were other factors that weren't in my favor beyond sheer engineering concerns. However, it was a challenging and entertaining exercise as we waited for our new home to be built.

For example, I needed a flat area for the coal marshaling and classification yards near the middle of the main line, at a fictional town I named Midland, W.Va. On a topographic map of the area surrounding Parsons, W.Va., I found exactly what I was looking for at St. George, just north of Parsons.

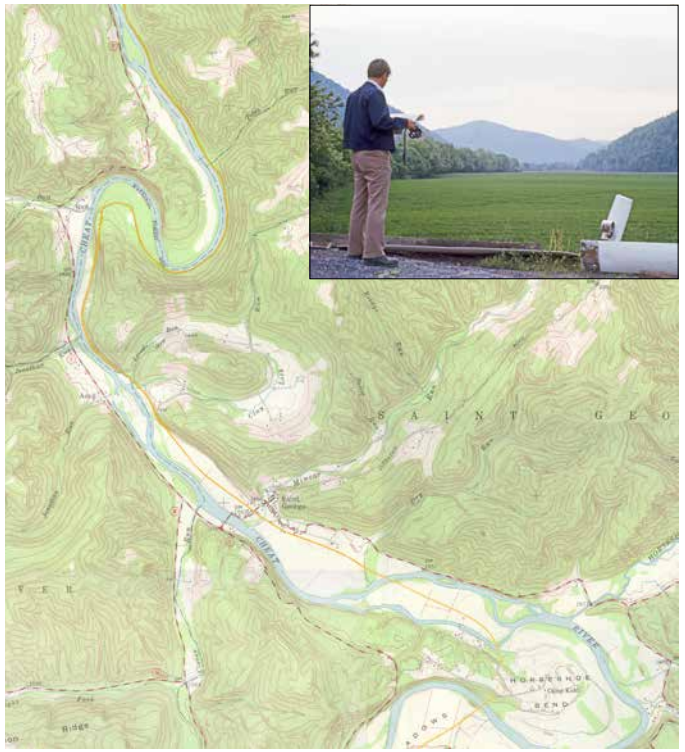
From Parsons south, I arranged for trackage rights with the Western Maryland to just beyond Durbin, W.Va., which gave me the opportunity to run WM trains and have the WM switch a paper mill I located at "North" Durbin.

Putting the Allegheny Midland (AM) on a detailed map led to all of these innovations that otherwise never would have occurred to me.

Choosing the right names

Choosing a name for a freelanced railroad and the towns it serves can make or break its plausibility. They either sound right for the region you're modeling or they don't. McClelland's Virginian & Ohio ranks at the top of the list of excellent choices for freelanced railroad names. It tells you what three states it serves and sounds so prototypical that, after Allen handed him a business card, a mine tipple foreman was sure he had shipped coal over the V&O. My former Allegheny Midland also told you where it was located.

By putting the railroad on a map, you're assured of finding place names that reflect the region. In central Appalachia, for example, what is called a "pass" in the West is known as a "gap," as in the famous Cumberland Gap. So the AM had Gap Run and Boyd Gap. Streams often branch in the mountains, so there are many towns with "Fork" in their names, as in South Fork and Coal Fork on the AM.



The U.S. Geological Survey 15-minute quadrangle map for St. George, W.Va., shows the abandoned Rowlesburg & Southern right-of-way along the east bank of the Cheat River as a broken line or dirt road and the open area where the AM's main classification and coal-marshaling yards were located. Tony's field trip to that location (inset) confirmed the map's information.

More than building models

If I tried to list the steps one would logically take from concept to completion of a model railroad, even with my decades of experience, I'd surely become discouraged. Most certainly it involves much more than building scale models.

Unless the prototype railroad you favor has already done it for you, taking the time to find a reasonable path for your railroad-to-be between logical end points on a map is not only worth the effort but actually a lot of fun, much like solving a mystery. With today's online resources, the only cost is your time. The reward is a could-have-been railroad that can be explained to visitors and crew members in a way almost certain to garner their interest. MR

Using topographic maps

We've all seen the weather person on TV point to those squiggly "isobar" lines on a map of our state and say that where they are all bunched closely together, that's where the pressure drops off more rapidly and wind speed picks up. It's the same thing with a topographic map. Where the contour lines (which denote a series of points of equal elevation) are bunched together indicates a steeply sloping surface, and where they're spaced far apart is relatively flat land.

So the goal of someone plotting the path of a railroad from A to B is literally to find the path of least resistance. It's the same on your model railroad. You don't want to have to climb steep hills unless you're modeling a logging line that employs Shays and Heislers. Doing this across the flatlands of the South or Midwest is usually not a major challenge except where large streams or swamps have to be bridged. But glaciers north of the Ohio Valley left piles of debris that may require cuts and fills or impressive bridges, and geological formations such as the Cincinnati Arch or Niagara Escarpment may offer obstacles far from mountain ranges. Geomart (geomart.com/products/raisedrelief/usgsquads.htm) offers plastic 3-D versions of topographic maps that give you a quick sense of ridges and valleys to speed up your pathfinding efforts.

Finding a route through the mountains is usually quite basic. Follow a river at a reasonable gradient until you can't, doubling back along the way if you must, then tunnel to the other side of the ridge to reach another stream-cut valley. You can judge feasible grades and curve radii by observing what the map shows existing or even abandoned railroads in that area did.

You'll either regard this process as an engrossing challenge, as I did, or a total waste of time.

In the latter case, find an existing or abandoned railroad and usurp its right-of-way or negotiate trackage rights. – *Tony Koester*