

# LAYOUT DESIGN



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International Car Ferry Switching  
Canadian Prairie Branch  
Multideck "Train Set" in a Shed  
Modern Transload LDE  
Compact Passenger Switching



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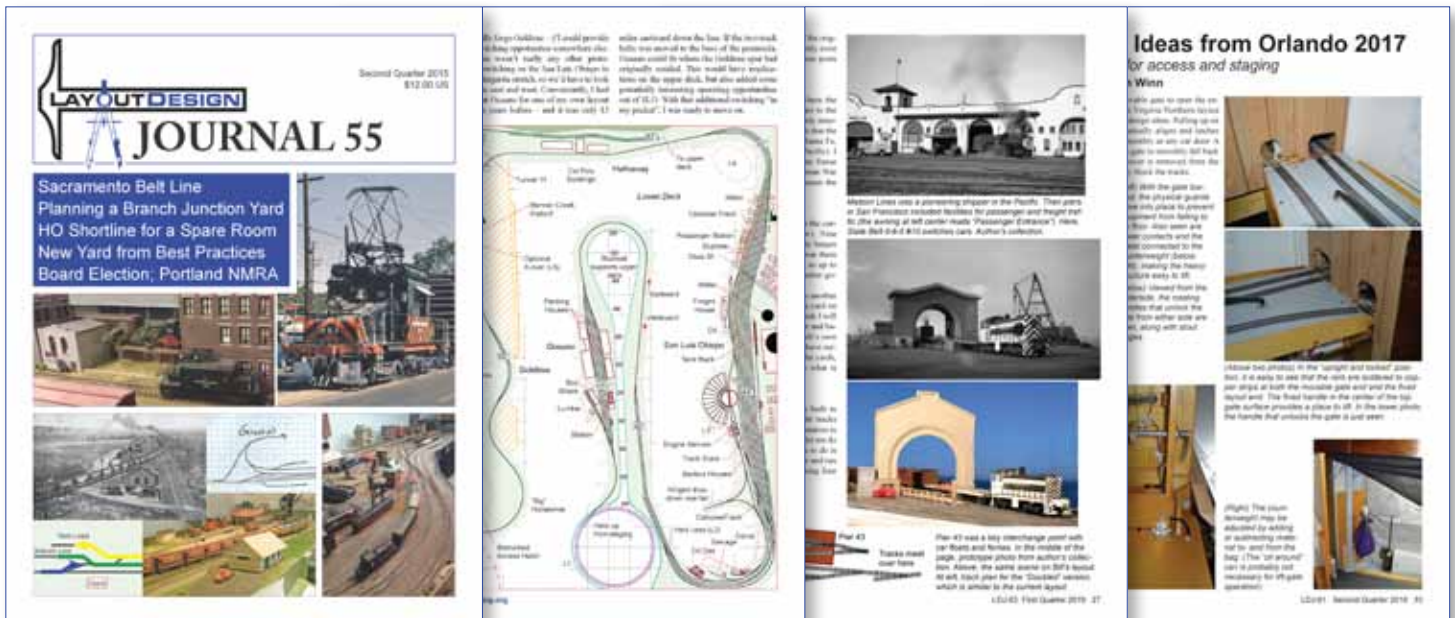
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ential of 14” could also be reduced to maybe mitigate some of the deck height issues. So the owner will have to decide what his optimal height is and build accordingly.

### Challenging, but no puzzles

Although I am not a big fan of Timesaver-style switching puzzles, I did include one switchback in each city. I didn’t want operators to have too easy of a time. Although space is tight, there is an ample “boat yard” next to each dock which is critical in loading and unloading the floats. The industry tracks are pretty straightforward, trailing or facing spurs with adequate, but tight, run around tracks. Both cities also have a railroad yard, the Wabash and Canadian Pacific yards, in which to store cars.

### Managing the human crews

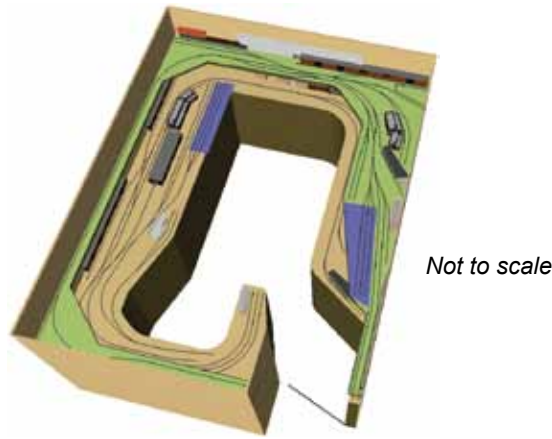
Both the Detroit and Windsor decks have a track or two that goes to the opposite side of the room, potentially encroaching on or interfering with the other operator’s movement. The Windsor operator has only one industry (the CP rail yard) in the closet area (in Detroit’s physical area).

The Detroit operator’s switching lead and other industries are near that same area. I did not view that as a major problem, as the Windsor operator will only briefly be in the closet area and that aisle is 3’ wide. Depending on operator girth, a 3’ aisle should accommodate both of them for short periods of time.

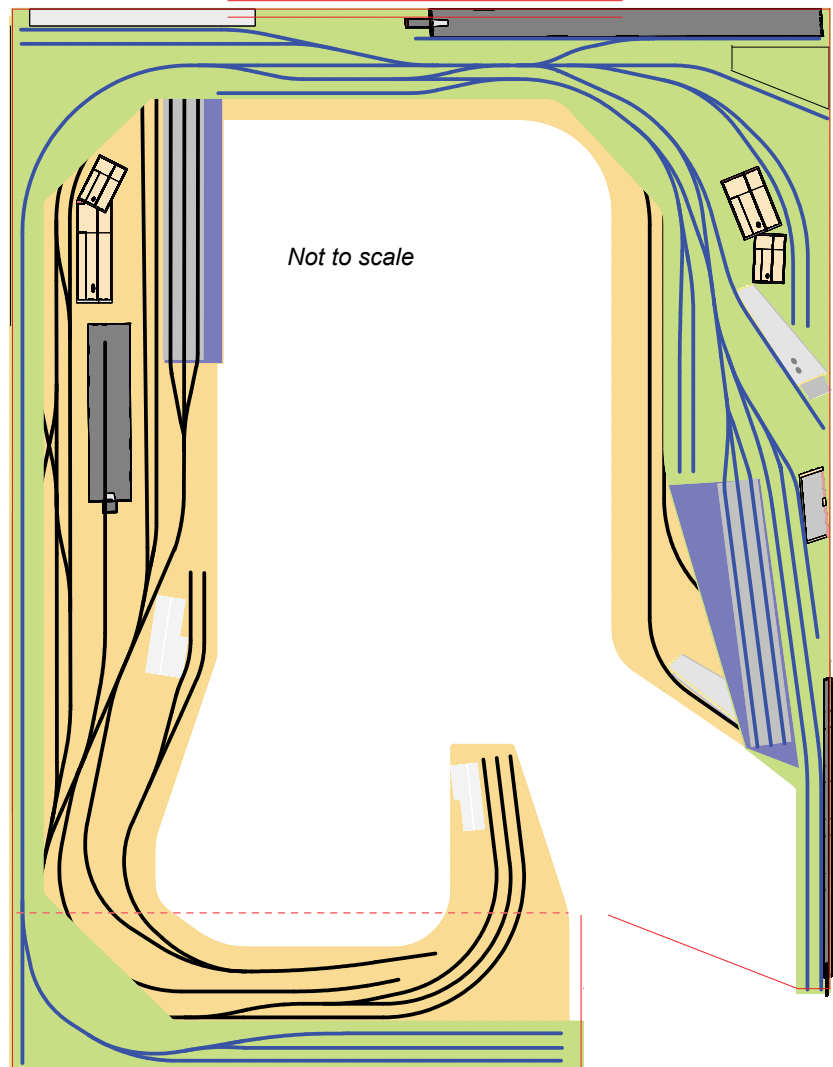
Similarly, the Detroit operator will also encroach on the Windsor operator’s space briefly when switching the two industries under the Windsor float (US Steel and the Wabash rail yard). Again, for the sake of a better, more challenging, and fun operating experience, I felt that both encroachments were worth the possible temporary inconvenience of operators potentially competing for the same aisle space.

From a practical point of view, the Windsor operator will usually be working in the upper-right portion of the room and the Detroit operator will usually be working in the middle- or bottom of the left side of the room. Those anticipated brief moments of potential encroachment are, in my mind, okay. This is a social hobby!

Walthers manufactures a railroad float that would work very well as the two floats to



*The 3-D view above and the plan-view below show the relationship between the stacked decks. The wide central aisle would provide “passing room” and most moves would keep the crews separated most of the time.*



# Freelanced Canadian Prairie Branch

*Imagining a Manitoba line prospering in a kinder world*

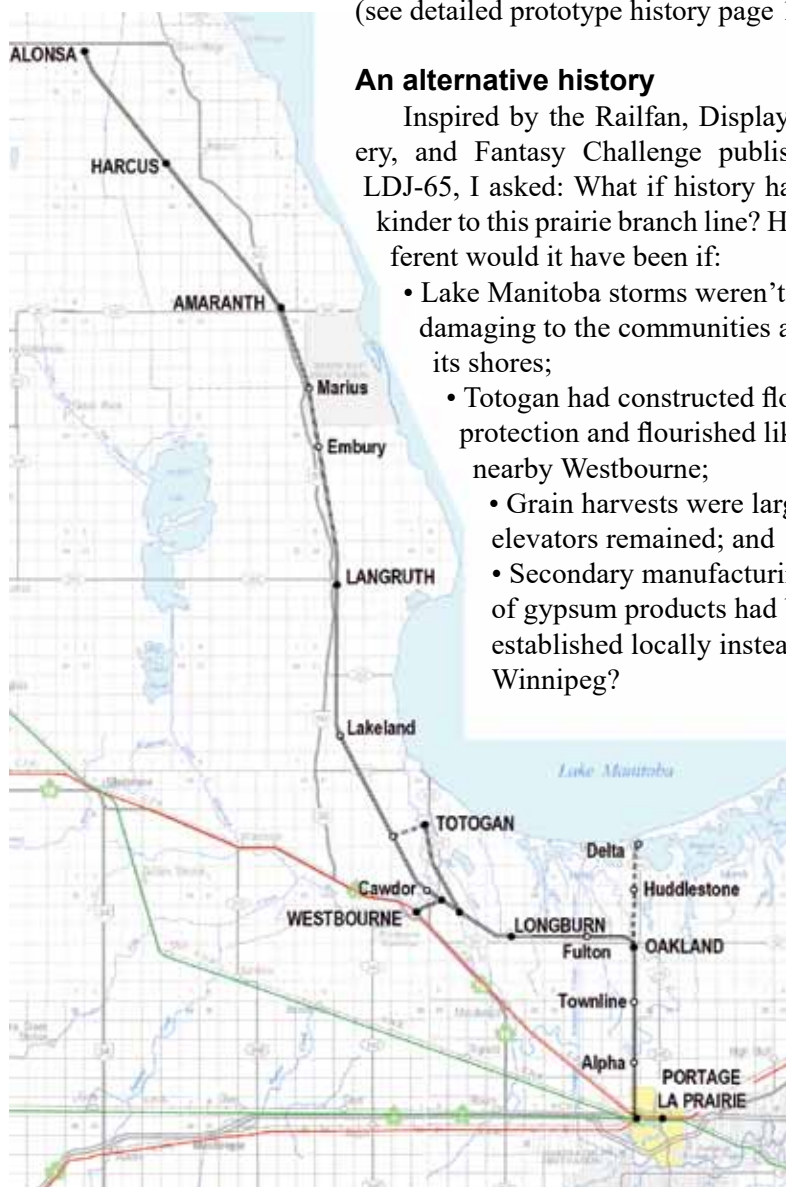
by Russ Bonny

The race to open new transportation routes west from Winnipeg to the Canadian prairies was in full swing during the late 1800s. One of these was the Portage & North Western Railway Company (P&NW), undertaken with big dreams of opening territory for industrial and passenger traffic. But in real life, this branch line fell into the hands of the Northern Pacific Railway (NP) before it even opened, then was owned by the Canadian National Railway (CNR) and its predecessor until abandonment in 1986 (see detailed prototype history page 13).

## An alternative history

Inspired by the Railfan, Display, Scenery, and Fantasy Challenge published in LDJ-65, I asked: What if history had been kinder to this prairie branch line? How different would it have been if:

- Lake Manitoba storms weren't so damaging to the communities along its shores;
- Totogan had constructed flood protection and flourished like nearby Westbourne;
- Grain harvests were larger, so elevators remained; and
- Secondary manufacturing of gypsum products had been established locally instead of in Winnipeg?



The line ran 71 miles from Portage la Prairie to Alonsa in Manitoba, Canada. Stations included in the track plan are in upper case.

Those are the “fantasy” conditions that are assumed to exist for the P&NW (or CNR Oakland Subdivision) HO-scale model railroad track plan that follows.

## Givens and ‘druthers

The available space is a 30' X 43' L-shaped section of a home basement. Single-deck construction and minimum 3-foot aisle widths for ease of access and maintenance are a must. Equal emphasis is placed on operations and scenic realism, as well as on main-line running and switching, but there must be long runs between some stations to capture the feel of the open prairies. The terrain is flat, so grades must be minimal on all visible track.

The period modelled can be any date in the diesel era between 1970 and 2040! Since we have the power to bend time and history, the imagined railroad operator could be any one of six possibilities.

## What's in a name?

For 68 of the 86 years the branch was in service it was the CNR Oakland Subdivision. But it started life as the Portage & North Western (P&NW) – and if the owners hadn't sold, it might still be the P&NW today (both titles are seen on the track plan). The same could be said of Northern Pacific. NP sold all Manitoba holdings by 1903, with the valuable line from the U.S. border to Winnipeg going to Great Northern (GN). The Lake Manitoba Branch could also have been sold to GN.

So this railroad could be the P&NW or CNR in any era. It could have been NP or GN until 1970, or Burlington Northern from 1970 to 1994. Lastly, it could be Burlington Northern Santa Fe from 1995. The BNSF's Manitoba subsidiary (ex-Midland Ry.) still operates an industrial railway 50 miles away in Winnipeg with running rights to the U.S. border.

All these possibilities mean that a model railroad of the P&NW might appeal to holders of five different Class I rosters. But the most intriguing possibility is that the P&NW survived all the way into the future, say 2040. Picture a fleet of grimy, weathered 2019 vin-

# Proto-Freelance Morada Belt

*Pro railroader's multideck "train set in a shed"*

by Dave Stanley

I knew that designing an HO layout with a long mainline run, wide-radius curves capable of accommodating passenger trains and larger locomotives, plenty of industrial switching, staging and classification yards, a satellite yard for interchange moves, a branch line, and adequate aisle space for operators would prove to be a tall order, given the 400 (20'X20') square feet I had to work with (see sidebar page 21). In addition, the railroad had to be a walk-in design with no duck-unders. At 6'3", with a large frame and three herniated disks in my lower back, crawling under anything would be a major chore.

## RR experience guides concept

With an adequate supply of blank paper, I started doodling. Hairpin turns, horseshoe curves, single-loop spirals, and a helix were all drawn, as were rough sketches of staging, classification, and interchange yards. Having these terminals represented was important to me; I spent five years as a yardmaster at Union Pacific's former Western Pacific Stockton yard and know first-hand that a well-designed yard

is the nucleus of a well-functioning railroad. Creating work assignments into and within these yards would be a plus to future operating sessions.

## Enlisting design help

Satisfied that I had a somewhat workable vision transferred to paper, but also cognizant of the fact that I didn't know squat about figuring a ruling grade, I turned my drawings over to good friend and retired railroader Kirk Baer.

Kirk had taken drafting courses in school and was an avid reader of John Armstrong's layout planning books. After looking over my sketches and re-measuring the room, Kirk said with a smile, "I think we can make this work." Two months later he dropped off the finished plans for the Morada Belt.

Ten horseshoe curves and three single-loop spirals allow a vertical climb of approximately three feet from Palisade/Stockton staging yard and reverse loop (the east end of the Morada Belt – situated a mere two feet off the floor) to Ridgewood, located on a reverse loop at five feet high and the western-most point on the layout. To facilitate this climb, and keep the ruling grade at 2.2%, the track plan varies from two- to three decks, incorporating eleven tunnels and three bridges along the 180-foot route.

## Radius vs. aisle trade-off

A 30" minimum radius was maintained on the main line, but at the expense of aisle space. Kirk gave me the option of slightly smaller curvature in order to gain an inch or two in the aisles, but I opted for the 30" radius design option.

The end result created adequate walkways with "turnouts" (wider spaces where operators may pass) and one pinch point in an area where operators wouldn't necessarily congregate. Capping the number of main line operators at three (plus

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***"... a well-designed yard is the nucleus of a well-functioning railroad."***

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*An overall finished view illustrates the multiple tiers and decks Dave used to maximize running length and room for industries. All photos by Dave Stanley.*

# HO Passenger Action in Spare Room

## *Somewhere West, The Family Room, and The Keyhole*

by Byron Henderson

It started out simply enough: A spare bedroom, a collection of colorful HO streamliner passenger equipment from a variety of western roads, and a high priority on passenger train action. Although a couple of consists included full-length passenger cars, most were “shorty” models from Con-Cor, Athearn, and others. Maximum train length with locomotives was about eight feet, but many trains would be shorter – even down to a single Rail Diesel Car.

Also high on the priority list was easy access for family members and friends to kibitz and watch the action, including a no-duckunder entrance to the room. A featured scene was to be a suggestion of a large metropolitan passenger station, even if it must be compressed and truncated.

At this point, the task was becoming a lot more challenging, because the room was only about 10’X11’. There was a closet that might be partially annexed, but it had to also remain available for storage of seasonal clothing. Decent access to the window was also a must.

### “Somewhere West”

Most of the models were from a handful of railroads, including Southern Pacific (SP), Santa Fe (ATSF), Western Pacific (WP), and Union Pacific (UP). The first request was for a prototypical passenger station to represent on the layout. But there was no one place where all of those railroads converged in real life, so a “Somewhere West” freelanced locale was agreed upon.

The builder had good results in the past with PECO Code 75 turnouts and flextrack, so those space-saving components were to be used again. While a minimum radius of 24” might be OK, he felt that an extra inch would help a lot in terms of reliability with the longest cars and trains.

### A successful (?) failure

The first footprint sketch (page 36) coaxed a double-track continuous-run mainline into the room, but at the cost of easy access to half of the closet. It also placed portions of the layout out of easy reach without access areas.

Four tracks and a flat along the wall didn’t seem like much of a big-time metro passenger depot, even given our confined space.

But the entrance door was *just* far enough from the wall to allow a couple of tracks to extend to 8’ in the clear. And with the ability to reverse trains in either direction, they could back-in and not require crossovers at the end of the tracks to release the engines.

There was space for a modest engine-service area and some representation of express, mail and passenger car servicing locations. A single staging shelf in the closet allowed for closet rods above and below (page 36), so there would be space to hang coats in the summer and the seersuckers in the winter.

### “Action” means ... action!

The builder seemed puzzled by the draft. “There’s really not that much action”, he said. I (helpfully, I thought) pointed out the continuous run, reversing connections, staging, etc. To which he responded, “I can watch my trains run in circles at the club. What I want for this layout is *action* ... you know, switching mail and express, building trains, changing out engines.”

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**“... high on the priority list was easy access for family members and friends ...”**

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*The Union Pacific’s City of Los Angeles and the ATSF’s San Diegan at Los Angeles Union Passenger Terminal (LAUPT) in March, 1971 are typical of the colorful western trains to be hosted on this layout. Drew Jacksich photo, Creative Commons License CC BY-SA 2.0*

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Yes     No      Special interest or skill: \_\_\_\_\_

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Do you model a specific prototype?     Yes     No    Prototype(s) modeled: \_\_\_\_\_

What specific areas or locale of railroading do you model (location) ? \_\_\_\_\_

Era modeled: \_\_\_\_\_ Scale(s): \_\_\_\_\_

Other interests (Main line, branch, yards, division, multi-scales, etc.) \_\_\_\_\_

Status of layout: \_\_\_\_\_

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