

THE LILLIPUT LOGGER, A 4x8 HO SCALE TRACK PLAN

N SCALE DASH 8

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## Artistry in O scale

Today's  
Aberfoyle  
Junction

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# Today's Aberfoyle

**Ontario's O scale  
time machine  
is a layout you can visit**

**By Jim Hediger**  
Photos by Lou Sassi

► Visitors to the Aberfoyle Junction Ry. are in for a wonderful trip back in time to see Canadian railroad-ing in the 1950s. As you enter the room, a beautifully finished O scale model railroad lies all around you. To your left, southern Ontario's rolling farmland stretches to the horizon while rocky outcroppings of the Niagara Escarpment angle north toward the





# e Junction

Bruce Peninsula. A constant parade of Canadian National and Canadian Pacific freight and passenger trains travels smoothly along the main lines linking the numerous small towns to the distant large city.

This superb display's beginnings can be traced to Frank Dubery's dream of re-creating an era many modelers grew up in. It was also a time when Frank

traveled extensively, riding well-maintained trains pulled by steam and early diesel locomotives.

Frank and his wife, Gay, began building the first Aberfoyle Junction Ry. in 1972 and opened it to the public a year later. An article on that layout was published in the March 1979 *MODEL RAILROADER*. This second layout was introduced in the February 1987 MR.

1. Highly detailed mini-scenes add human interest to Aberfoyle Junction's unique blend of two prototype mainline railroads. East-bound Canadian National no. 3737 is a modified Sunset USRA light Mikado.



### The Aberfoyle team

Word of the railroad spread quickly and a number of friends joined the Duberys' project between 1972 and 1975, including Chuck and Gwen Bard, Wayne Pfeiffer, and Craig Webb. Most of the male members of the team have been in the hobby since childhood, but Gay and Gwen became participants in the hobby by marriage. Everyone had different strengths within the hobby which dovetailed perfectly as the railroad grew.

One of the Duberys' teenaged grandsons helps with the public shows while two of the Bards' granddaughters help staff the gift shop and run trains.

### A new home

The original Aberfoyle Junction Ry. was in a nearby antique mall where its future expansion possibilities were limited. Between 1980 and 1982, the Duberys purchased the present property and built the large quonset hut that houses the current railroad while the group continued to operate the original display until the lease ran out.

The new building was designed specifically for the model railroad. Steel columns that support the control tower and electrical conduits for the layout wiring were carefully planned and installed before the concrete floor was poured.

Drywall covers all of the interior walls and skyboards that aren't part of an exterior wall. Curved sections of drywall start 6'-6" above the floor and follow the building's arch to blend into a suspended ceiling 11 feet high. Incandescent fixtures are recessed into the ceiling to spotlight specific scenes on the layout.

Construction of the AJR has had its share of trials as well as humorous moments. When the ceiling crew needed a piece of chalk on a holiday weekend, Gay went home and returned with the only piece available. She tossed it up to Chuck who was working on top of a 7-foot-high scaffold. He made a great try, but missed as the chalk arched its way across the room. Chuck's dog, Dusty, spotted the flying chalk, fielded it in mid-air, and gulped it down! No one volunteered to follow the dog for the next 24 hours, so work continued with a pencil.

### The track plan

The Aberfoyle Junction track plan was developed mostly by Frank and Chuck with a lot of input from the others. While it doesn't reproduce any specific locations, it includes a number of typical southern Ontario scenes.

The layout represents two separate railroads (CN and CP) which cross each other at Aberfoyle Junction, a rural junction that includes a small double-ended interchange yard. Both railroads also share Wellington Union Station, and a few Toronto, Hamilton & Buffalo RR trains operate on trackage rights over the CP.

One industry, the Canada Crushed Stone Co., features an empties-in and loads-out operation. Two tracks run through the hillside allowing CN trains to deliver empties and pick up loads on the scenery side while the CP trains handle the opposite cycle from behind the scenes.

This display railroad was planned so public shows could help defray some of the expenses. It runs around three walls of the room, low in front and slowly rising toward the skyboards. A control tower in the center of the room places the operators above the viewers. Operators don't have to enter the modeled scenes, except for an occasional emergency. Kadee magnetic couplers provide the reliability needed for remote control switching.



### Construction by survey

Before any benchwork construction began, Frank and Chuck drew the full-size track plan on the concrete floor with felt pens. Then they used a surveyor's transit to establish a base level line around the room. Many friends helped out as the L-girder benchwork was built over the track plan and then the track centers were plumbed up from the floor.

Frank handlaid the track taking special care to make each railroad's track look visibly different. All of the rail is steel and it's laid on different colors of handmade ties. The CN's double-track main line has code 148 rail, while code 125 was used on the CP's single-track line. Different ballast colors also contribute to the effect.

Most yard tracks and spurs are laid in code 100 while Atlas flexible track is used backstage. The various junctions are all electrically interlocked so conflicting routes cannot be set up. Frank's handmade semaphores protect the different routes through the interlocking system.

All of the bridges were scratchbuilt by various members. Chuck designed the mechanism for the operating





▲ 2. A railfan captures westbound CN Northern no. 6153 as it passes one of the new postwar homes under construction near Aberfoyle Junction. Chuck Bard scratchbuilt both the 4-8-4 and the house.

▶ 3. An MLW (Alco) FPA-4 passenger cab diesel arrives at CN's Kelso depot. Frank Dubery scratchbuilt this station. The diesel is an Overland Models brass import.







▲ 4. Ontario's postwar building boom is evident as this new factory's steelwork goes up outside Eastport. Canadian Pacific Alco switcher no. 7042 is an Overland Models brass import. Chuck scratchbuilt the factory and its construction cranes.

three-track lift bridge at Eastport while Frank and Wayne built the superstructure mostly from stripwood. It's carefully counterbalanced to operate with a very small motor.

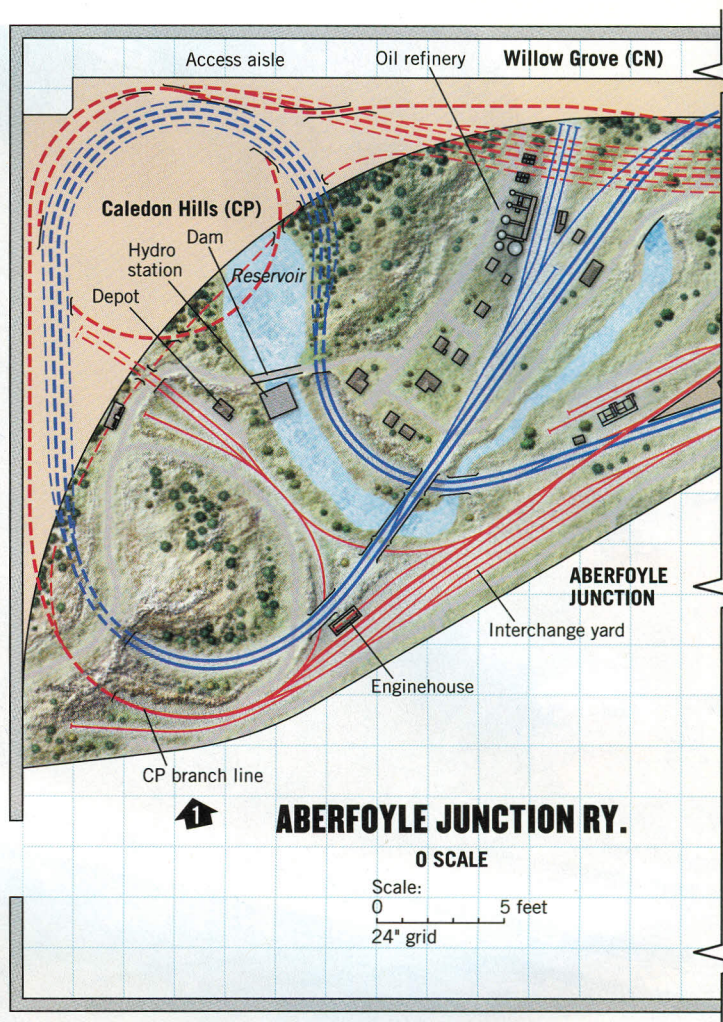
Two scratchbuilt turntables serve the CN and CP yards. Frank built both superstructures while Chuck fabricated their automatic indexing mechanisms. (The operators in the tower are too far away for visual alignment.)

### Electrical

Unlike a home layout, Chuck wired Aberfoyle Junction's eight cabs into specific routes such as the CN westbound main, CP branch, and so on. This simplicity improves reliability and prevents mistakes. Some areas have rotary selector switches so a mainline operator can bring a train into a yard and stop before the yardmaster takes over.

All turnouts are actuated with switch machines. When a mainline turnout is lined into a yard area, mainline power is automatically routed down the arrival or departure track. This allows the yard operator to continue working elsewhere while a road train arrives or departs.

Schematic diagrams in the control tower display routing and occupancy on all tracks. Six security cameras feed three



television monitors in the tower so the operators can observe train movements in the hidden areas.

Chuck's electrical wizardry has produced a spectacular night scene. He made an 8"-diameter drum that slowly rotates to operate 64 cam-actuated microswitches in a seemingly random sequence during a ten-minute cycle. Over 400 lamps in the various structures, streetlights, and yards are involved in the cycle, lighting up with the sunset and remaining on through the night until they're turned off as dawn returns eight minutes later.

The city scene is set back about 20 feet from the viewing area, and its lighting reflects the general glow typical of a distant city. The sequence lighting occurs mostly in the town and rural areas to focus attention on the highly detailed structures. These are near the viewers and have full interiors. All of the passenger cars have interiors and lighting, so they're usually run at night.

### Scenery

To support the terrain, scrap pieces of 1/2" electrical conduit were bent to shape and attached to the benchwork with screws. Additional conduit crosspieces were held in place using bits of twisted wire, and then the frame was covered with screen wire.

The rock faces are patching plaster carved to shape as it set. Then the wider expanses of terrain were covered with a mixture of patching plaster and fine sawdust.



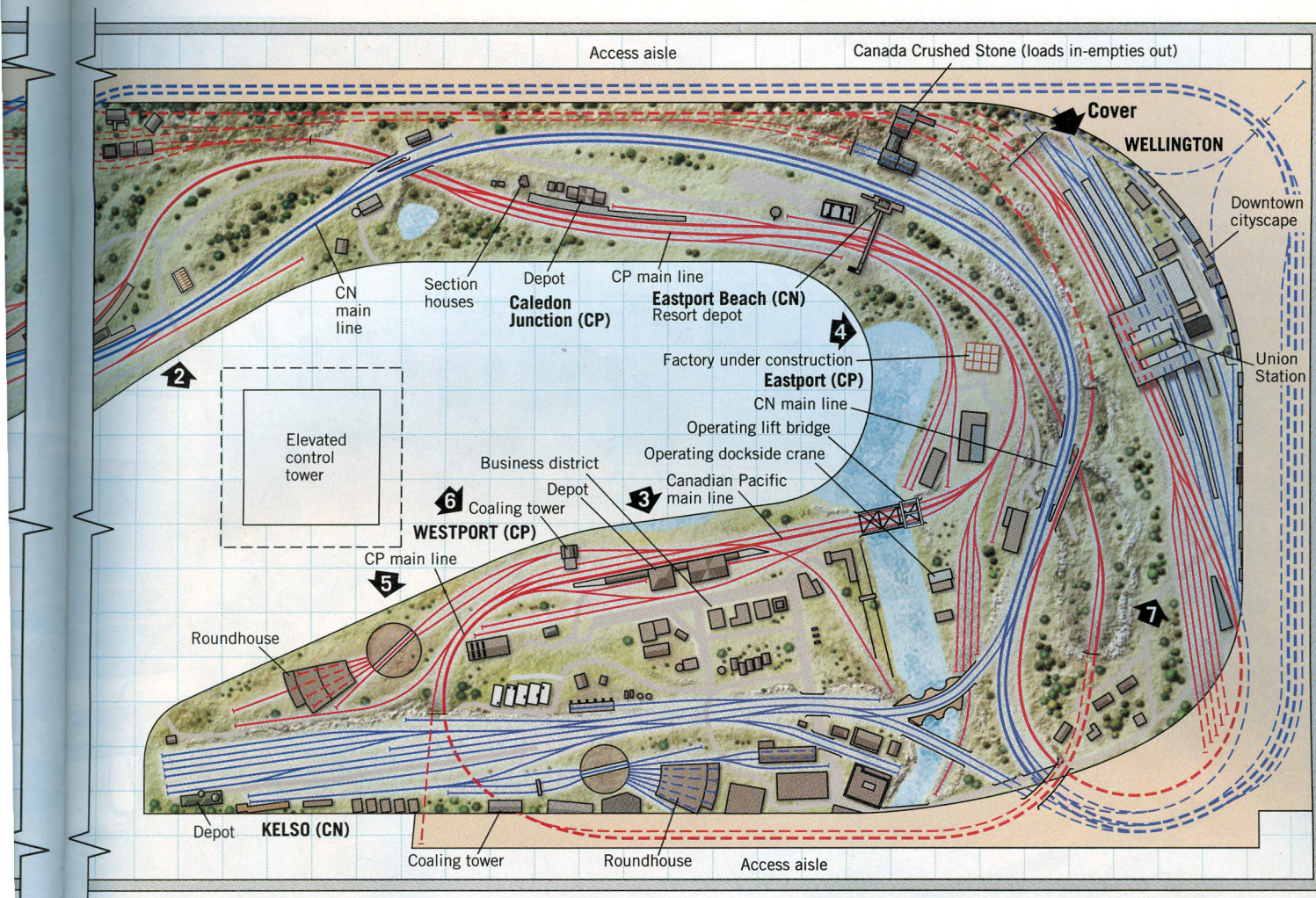


ILLUSTRATION BY RICK JOHNSON

Gwen made thousands of trees, mostly from local weeds or dried materials that "looked right." Some of her foreground trees have fine copper wire trunks and branches. The rest of the ground cover is ground foam, dyed sawdust, and dirt.

Gwen also painted the backdrops.

### Structures

Craig Webb is responsible for many of the layout's scratchbuilt non-railroad structures which are modeled from prototypes found in Ontario or upper New York state. Some have been selectively compressed, but their significant features have been retained. The urban areas were deliberately kept generic so viewers couldn't identify a particular location.

Except for the free-lanced Union Station, the railway buildings are modeled from specific prototypes that reflect the typical architecture of each railroad. This approach can be seen in the Kelso depot, modeled from CN's Chesley, Ontario, station while Westport is a replica of CP's West Toronto depot.

Most of the distant structures are made of heavy cardstock laminated to a clear acrylic box. The outer walls are covered with brick paper laminated to the shell while the clear acrylic box also

### Layout at a glance

**Name:** Aberfoyle Junction Ry.

**Scale:** 0

**Size:** 38 x 83 feet

**Prototype:** Canadian National and Canadian Pacific Rys.

**Locale:** southern Ontario

**Period:** 1950s

**Layout style:** walk-in along three walls

**Layout height:** 39" to 46"

**Benchwork:** L girder, spline trackboards, and 3/4" plywood tops (yards)

**Roadbed:** Ten-Test fiber sheathing board

**Track:** handlaid code 100, 125, and 148 steel rail, some Atlas flextrack

**Turnouts:** minimum no. 8

**Minimum curve radius:** 60"

**Maximum grade:** 1 1/2 percent

**Scenery:** plaster over screen, textured with homemade ground foam

**Backdrop:** hand-painted drywall

**Control:** cab control with eight cabs



Aberfoyle Junction's builders took time out for this official portrait. The crew includes, left to right: (standing) Chuck and Gwen Bard, Wayne Pfeiffer, (seated) Frank and Gay Dubery, and Craig Webb.





serves as window glazing. This produces a strong structure requiring little interior bracing.

The foreground structures have thinner, scale thickness walls with interiors and lighting. These buildings are solidly braced with stripwood and have embossed plastic brick, stone, and trim laminated on. Their windows are glazed with .010" clear styrene. Interior access is provided through a removable roof or hollow floor.

The degree of fine detailing depends on a model's location. Structures close to the viewers have highly detailed exteriors, interiors, and close-up scenes of daily activity. Structures that are 15 to 20 feet back are less detailed and lack interiors.

### Rolling stock

Most of the trains operating on the layout are pulled by smooth-running replicas of specific Canadian National and Canadian Pacific steam locomotives. Scratchbuilding was necessary to capture the typical Canadian details. Chuck is the group's most prolific steam engine builder, although

Frank and Wayne have also done some. Frank had three small engines custom-built and personally modified a Sunset USRA 2-8-2 Mikado into a CN 3700-class engine.

The diesels generally started as kits, although a few brass models have also been modified with details that match CN or CP practices. Frank, Craig, and Wayne have been the primary diesel builders.

The large fleet of heavyweight passenger cars is almost entirely scratchbuilt to match CN and CP designs. Craig built most of these cars with interior detail, lighting, and a suitable load of passengers.

The freight car fleet includes both Canadian and U. S. railroads as considerable international traffic moved across southern Ontario. A number of flatcars carry typical open loads and the distinctive CN and CP wood cabooses are also scratchbuilt.

Some weathering has been applied on all of the rolling stock, but the passenger cars and locomotives show very little grime. This reflects the good maintenance Canadian locomotives and passenger equipment still received in the 1950s.





▲ 5. CP's Westport roundhouse is home to more diesels than steam as Frank's modified Rivarossi Fairbanks-Morse C-Liner rides the turntable and a Central Locomotive Works FA-2 waits in one of the roundhouse stalls.

▶ 6. Toronto, Hamilton & Buffalo GP9 no. 402 is running on the CP as it rolls past the junkyard and an older neighborhood in Westport. Art Robertson built the dual-service TH&B Geep from a brass import.

◀ 7. A CN yard transfer job switches cars into the industries adjacent to Wellington Union Station. Frank built the MLW RSC-13 road switcher from an old Kemtron kit.



## Railfanning

Aberfoyle Junction's display operation creates a railfanning experience where everyone is treated to a variety of trains. Hidden double-ended staging tracks make it easy to run any train desired. The yardmasters switch cars around, but there's no car forwarding system. Road engineers can choose to make set-outs or pickups along the line or they can just keep things moving depending upon the audience.

Six operators are required: two control the CN main line, two more run the CP, plus yard engineers work CN's Kelso Yard and the Wellington terminal.

Cramming six operators into the original tower wasn't comfortable, so a second control gallery was added across the entrance end of the room. Interlocking controls and a telephone system make it easy to coordinate train movements between the two locations.

When the trains are running, their operators are out of sight in the shadows above the bright lights highlighting the railroad. Unless there's a noise in the tower to attract their attention, many visitors don't even realize the railroad isn't

automated as they watch the trains make station stops, switch cars, and travel around the system.

Trains run for seven hours straight during public shows, while private showings are tailored to the various groups. Between 30 and 50 different trains are normally run during a public show.

## Closing thoughts

As the Aberfoyle Junction Ry. enters its 26th year, its builders can look back with great pride. They've certainly accomplished their goal of re-creating southern Ontario railroading as it was practiced in the 1950s. Visitors are often amazed to learn that this superb display is the work of only six people.

If you'd like to see the Aberfoyle Junction Ry. in person, it'll be open from 10 a.m. to 5 p.m. on October 17, 18, 24, 25, 31, and November 1, 1998. The railroad is located 1.5 km north of Ontario Hwy. 401 (MacDonald-Cartier Freeway), exit 299 Brock Road. Admission is \$5 for adults, seniors and students are \$3, and children are \$2. ☐