

Traction Action



Roger C. Parker

The Sacramento Northern

The Sacramento Northern meets the Key System at 40th and Shafter in Oakland, California. This junction is a modeler's paradise, providing an excellent focal point for busy home layouts or traveling modules. It can be endlessly configured to accommodate different home and temporary locations.

The 40th and Shafter junction and yard offers continuous freight and passenger traction action. While a continuous stream of Key System local trains passed by on 40th Street, the Sacramento Northern would make up and break multi-car passenger trains, assemble local freight trains, and serve the local LCL freight house. While this was going on, and through trains passed through on their way to and from Sacramento, other cars would be crossing the mainline entering and leaving the five-track carbarn. There was even overnight lodging and servicing for freight locomotives.

The junction was located a few miles from the Oakland Mole, where passengers switched to ferry boats. After the Oakland Bay Bridge opened, the junction was still used by the Sacramento Northern, enroute to the Transbay terminal in downtown San Francisco.

Located in a Wye

One of the most noticeable aspects of the 40th and Shafter layout is that all the action is confined to within just one and one-half city blocks. This includes a wye, a passenger station with a lunchroom, a freight house with a spur, a tower, the five-track carbarn, an inspection pit, and a separate freight enginehouse!

There are several distinctive features to the location. Perhaps the most noticeable (and beautiful) is the double-track junction with the Key System, coupled with the carbarn lead that crosses the curved double-track route to Sacramento. Curved parallel tracks are always visually compelling, especially when the curved tracks are crossed by a track leading to a three-way turnout and the additional switchwork that branches into five individual carbarn tracks.

The Sacramento Northern's junction and yard has more depth than most layouts and modules. This depth adds to its appeal because there are so many parallel tracks, not only in the wye area, but also in the sidings and the working areas of the yard where trains are assembled and broken apart. There are enough structures to add visual interest, but the tracks and the rolling stock are definitely where the operator's and viewer's attention would be placed.

Possible Configurations

The easiest way to employ the layout is to create a free-standing rectangle in the center of a room, and provide enough connecting track at the top, right, and left to stage trains as they enter or leave the scene.

A second option would be to place the right side of the module (Opal Avenue) against one of the walls of a room, leaving the front (40th Street), top, and left, accessible to operators. Arranged in this way, the module would be a corner, and the primary operating emphasis would be on trains entering from the left and continuing to adjacent modules at the top (and vice-versa). The right-hand wye tracks would be limited to passenger trains accessing the carbarn and freight trains accessing the freight house.

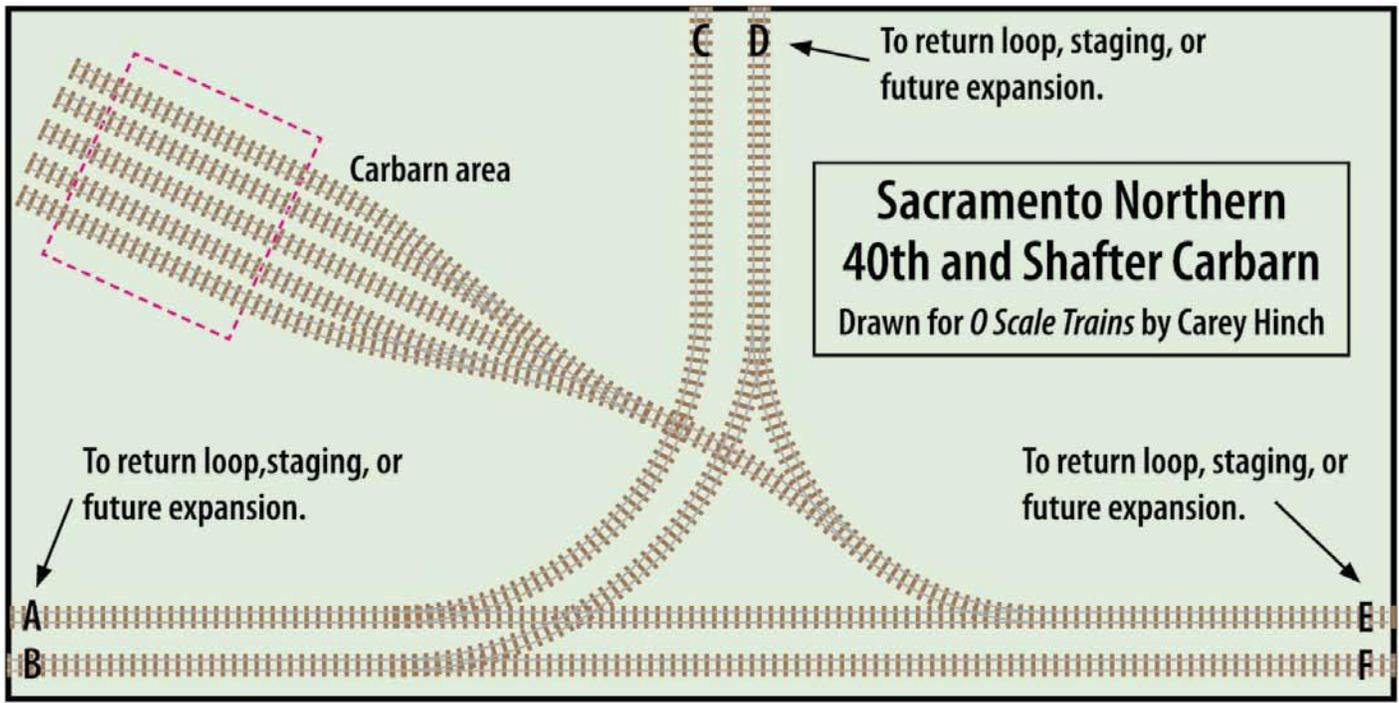
A third option would be to place the left side of the module (Webster Avenue) along the wall. In this configuration, the operating emphasis would be placed on freight and passenger traffic entering and leaving from the right and the top. This approach would create a very credible terminal. Passenger trains would enter from the right, board and disembark passengers from the 40th Street trackage, then proceed to the carbarn. Freight trains would make up and break down trains in the yard before leaving to the right.

If the line used single-direction cars or had (like the Sacramento Northern) single-ended observation cars, arriving passenger trains would have to use the loop to correctly reposition the observation car for the next departure, adding to the operation possibilities of the right-side track connection.

Additional variations are possible, of course. For example, the exact location of Webster Avenue, located along the left edge, could be repositioned to allow more cars to be stored in the carbarn. Another variation would be to extend the 40th Street tracks to the left and right. Then, the two tracks in each direction would merge to a single track on each side adding more staging area.

Ideal Configuration

The most elaborate scenario, of course, would involve connecting the tracks while leaving the scene at the left, right, and top. The drawing shows how this could be done, although the actual track layout would, of course, depend on the space available in your home or at various shows. The exciting thing about the potential offered by the 40th and Shafter setting, however, is that these connecting loops would always be available even if they were only infre-



quently used. For example, if the tracks extending down 40th Street from the left (A & B) were looped back to the Sacramento line at the top, operators could run trains in both directions through the junction while other trains were working the yard or waiting to cross the mainline and enter/leave the car barn.

Operating flexibility would be even greater if the tracks exiting the junction from the lower right (E & F) looped back to track at the top (or Sacramento) leg of the junction. Again, this would permit continuous operation while routine yard chores were performed.

The layout that really works best would be a pair of loops connecting both legs of the 40th Street to the top. This would permit continuous traffic in both directions, just like the prototype! Key System trains could proceed in both directions along 40th Street, while Sacramento Northern trains enter or exit from the left or at the top. If the rolling stock is equipped with DCC multiple cars can be operated, recreating the stress operators used to have separating mainline, local, and yard traffic from each other.

Clearly, the Sacramento Northern's 40th and Shafter track plan offers individuals and clubs a lifetime of challenge and pleasure. It's a concept that can expand or contract as available space dictates.

Resources

Any Sacramento Northern fan seeking more information will find numerous resources at the *Sacramento Northern Online*, located at [<http://people.virginia.edu/~ggg9y/home.html>].

The specific article and map upon which I based this column is located at [<http://people.virginia.edu/~ggg9y/shafter.html>].

There is also a great feature describing deadhead moves (empty passenger trains) between the Transbay terminal and

40th and Shafter at

[<http://people.virginia.edu/~ggg9y/deadhead.html>].

This contains numerous interesting photographs of the equipment, the downtown terminal, and the structures at 40th and Shafter. ♦



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Pacific Electric Los Angeles Elevated Terminal Junction

Consider adding an upper level to your downtown terminal!

I recently noticed a Pacific Electric photograph with great modeling potential while thumbing through Donald Duke's excellent *West Coast Interurbans: California*, recently published by Golden West Books. The photograph documents the junction where the upper level tracks of the Pacific Electric's Los Angeles terminal joins street trackage.

This junction would make a great addition to any traction layout. It opens up numerous modeling possibilities for both new layouts and adding visual and operating interest to existing layouts. Like all of the layout "centerpieces," or modules I have been exploring during the past few years, the junction and upper level trackage can be as simple or complex as desired.

Modeling the PE Junction

The junction itself is very simple. Located at the bottom of the ramp leading to the upper level trackage, the junction is basically a "T" intersection, or looked at another way, one-half of a Grand Union. Trains traveling in either direction on street level trackage can proceed through the junction in either direction, or proceed up the two-track ramp to the upper level platforms. Likewise, trains descending the ramp can turn either left or right.

Although the junction opens up numerous possibilities, it is relatively simple, requiring only 4 turnouts and two crossings. All that's needed to model the junction are a pair of wye switches, a pair of matching-radius left and right-hand turnouts, and two crossings.

To operate the junction, only 3 of the turnouts need to be powered: the wye turnout on the descending ramp, and the street-switch left and right-hand turnouts. The remaining turnout (on the "up" track of the grade) will take care of itself.

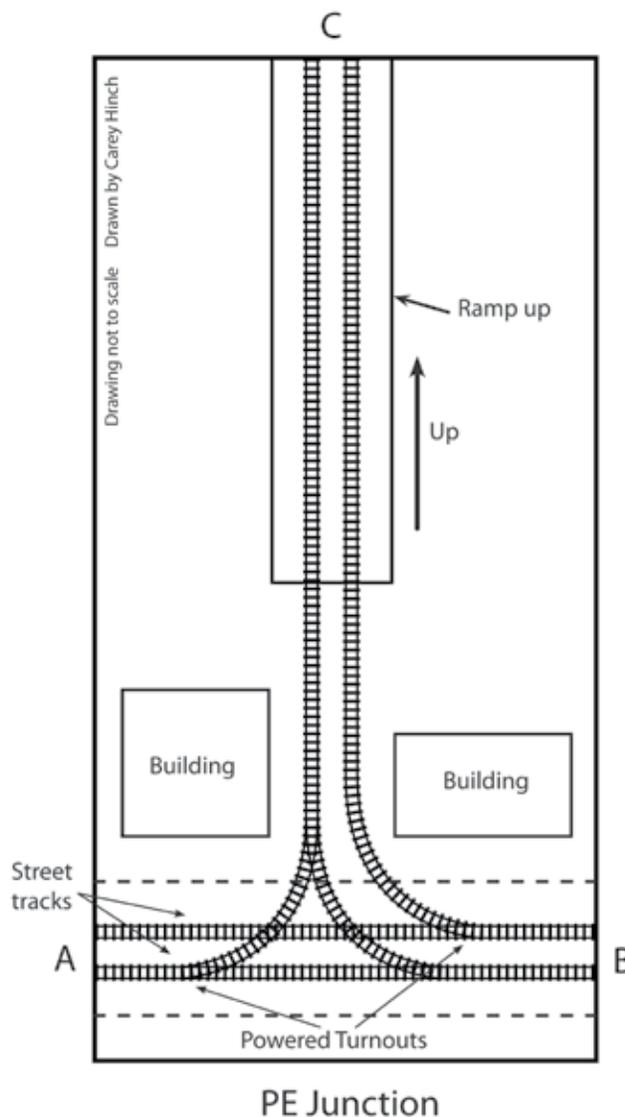
Modeling Options, Stage 1

One of the nice aspects of the Pacific Electric junction is the ability to model it in stages. In the first stage the junction would be modeled, but *only the first few feet of the ramp tracks* would be completed. All trains on the street level would pass through the junction. At this stage it would primarily add visual interest and the sound of car wheels passing through the turnouts and crossings. A non-operating junction could be added to narrow modules or shelf layouts.

If a few feet of the ramp were modeled, static trains could be shown ascending or descending the ramp trackage. This would provide a space to display excess rolling stock right from the start. Alternately, if a modeler had experience painting layout backgrounds, the ramp and second level could initially be painted on the background!

Modeling Options, Stage 2

Another option would be to simulate the upper level terminal



by creating an upper level loop. The loop could be either visible or hidden behind adjacent buildings or scenery. In either case, some, but not all, street level trolleys would proceed up the ramp to enter the hidden staging area or immediately turn around and descend the ramp.

One of the nice things about the loop idea is that no additional turnouts would be required, unless you wanted to include a passing siding or holding area on the loop.

If you're short for space and have negotiated the right to "tunnel through" the walls in your layout room, you could even place

the loop in an adjacent room. (You'd want to include some sort of signaling or track occupancy lights to protect out-of-sight trains on the loop, of course.)

Modeling Options, Stage 3

The upper level of the Pacific Electric's Los Angeles terminal included 4 stub end tracks. These tracks were capable of handling the long, multi-car, trains typical of the Pacific Electric at its peak. The third option could be delayed a year or two down the road. In this case, you would complete the ramp and model the upper level terminal trackage and platforms. This would add a great deal of operating flexibility and, most importantly, storage space for your rolling stock.

Writing Your Own "Story"

The idea of a 2-level terminal introduces numerous creative and operational options. You could segregate traffic between the street level and upper level. For example, you could use one level exclusively for freight motors, railway post office cars, and package express shipments, and the other level for passenger trains.

Or you could restrict the upper level to long distance trains and restrict the lower

level to shorter, more frequent locals. Your reason for this, of course, would be to eliminate blocked street level traffic at grade crossings and intersections.

Finally, if you already have a lot of rolling stock lettered for the primary line you model, you could restrict the upper level trackage to one or more foreign lines that rent trackage rights from you.

Inspiration Everywhere

Perhaps the biggest lesson of this column is the ability of a single photograph to provide inspiration for years of modeling pleasure. The first few times I read and

re-read Donald Duke's *West Coast Interurbans: California* I hadn't paid any attention to the junction photograph.

It was only about 6 months after I purchased the book that I first paid serious attention to the junction trackage, and began to appreciate the numerous modeling and operating possibilities it suggests.

The lesson? One photograph can launch years of modeling and operating pleasure! We should all be thankful for the numerous, high-quality traction books we can choose from as traction modelers. ♦

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