

DESIGNS FOR INTERURBAN LAYOUTS

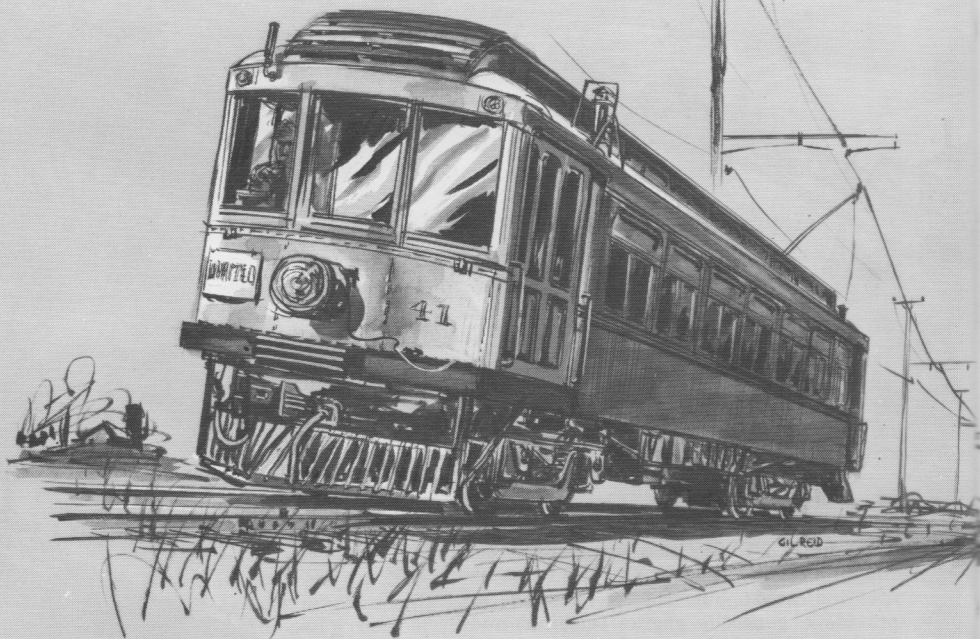
Lap and terminal scheme provides variety of runs for various sorts of equipment

The interurban electric railway developed in the early years of this century from America's desire for greater mobility between cities and between city and country. Transportation was hampered by the lack of good roads, which made horse-and-buggy trips difficult; steam railroad local service was often marginal; the automobile was still an undependable horseless carriage.

By the time of World War I a number of interurban networks had developed around large cities and in the more populous regions, only to disintegrate in the next two decades because they were not fitted to compete with paved highways and the automobile. In 1961 the last remaining line in the Southwest, a remnant of the great and far-flung Pacific Electric system, abandoned passenger service and tore down its overhead wire—and the interurban era came to an end.

Famous interurban names still exist. In the Midwest the South Shore Line still operates, but more as a freight railroad and a suburban rapid-transit line than as a typical interurban. In the East, the Philadelphia & Western is strictly a suburban line, and it has lost the cars of the Lehigh Valley Transit, a true interurban which once used P&W tracks as an entrance to Philadelphia.

Other remnants of once-large systems remain but are not used in the interurban manner. For example, a remnant of the Milwaukee Electric still remains under



wire at East Troy, Wis., where a box motor hauls freight cars from that town to the nearby Soo Line interchange. Still others remain but have been converted to dieselized freight operation, such as the Illinois Terminal.

Interurban lines in the East, the Midwest, and the Far West had their own regional characteristics. Eastern lines tended to be true "between city" lines;

midwestern interurbans joined comparatively distant cities and served the farmlands in between; in the Far West the interurban more closely resembled an electrified railroad short line with carload freight operation not usually found in the East or Midwest.

In the following feature, E. S. Seeley Jr. presents three layouts based on these regional differences.

BY E. S. SEELEY JR.

THE design of any interurban model railroad layout must reflect the fact that passenger traffic is a very large part of the operating picture; and to be a true interurban we must provide a main line that simulates long runs. Unless we have access to a room about the size of a college gymnasium, I consider the closed-lap main line as our best bet. Arranging the lap around the walls of a room helps stretch the run even farther than if built on a central table. It also gives us the walls for a background where varied settings can be represented. Terminals branching off the lap of track can represent different cities or towns to provide the kind of point-to-point running that paves the way for prototype operation. More car destinations can be operated simply by adding more terminals. In making a run, an interurban car leaves one terminal and circles the lap (perhaps under some form of automatic control)

for as long as the brass hat wishes, then runs into the terminal designated as the end of that particular car's route.

Let's examine three sample layouts to see how this principle can be applied to three different types of interurban operation.

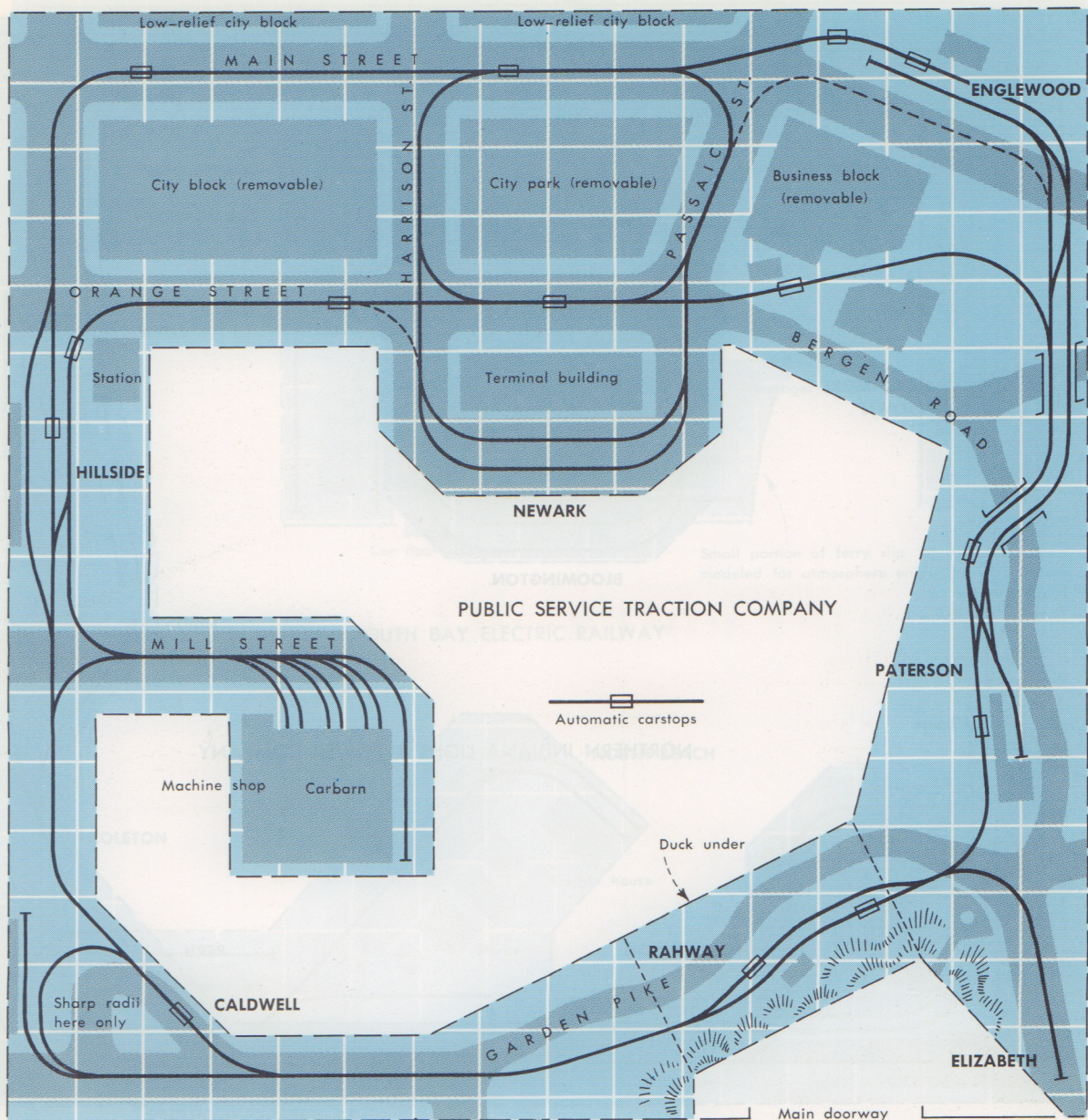
Public Service Traction Co.

Here is an eastern-type layout for the traction modeler whose eyes light up at the mention of the Eastern Massachusetts Street Ry., the Connecticut Co., or New Jersey Public Service. It offers a fine setting for deck-roofed Brill cars grinding along city streets, hitting an unaccustomed 30 m.p.h. on the shoulder of the county pike, and returning at day's end to a big multistall carbarn for a quick wash and running-gear inspection.

The PSTC is a multiple-route system designed so the routes can be combined in different schemes typical of the region. For example: The major routes of the Connecticut Co. followed an end-to-end

pattern, starting from the New York state line and running along the shore to New Haven, then heading north to Hartford and the Massachusetts state line. Routes of the Eastern Massachusetts Ry. criss-crossed the area they served; routes of the New Jersey Public Service fanned out in different directions from the main Newark terminal. With the proper variation in station names, each pattern can be simulated on the PSTC as illustrated, when the brass hat desires a change. A study of the layout will reveal many interesting and varied possibilities.

In planning route patterns, note that the barn lead on Mill St., and both sides of the lap of track around the park—opposite Newark terminal—can be used as terminals along with the more obvious turnback facilities at Newark, Caldwell, Elizabeth, Paterson, and Englewood. Imaginative pairings of terminals will create a lot of operational variety to keep the layout from ever becoming dull. A small box motor terminal has been included at



PUBLIC SERVICE TRACTION CO.

Scale modeled	N	TT	HO	S	O	
Drawing reduction	1:	16	24	32	48	64
Scale of drawing per foot	in.	3/4	1/2	3/8	1/4	7/16
per meter	mm.	63	42	32	21	16
Spacing of rulings	in.	6	9	12	18	24
	mm.	150	225	300	450	600
Width	ft.-in.	8-0*	12-0	16-0	24-0	32-0
	m.	2.45*	3.68	4.90	7.36	9.80
Length	ft.-in.	8-2*	12-3	16-4	24-6	32-8
	m.	2.50*	3.75	5.00	7.50	10.0
Mainline radius†	in.	6	9	12	18	24
	mm.	150	225	300	450	600
Track center spacing‡	in.	9	1.3	1.67	2.25	3.3
(straight track only)	mm.	23	33	43	57	84

*Does not allow adequate aisle width near Caldwell and Hillside.
 †Loop at Caldwell has 20 percent shorter radius: 10" in HO, etc.
 ‡May not allow some steam-road equipment to pass.

Hillside so package freight or express service can be run.

Northern Indiana Light & Power Co.

The Northern Indiana is typical of mid-western interurbans that once laced Indiana, Ohio, Michigan, and Illinois. Two routes run in opposite directions from the city of Bloomington: the longest terminates at Fort Marion, seat of the next county, while the shorter line runs through farmland to the small but important agricultural town of Peru. Suburban service is also operated on the Fort Marion line between downtown Bloom-

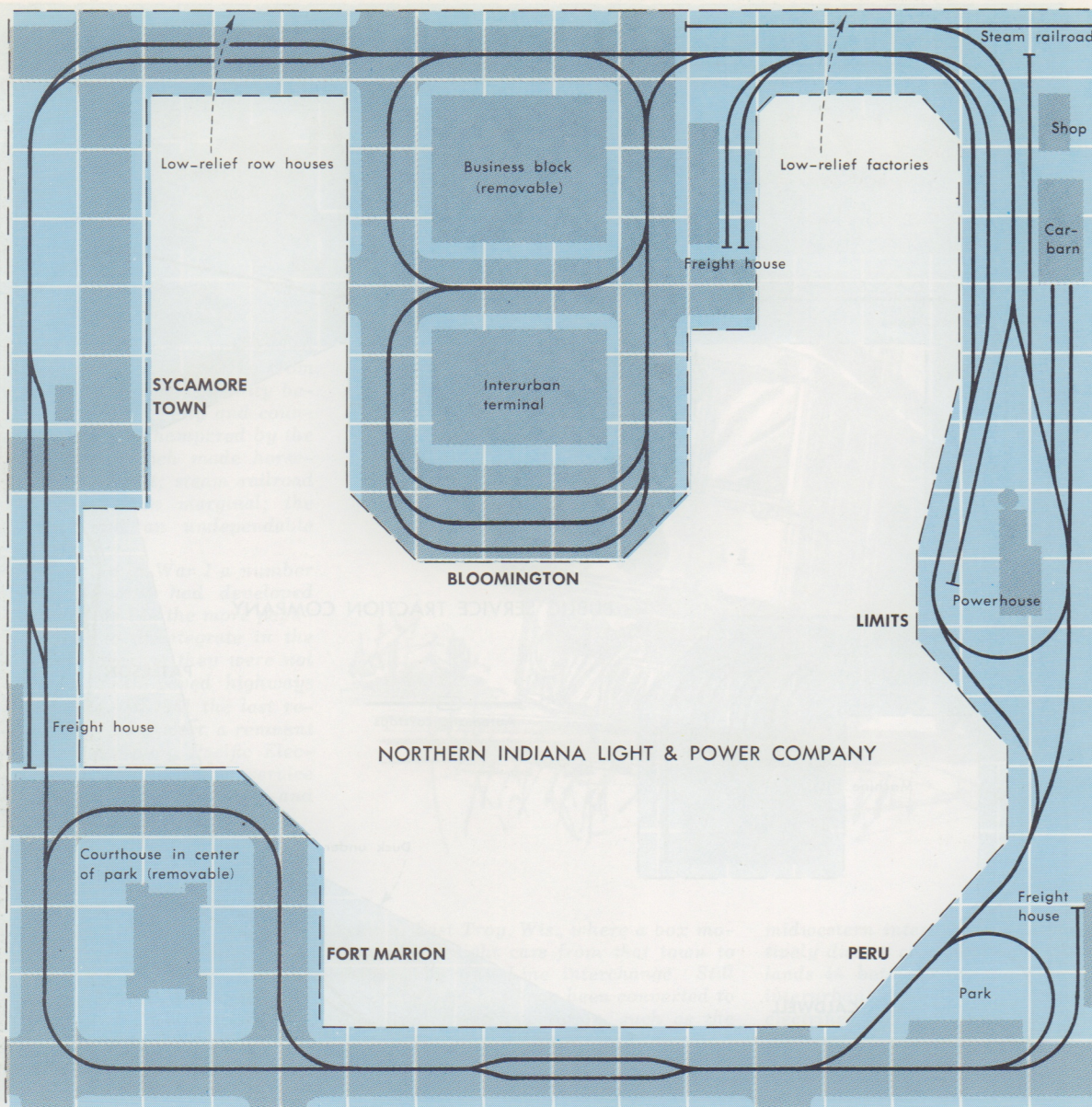
ington and the powerhouse just outside the city.

We have a big interurban terminal in Bloomington, freight houses in each terminal city, and even a steam railroad connection. (Maybe the Northern Indiana is lucky enough to have an interchange agreement with this steam road; if so, watch out for that 48-foot curve on the main line in downtown Fort Marion. More typically the connection would be limited to moving hopper cars of coal to the powerhouse.)

Mergers were a common practice in the interurban's golden age, so we're on safe

ground in assuming the NI's two routes began life as independent companies. Let's call them the Bloomington, Fort Marion & Western and the Bloomington Eastern just to keep things straight. Cars on the suburban run to the powerhouse might be lettered for the Bloomington Traction Co. for greater variety. This offers the brass hat some choice in lettering his cars and in the kind of service operated. He can model the period before the merger by lettering his smaller cars for the BE and his larger cars for the BFM&W. Each group of cars would be restricted to runs between the appropriate cities, but perhaps as an indication that merger is just around the corner, one BFM&W car might operate as a through limited between Fort Marion, Bloomington, and Peru.

Or consider that the merger has just taken place but not all cars have been re-lettered for the new company. What a grand mixture of colors and names could move through downtown Bloomington! There would be new, heavy cars lettered NORTHERN INDIANA; older cars lettered BFM&W and others BE; plus a few city cars still lettered BLOOMINGTON TRACTION. If



NORTHERN INDIANA LIGHT & POWER CO.

	N	TT	HO	S	O
Scale modeled					
Drawing reduction	1: 16	24	32	48	64
Scale of drawing per foot	in. $\frac{3}{4}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{3}{16}$
per meter	mm. 63	42	32	21	16
Spacing of rulings	in. 6	9	12	18	24
	mm. 150	225	300	450	600
Width and length	ft.-in. 8-0*	12-0	16-0	24-0	32-0
	m. 2.45*	3.68	4.90	7.36	9.80
Mainline radius	in. 6	9	12	18	24
	mm. 150	225	300	450	600
Track center spacing	in. 1.0	1.3	1.8	2.5	3.25
(straight track only)	mm. 25	33	46	64	83

*Aisles need widening at Sycamore and Limits if built in N scale. This will make N scale layout 10 feet (3 meters) long.

each company has its own style of equipment and color scheme, we have a prototypic justification for the variety many interurban modelers like to see on their layouts.

South Bay Electric Ry.

Heavy freight drags behind steeplecab growlers, steam road carload interchange, multiunit commuter and school trains, wharf trackage serving ocean steamers and coastal schooners, a big ferry terminal and express shed — these are some of the features that mark South Bay Electric as a far western interurban. It is ideal for the interurban modeler who wants to add freight operation.

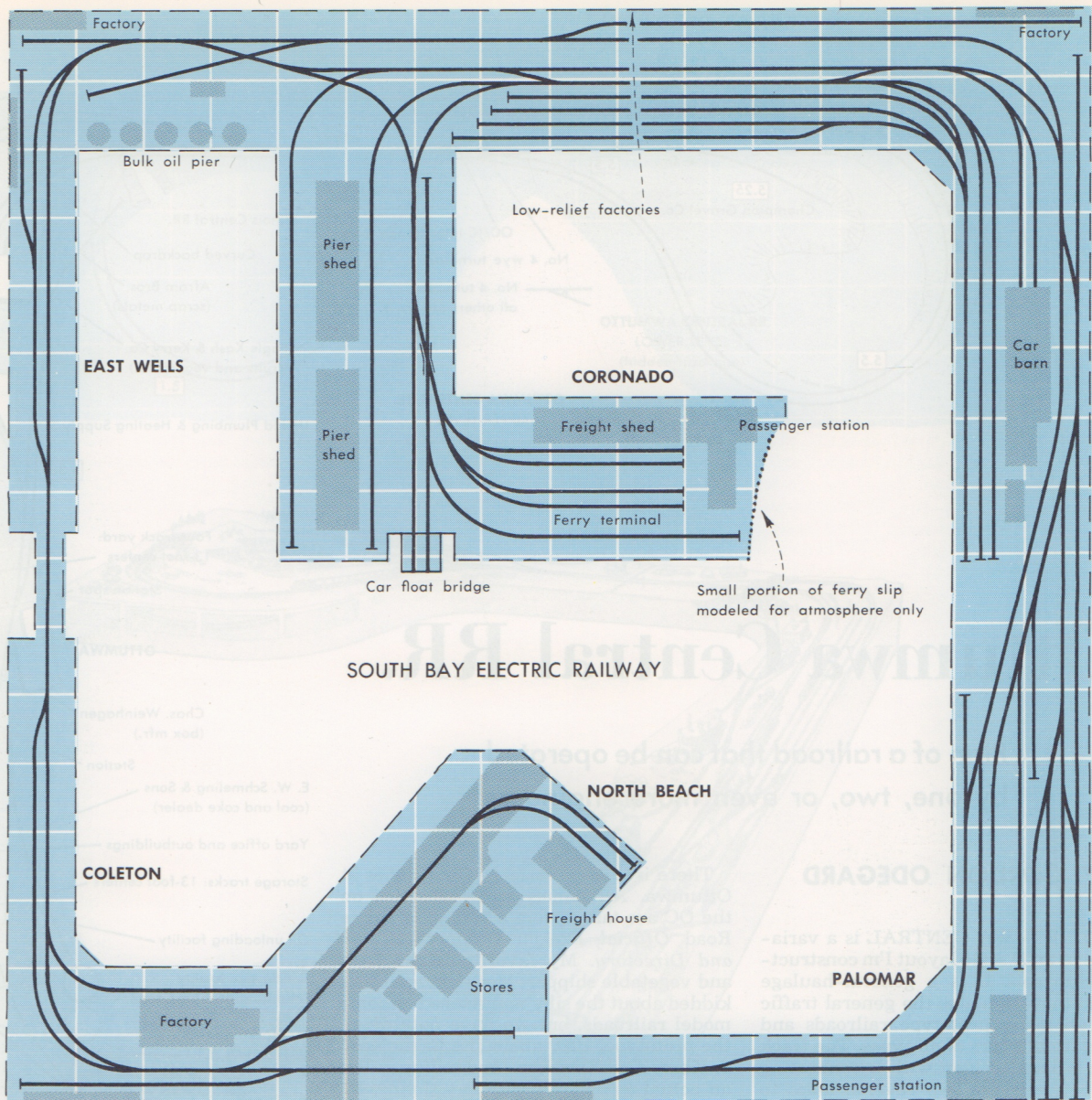
The fictional prototype of South Bay Electric starts at Coronado, a port city across the bay from a major west coast metropolis. From the Coronado ferry slip it skirts the edge of the bay for several miles, passing through industrial districts and commuter towns. Then it runs inland along a river valley to the important railway junction at Palomar. There is also a branch that runs from the Coronado ferry terminal along the ocean shore to North Beach.

The SBE was probably built by a class 1 steam road as an alternate freight route between Palomar and the big city (with car floats used to move cars across the bay); but electrification meant fast and

frequent passenger service too, which resulted in the rapid growth of the commuter towns and industries along SBE's main line. The North Beach branch originally may have been an ancient steam short line that was made part of the SBE and electrified to serve popular resort towns along the ocean. With readily available transportation, Coronado's own port facilities were developed. This resulted in more business and additional revenue.

The kind of passenger service operated on the main line depends on how long we imagine the route to be — 50 miles or more, perhaps? Then we can run our own version of Sacramento Northern's Comet complete with parlor-observation cars. A main line of 20 or 30 miles would mean shorter but more-frequent trains like those Pacific Electric once ran on its lines to Long Beach, San Pedro, Santa Ana, and Pasadena. It's up to the modeler. With enough rolling stock he can vary his mainline schedules from day to day.

Service on the North Beach branch would normally be operated by single cars, probably of lighter design than mainline stock, running at frequent intervals. On this line, however, there could be multicar specials transporting city



SOUTH BAY ELECTRIC RY.

Scale modeled	N	TT	HO	S	O	
Drawing reduction	1:	16	24	32	48	64
Scale of drawing per foot	in.	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{3}{16}$
per meter	mm.	63	42	32	21	16
Spacing of rulings	in.	6	9	12	18	24
	mm.	150	225	300	450	600
Width and length	ft.-in.	8-0*	12-0	16-0	24-0	32-0
	m.	2.45*	3.68	4.90	7.36	9.80
Mainline radius	in.	7.5	12	15	24	30
	mm.	190	300	380	600	760
Track center spacing	in.	1.0	1.3	1.8	2.5	3.25
(straight track only)	mm.	25	33	46	64	83

*Aisles need widening generally if built in N scale. This will make N scale layout 10 feet (3 meters) in width and length.

crowds to the beaches on Sundays and holidays.

Rush-hour commuter schedules can be included on both lines, along with morning and midafternoon school trains.

Freight operations can be as extensive as on any steam or diesel layout. We have long drags between the Palomar interchange yard and the Coronado carferry floats, way freights in both directions to serve mainline industries and freight houses, and ferryloads of cars from across the bay destined for ships moored at Coronado's docks. Both freight yards would be busy places indeed on the SBE layout. Don't forget box motor service on the North Beach branch (and on the main

line if you wish), not to mention possible daily RPO runs.

Once a year, on the weekend after Thanksgiving Day, the world-renowned Neptune Parade is staged at Coleton, followed by the great football game in the Fish Bowl nearby. Then every piece of passenger equipment on the system is pressed into service; and it takes a good bit of planning and patience for the dispatcher to get the equipment into and out of Coleton in time for the events, and then to take people home. Try that one on your layout! It is, of course, based on the actual operations of Pacific Electric when it once served the Pasadena New Year's Day events each year.

One last comment

Despite the comparative wealth of ready-to-run HO equipment and the fine array of parts and kits in $\frac{1}{4}$ " scale, interurban model railroading still remains a scratchbuilder's stronghold. This is especially true where trackwork and overhead wire construction are concerned. Some scratchbuilding practice certainly is desirable before undertaking any interurban layout as complex as the three described.

For this reason the novice interurban modeler should first get his feet wet with a small steam or diesel layout utilizing sectional track components and a few pieces of dependable, low-cost ready-to-run equipment. After some operating experience he can experiment with one or two ready-to-run interurban cars, most of which can be run on a two-rail system. Then he can try hanging some overhead wire, building special trackwork, and perhaps scratchbuilding a few of his own cars. The knowledge gained from such an expandable trial-and-error layout will pay important dividends later, when he begins work on a more complicated interurban layout based on a real or fictional prototype.