Model Railroader SPECIAL ISSUE

# Model Railroad Planning 2023

**Page 18:** A big prototype railroad in a smaller layout size



**On the cover:** The Chicago & North Western moved its aging Alcos to a line where it could keep close tabs on them, making an ideal modeling candidate. See page 8.
Photo by Dennis Eggert


**2** An overview of the Stifftown Branch finds a Baldwin switching the public delivery tracks underneath the overhead crane. Behind it is the Air Linde building now occupied by Sinclair & Valentine, makers of printers' inks. The cooling tower on top of the Linde building has been removed as well as the gasometer, with only the concrete pad remaining.

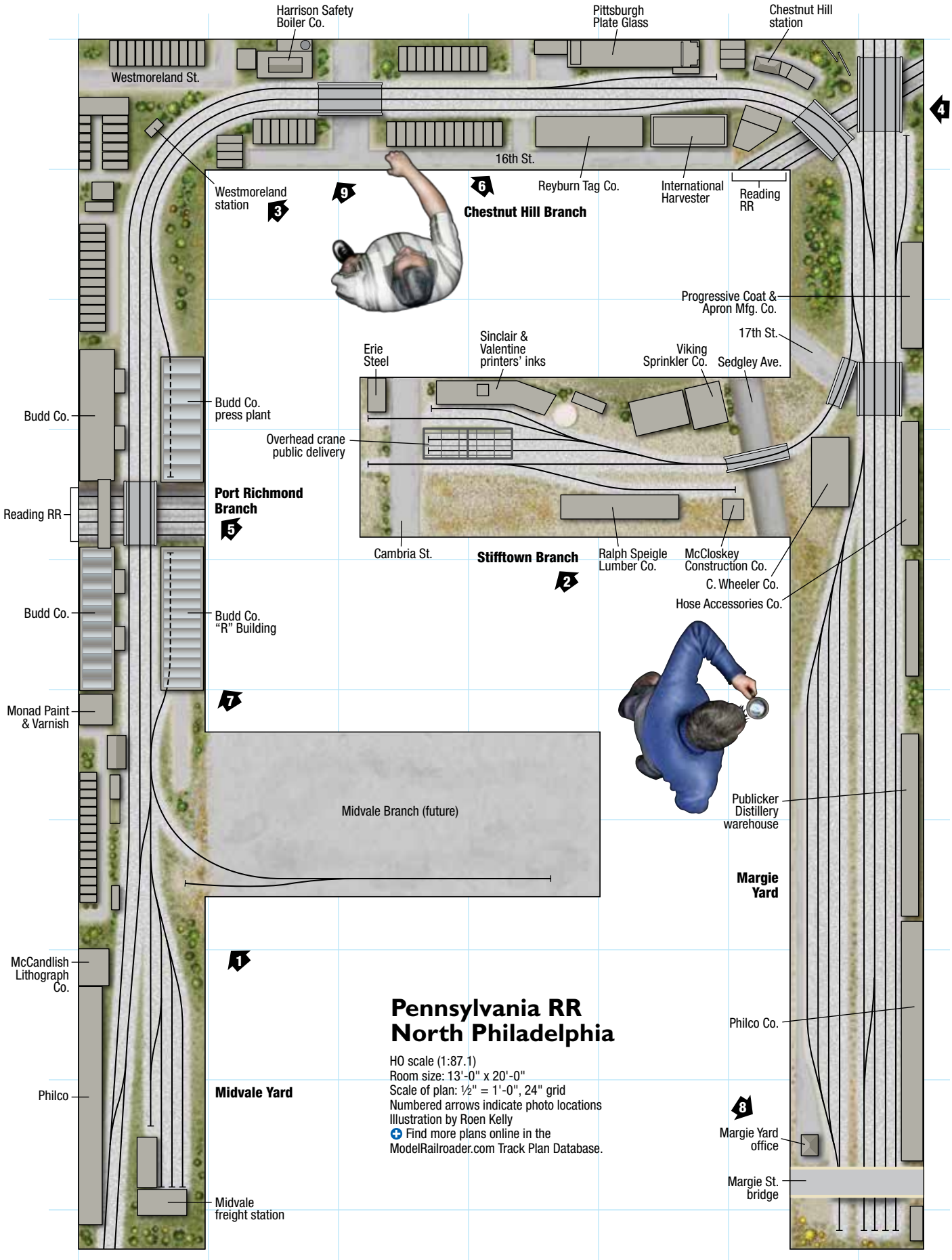
**3** Two PRR MP54 commuter cars pause at Westmoreland Station on their journey inbound to center city Philadelphia. The station was demolished in the early '50s and replaced by a utilitarian shelter. The surrounding area is primarily residential, reflected by the variety of rowhouse styles.

heavy industries, including Midvale Steel and Budd Co. This generated a large amount of freight traffic that made for interesting operations. Both freight traffic and commuter trains were funneled via two tracks onto the main line at North Philadelphia.

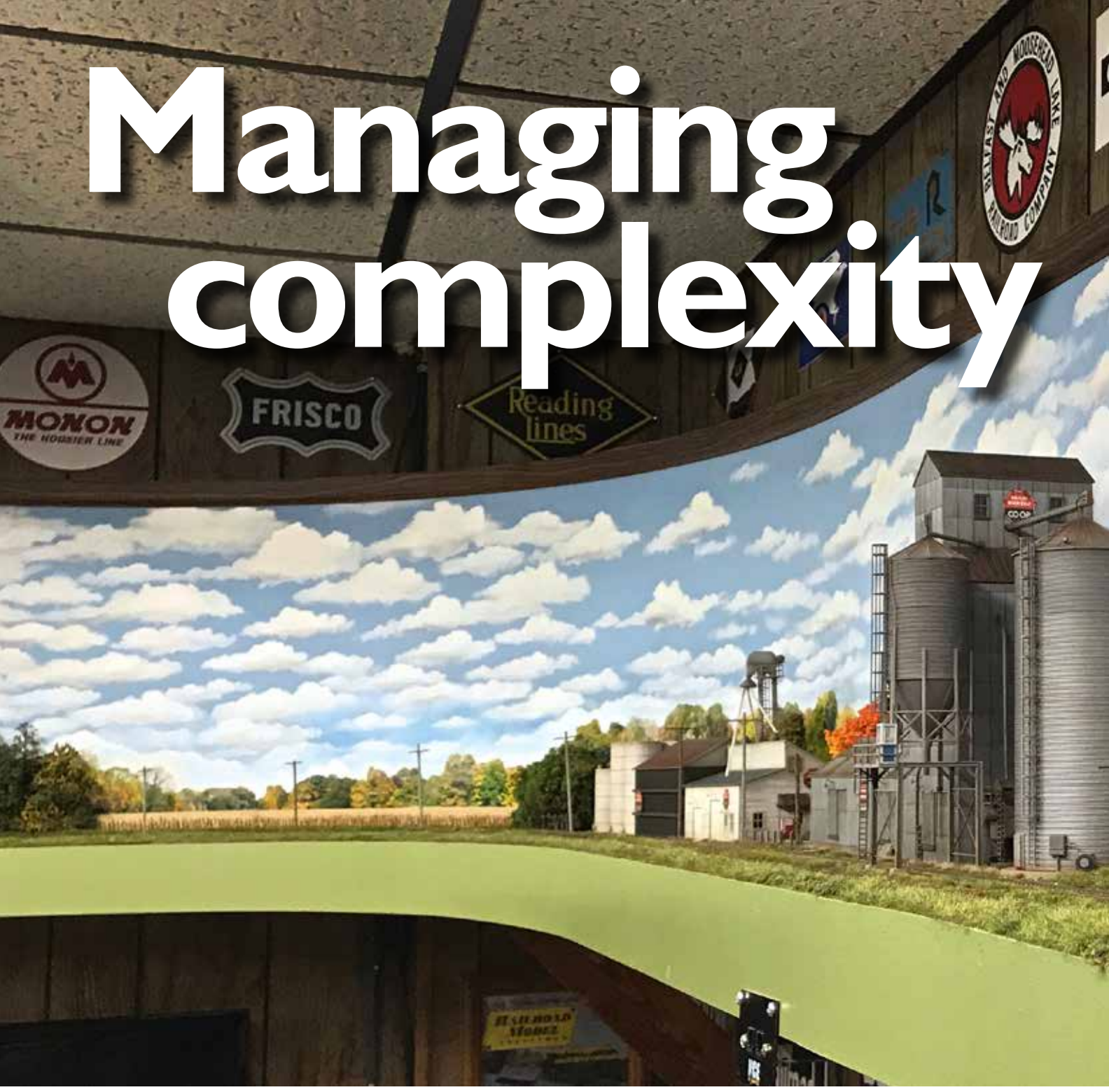
When planning the layout, given the 13 x 20-foot space I had to work with, reality soon set in. To make a suitable prototypical representation, the scope of the layout needed to be scaled back. After consulting maps and aerial photographs, I was able to devise a plan that was more limited in scope but still lent itself to constructing a good prototype layout. My final plan encompasses approximately 1 mile of

## The layout at a glance

**Name:** Pennsylvania RR at North Philadelphia
**Scale:** HO (1:87.1)
**Size:** 13 x 20 feet
**Prototype:** Pennsylvania RR
**Locale:** North Philadelphia, Pa.
**Era:** 1958
**Style:** walk-in
**Mainline run:** none
**Minimum radius:** 24"
**Minimum turnout:** No. 6
**Maximum grade:** none
**Train length:** 6 cars
**Benchwork:** open grid
**Height:** 53"
**Roadbed:** Homasote on plywood
**Track:** code 83 flextrack (main), code 70 (yards and sidings)
**Scenery:** Homasote and foam board
**Backdrop:** Plas-Tex plastic wall panel
**Control:** Digitrax DCC


Harrison Safety Boiler Co.
Pittsburgh Plate Glass
Chestnut Hill station
Westmoreland St.
16th St.
Westmoreland station
Reyburn Tag Co.
International Harvester
Reading RR
Chestnut Hill Branch
Progressive Coat & Apron Mfg. Co.
17th St.
Erie Steel
Sinclair & Valentine printers' inks
Viking Sprinkler Co.
Sedgley Ave.
Budd Co.
Budd Co. press plant
Overhead crane public delivery
Reading RR
Port Richmond Branch
Cambria St.
Stifftown Branch
Ralph Speigle Lumber Co.
McCloskey Construction Co.
C. Wheeler Co.
Hose Accessories Co.
Budd Co.
Budd Co. "R" Building
Monad Paint & Varnish
Midvale Branch (future)
Publicker Distillery warehouse
Margie Yard
McCandlish Lithograph Co.
Philco Co.
Philco
Midvale Yard
Margie Yard office
Margie St. bridge
Midvale freight station
Pennsylvania RR
North Philadelphia
HO scale (1:87.1)
Room size: 13'-0" x 20'-0"
Scale of plan: ½" = 1'-0", 24" grid
Numbered arrows indicate photo locations
Illustration by Roen Kelly
Find more plans online in the ModelRailroader.com Track Plan Database.

# Managing complexity




## Four tips from a pro

**By Lance Mindheim**
Photos by the author except as noted

Planning and design are often thought to be the same, but they're not. Planning has to do with overarching strategic issues. Design deals with more tactical aspects, such as track arrangements, curve radii, and so on. Putting planning in its rightful place in line ahead of design greatly increases the odds of ending up with a successful model railroad.

Failure to launch a layout, or having an existing one grind slowly to a stop, is a common concern. Often the culprit is a subtle one and falls under the planning umbrella. Specifically, it's a case of not managing a project's complexity in a way that matches our available time and skill level.

Complexity is typically associated with layout size, but that isn't always the case. A relatively large railroad can be planned and designed so that construction moves along at a fairly quick pace. A more accurate definition of complexity is how time-consuming or difficult a given construction task actually is.


**In this view of Lucerne, Ind., on master modeler Tom Johnson's original HO scale Cass County RR (a former Pennsylvania RR and Penn Central line), the benchwork was only 12" wide! Tom, a retired art teacher, avoids all aspects of complexity.** Tom Johnson photo

If we can manage a project's complexity in the earliest stages of the planning process, we increase the odds of successfully launching a new layout or maintaining momentum on an existing one. To do that, we need to develop an awareness of elements that can be more time-consuming or difficult to build. Once we have that understanding, we are in a position to move forward with the Xs and Os of the design process.

Let's take a look at four common areas that contribute to complexity:

- Track density and turnout count
- Grades
- Benchwork width/surface area
- Aesthetic curves.

Notice that I didn't include mainline length or overall layout size. You can have a layout with a relatively long run, or one that is somewhat on the large side, that's still pretty simple to build.

## Track density and turnout count

One of the primary drivers of complexity is your turnout count. The