

**A VISIT TO THE (SECOND) HO SCALE NORFOLK AND WESTERN 1950s  
PRESENTED TO THE CINCINNATI DIVISION 7 NMRA**

**MAY 4, 2025**



**C&O K3 leaving Arlington, WV yard at sunrise**

BY  
GARY HOOVER



**N&W switching mine at Fairfax, WV yard**

**In May 2021, we went from this.....**



**(Florissant, MO)**



**to this.....a downsize.**



**(Imperial, MO)**

***Which resulted in.....***

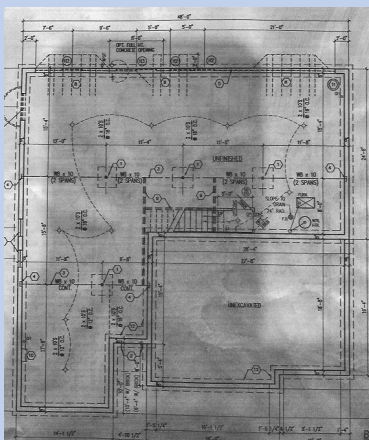
**THIS!!!**



*What a mess!!*

**The entire N&W layout in the old house was completely torn down.  
Only structures, locomotives, rolling stock and trees were saved.**

**The new layout was “planned” when the new home was being built.**



**Contractor's basement dimensions**



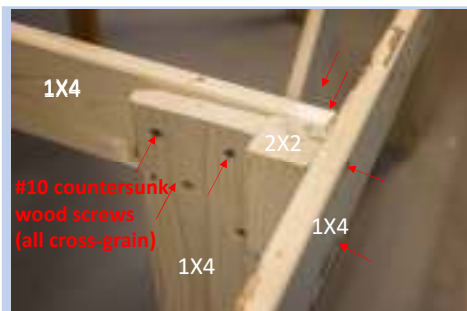
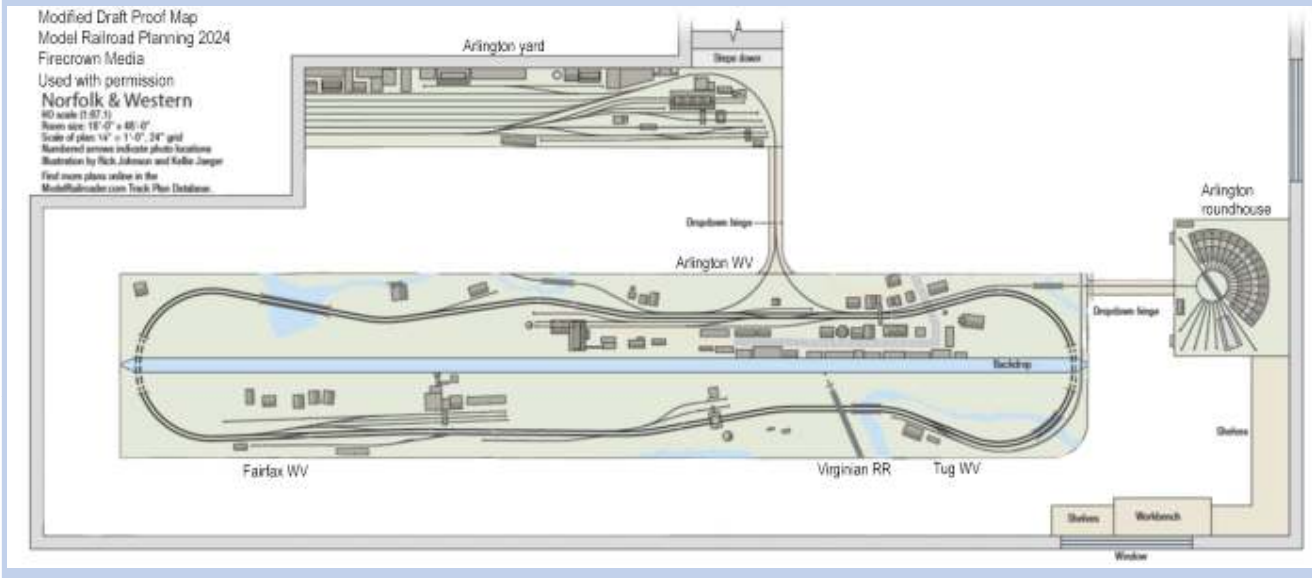
**A simple pencil/grid paper/template layout plan**



**The new layout was featured in  
MRP 2024 and MR 11/23**

**I've found planning the basic layout “footprint” and basic track plan provides what's important. Planning small details generally only leads to revisions once the layout begins to take form – i.e., waste of time.**

## Original layout plan for the second N&W

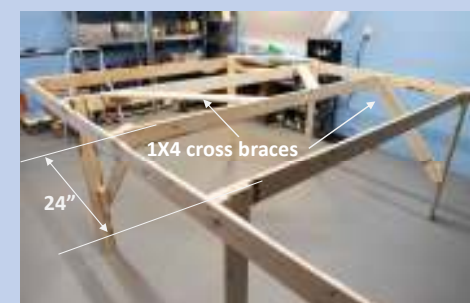


## Basic benchwork – *it sure isn't furniture!*

Lumber is expensive---adequate is perfect for basic benchwork!!



Roller stool - your best friend when working under the layout!



## Track bus and feeders

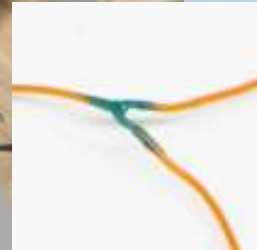
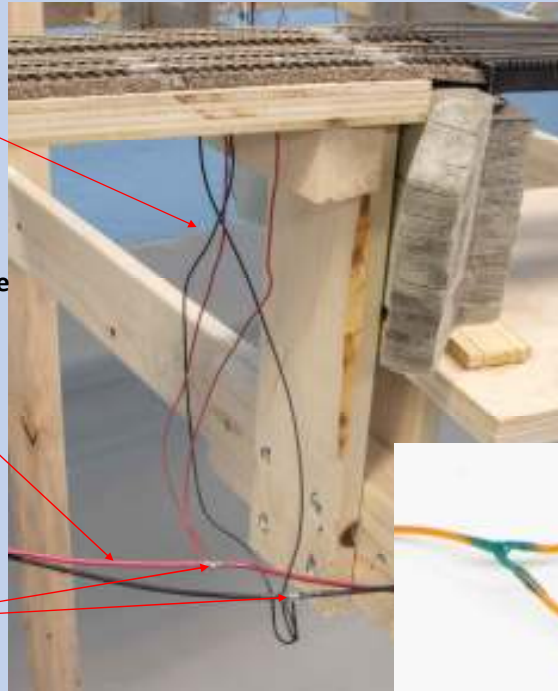
The 22 gauge solid wire track feeders are spaced about 6 feet apart and are soldered to the rail's side.

Pick unique color coding schemes for as many different circuits as possible but definitely for the track bus and feeder wiring.

12 gauge solid wire used for the main bus wire



All solder joints coated with liquid electrical tape



The entire layout (except for the overhead lighting) can be completely disconnected from house power via one plug. This eliminates possible damage from lightning strikes.





## Lighting for structures and signals

Previous layouts used 12 volt and 1.5 volt bulbs with dropping resistors. The bulb life proved to be a problem, not to mention the excessive power consumption.

Building lights, light towers, porch lights, etc. now use LEDs.

LM2596 module (10 for \$15.99 on Amazon) steps down from the input voltage to 1.25Vdc (adjustable). (Input up to 30 Vdc. Be sure to fuse the input). 3 amp max capacity, 2 amp or less is recommended.

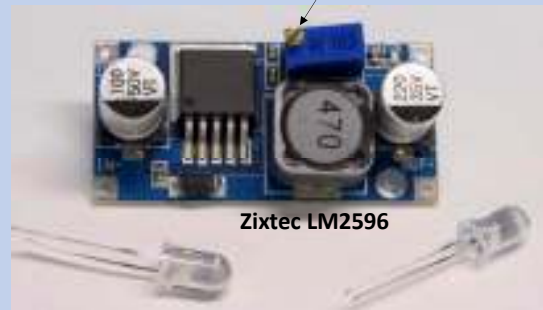


Tichy HO, S and O lamp shades. S gauge reflectors work well for me.

3mm round top warm glow ultra bright LEDs for buildings. (Amazon)

Micro Litz (or Bowerful) pre-wired warm glow LEDs For lamp shades (Amazon)

Output voltage adjustment screw (takes about 2 dozen turns to get from 12v to 2v)



## Overhead layout lighting (2 separate circuits—day, night)



Blue LED bulbs for night ops

"Fluorescent" LEDs for day ops and general work

## Signals



N&W signal

Heads/LEDs from D5DEM  
Modelsmiths (pre-assembled)

Scratchbuilt brass  
mast structure

Heads/LEDs from Showcase  
Miniatures (kit)

Basic structure from  
Oregon Rail Supply

(Most signals controlled via Digitrax BD1  
detectors feeding into DS54 stationary  
decoders that control 12vdc relays.)

C&O signal



## Facia signs and maps



Dry-erase board for  
indicating loco track  
occupancy in the "long  
house" (lubritorium)

Yard map.  
Yellow=N&W track  
Green=C&O track  
("Neon Glow" paper)



Night Ops under LED blue lights



Siding power SPST switches



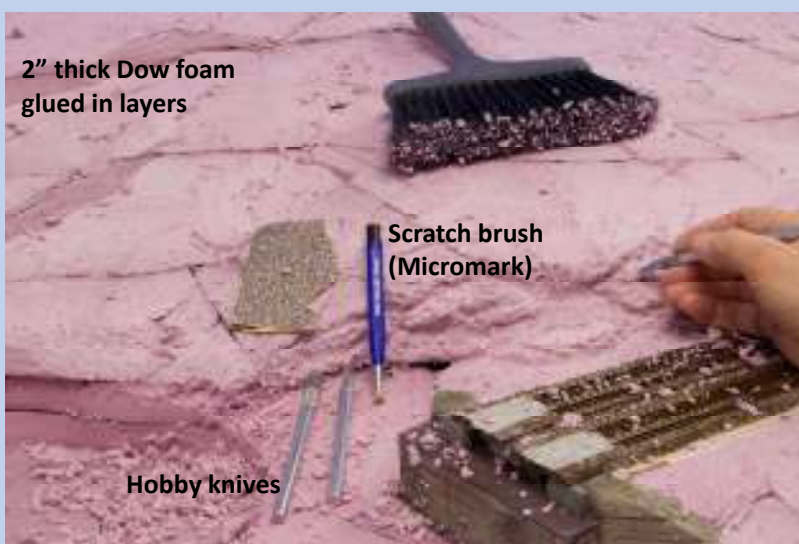
The uncouplers can be easily held in position by pushing in some double sided foam tape along two sides.

## ***Rapido magnetic uncoupler installation***



For uncouplers that are farther from the layout edge, a clear short beveled tube is centered over the blue uncoupler light. The beveled edge lights up when the uncoupler is in the Uncouple position. The stock tube is included with the uncoupler and just needs to be cut with a razor blade.

## **Scenery base**



“Controlled hacking” probably better describes the rock carving process.

## Scenery paint



Basic acrylics are used, slightly thinned with water

## Scenery materials



Scenic Express dirt, medium SE0413  
Woodland Scenics soil T1341  
Woodland Scenics earth T1342  
Woodland Scenics blended turf T1350  
Scenic Express 2mm static grass EX8917  
Noch 6mm static grass 50256  
Heki winter static grass 3363  
Sunlit Vistas brown polyfiber 1414  
Ground leaves  
Heki leaf material (pull apart) 1680  
Woodland Scenics snow 140  
Straight and diluted white glue  
Cheap hair spray  
Heki Flockstar Grass Hopper static grass applicator

The Heki "Grass Hopper" has enough "umpf" to apply 6 mm static grass but does require a separate power supply.



## Track Ballast

What????

Arizona Rock & Mineral ballast (real stone, doesn't float)

"Wet water"  
(water plus a few drops  
of detergent)

Diluted white glue works  
as well as matte medium  
and is cheaper



## Painting & Weathering

Iwata HP-C Plus  
(acrylics)

Paasche Talon  
(solvents)

Star Brand and Tamiya paint

Bragdon powders

Red oxide PanPastel

"Heavy" weathering



Tamiya panel liner

Model Master "steel" enamel  
for dry-brushing details

MicroMark dry brushes

"Normal" weathering for 1950s

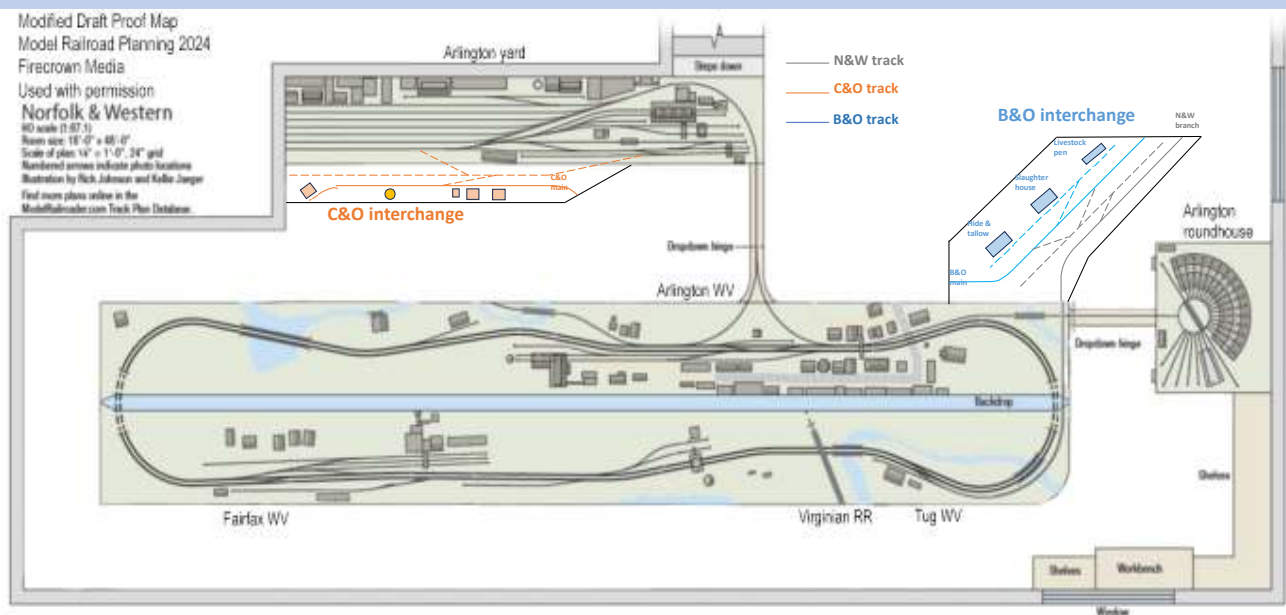
## Expansion for C&O and B&O Interchanges

- The initial N&W track plan needed more switching locations.
- Separate C&O and B&O extensions were planned.
- The C&O extension is complete. The B&O extension is in-work.
- In addition to added switching possibilities, the C&O and B&O adds contrast to the N&W.
  - Different style locomotives, tenders, cabooses
  - Different style/color structures
  - Different ballast color
  - Significantly different signals
    - N&W = unicolor position light signals
    - C&O = vertical multicolor signals
    - B&O = multicolor position light signals



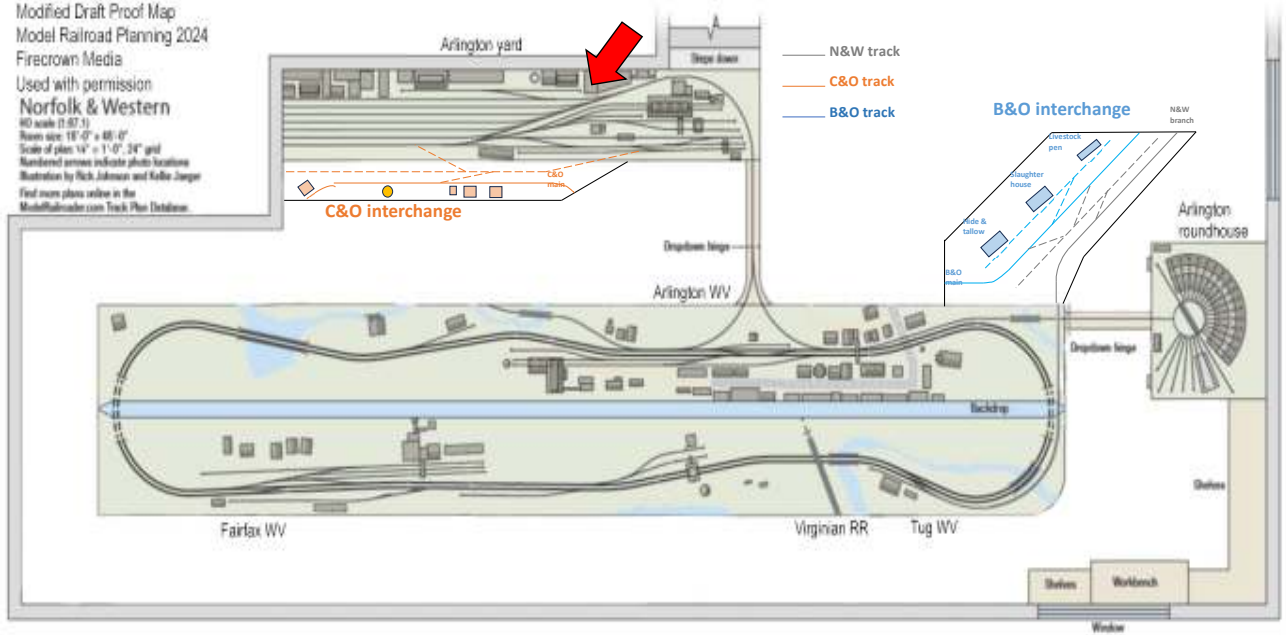
C&O K3 (2-8-2) at C&O Arlington, WV station

## Expanded Layout Plan with C&O and B&O Interchanges



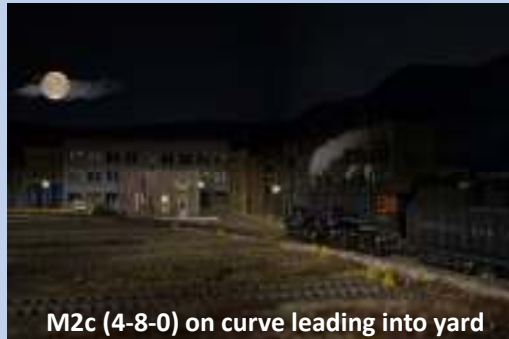
Now let's take a brief still-photo tour around the layout.

We'll start at the Arlington yard.

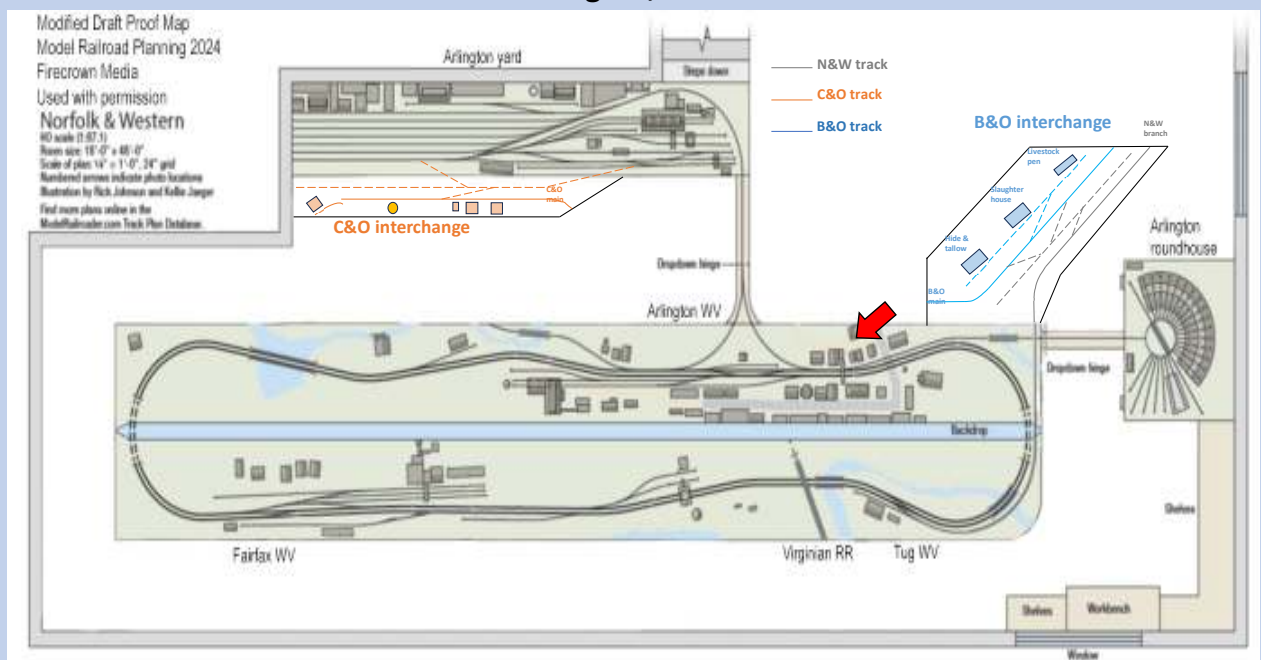




Arlington Yard



## Arlington, WV







## Arlington, WV

Drop-down connection  
between Arlington and  
Arlington yard.



Town of Arlington, WV

Lead to roundhouse

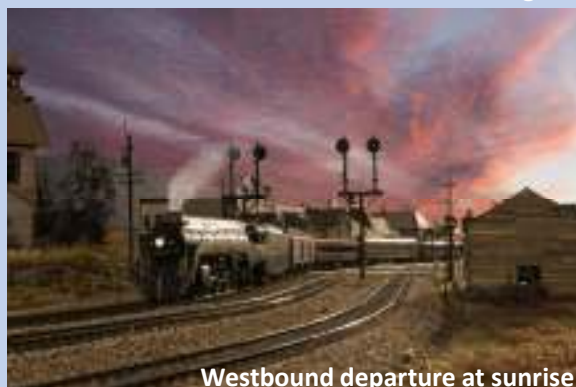


N&W switcher on wye leading to yard

## Arlington, WV

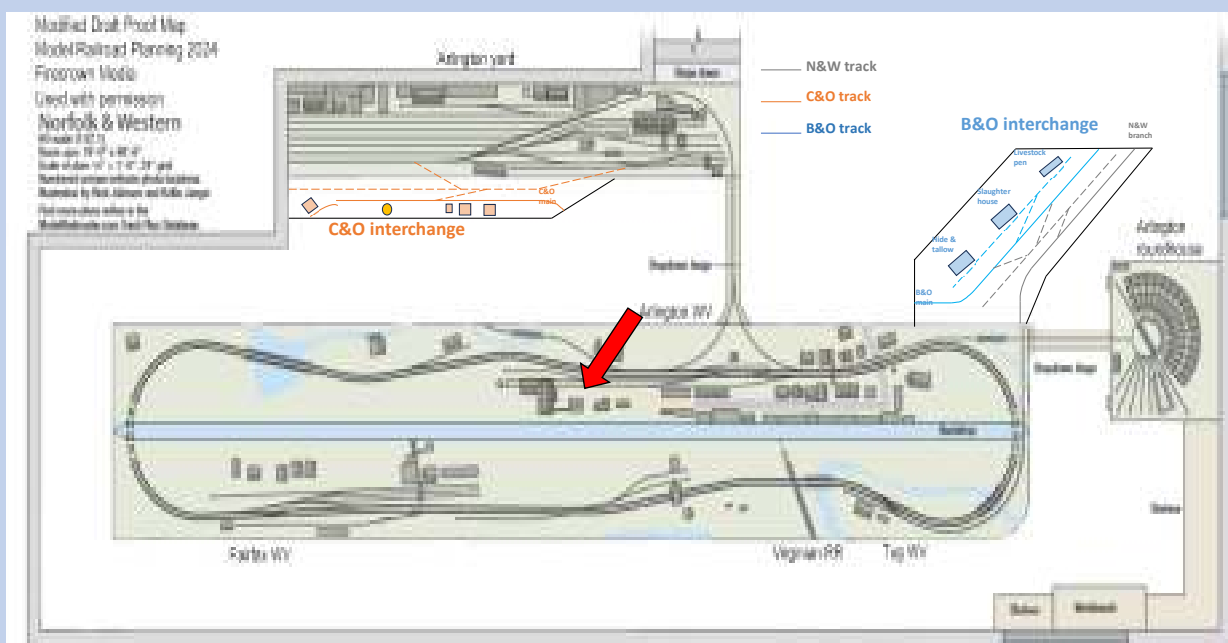


New passenger GP9 with local arriving  
Arlington



Westbound departure at sunrise

## Blue Ridge Stone (just east of Arlington)



## Blue Ridge Stone

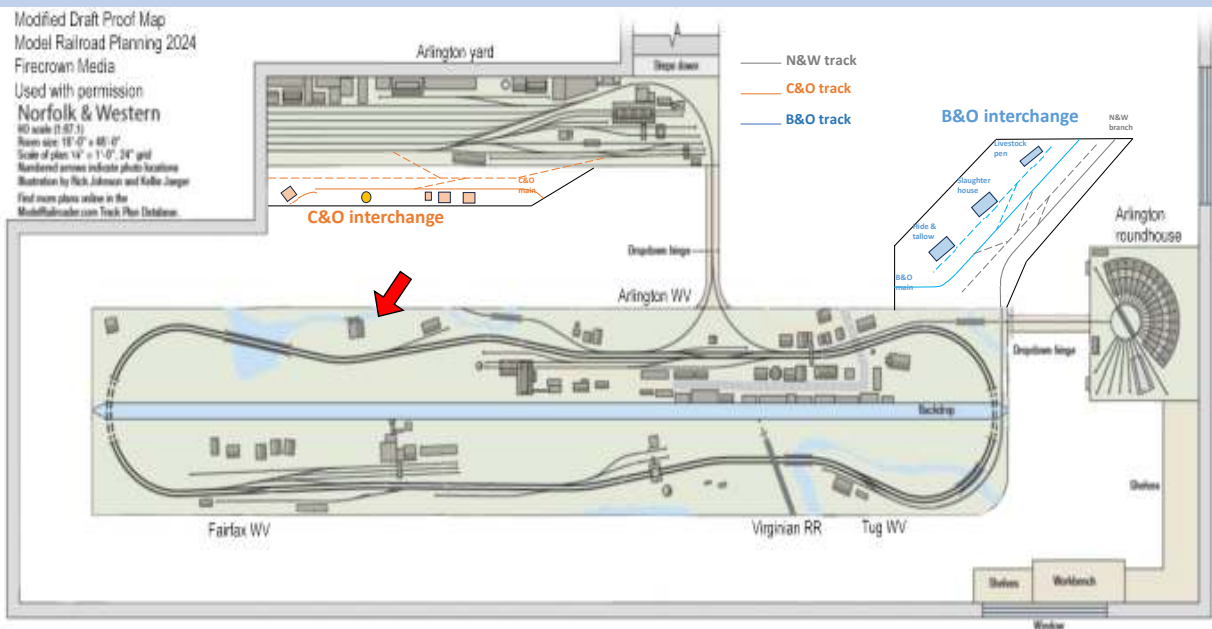


## Blue Ridge Stone



Blue Ridge Stone shay #3 eastbound empty and westbound N&W K2 with passenger local.

## Muldoons Distillery





## Muldoons Distillery



K2 class passing Muldoon's  
on a snowy day

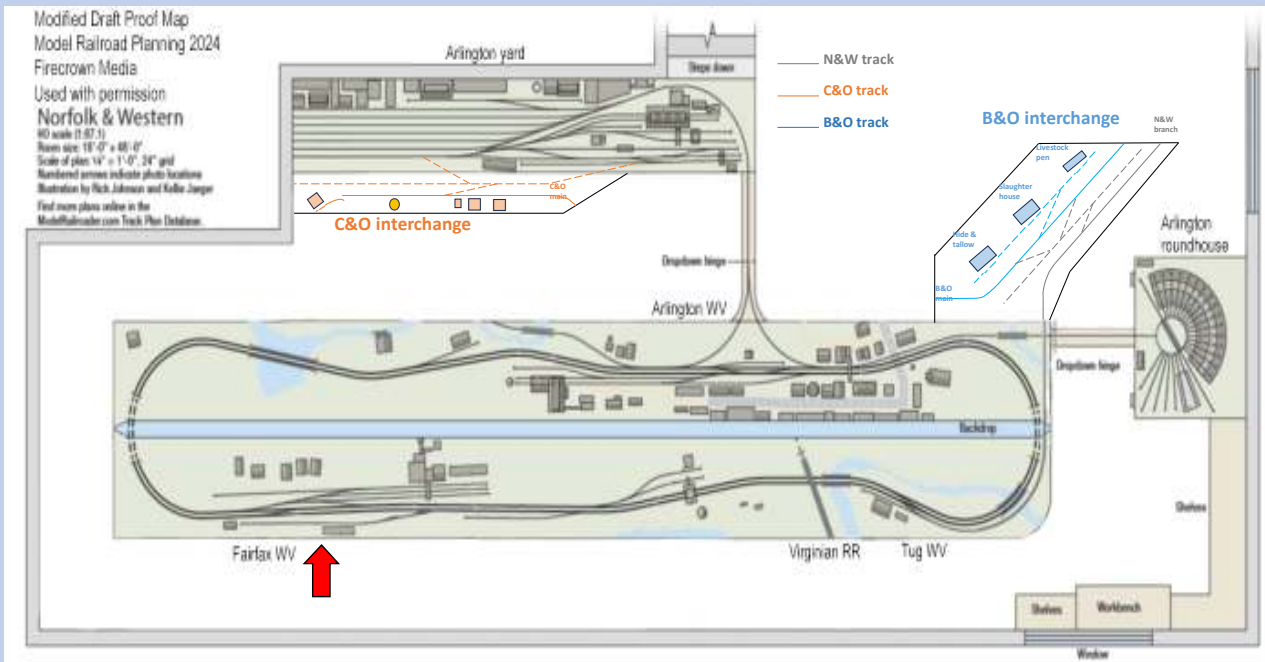


Y6B and K2 meet at the  
bridge east of Muldoons

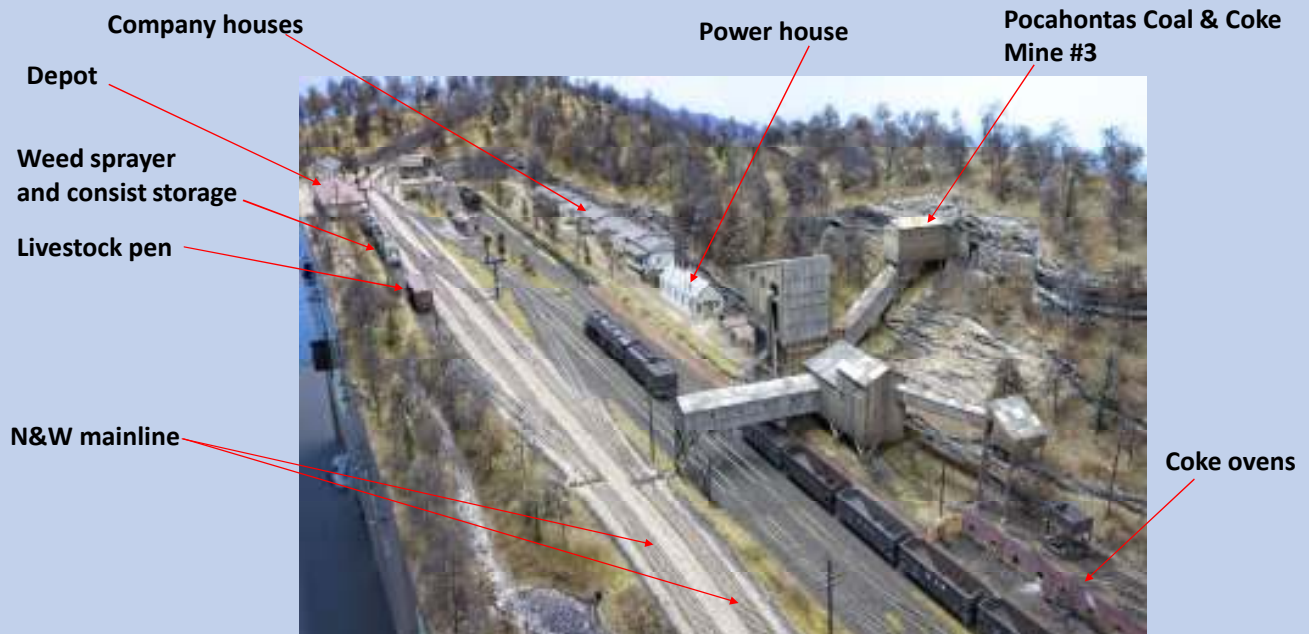




## Fairfax, WV



## Fairfax, WV





The mine tibble on a cold early winter day

Fairfax, WV

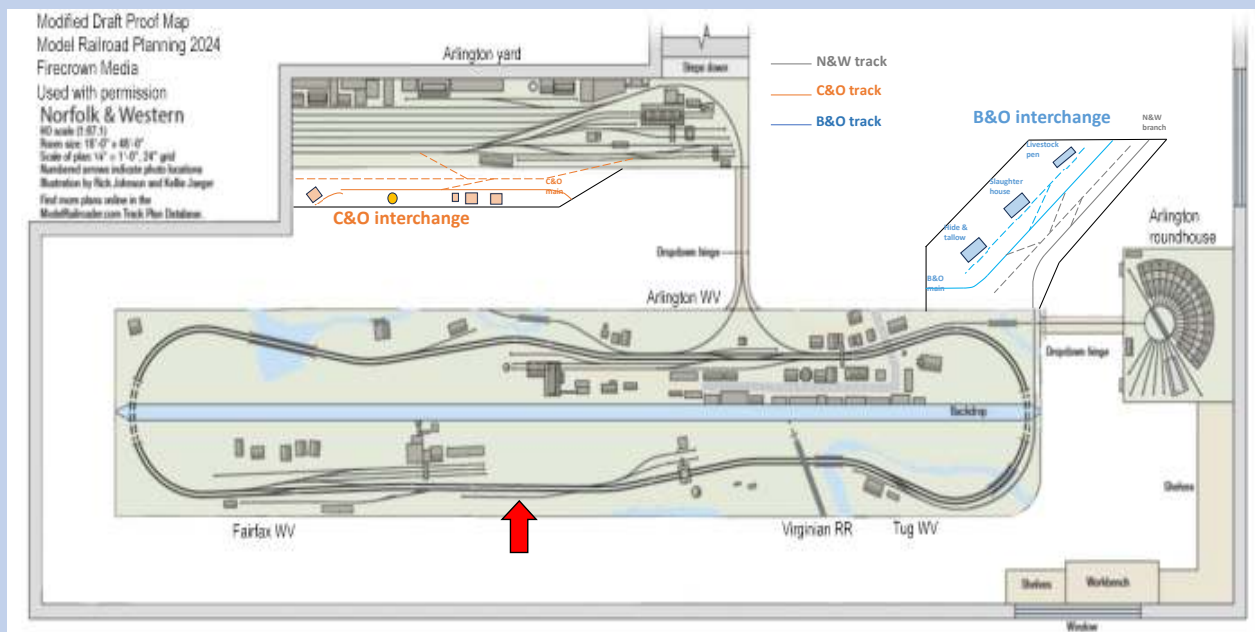


Night switching at the mine



A snowy day at Fairfax with Y6B westbound.

### Helper siding for Jawn Henry (Jawn Henry was an N&W experimental coal/steam turbine, 6-6-6-6)



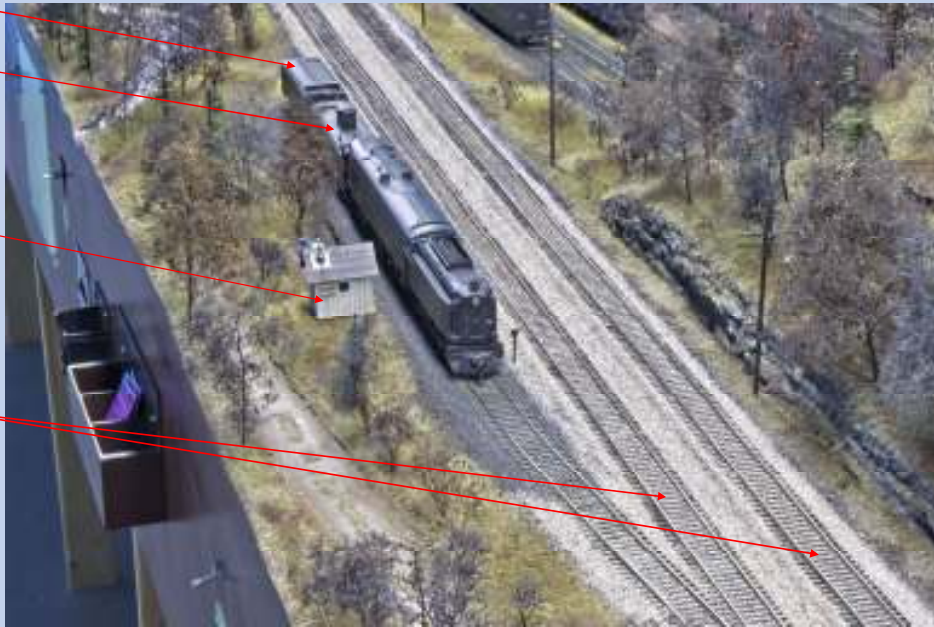
### Helper siding for Jawn Henry

Aux tender

Water treatment  
car

Crew shack

N&W mainline



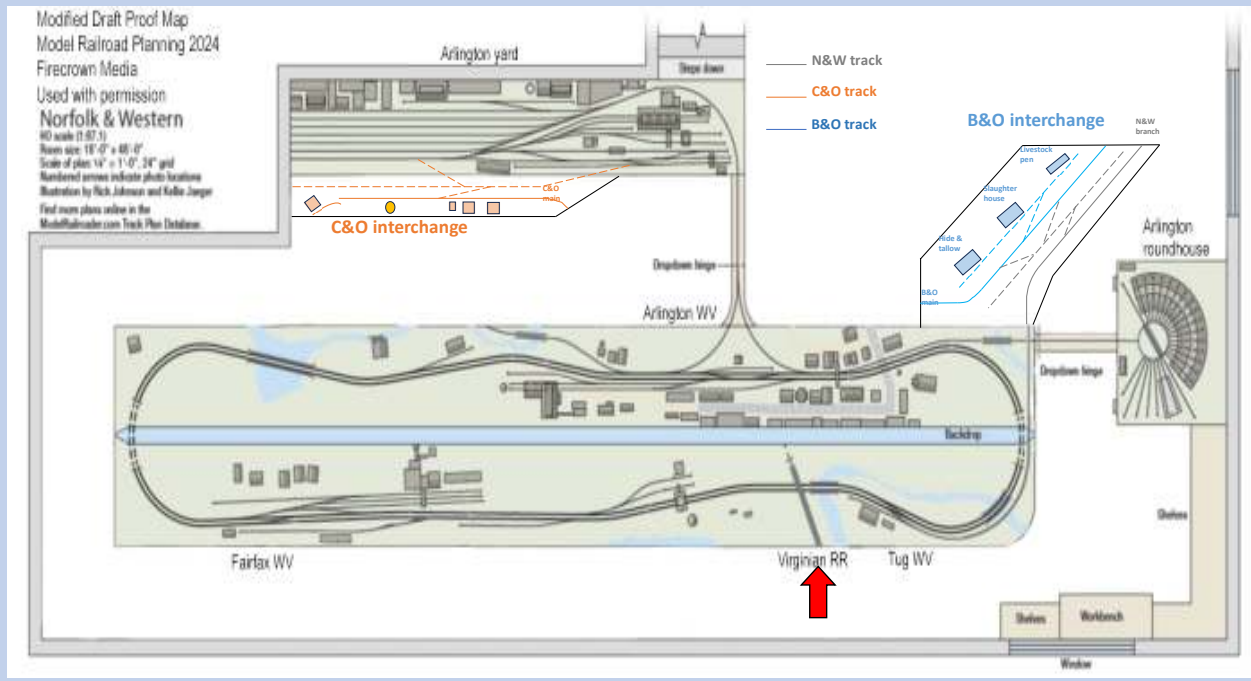
### Helper siding for Jawn Henry



Eastbound "A" slowing for a push by the Jawn Henry



## Electrified Virginian/N&W crossing



## Electrified Virginian/N&W crossing





## Electrified Virginian/N&W crossing

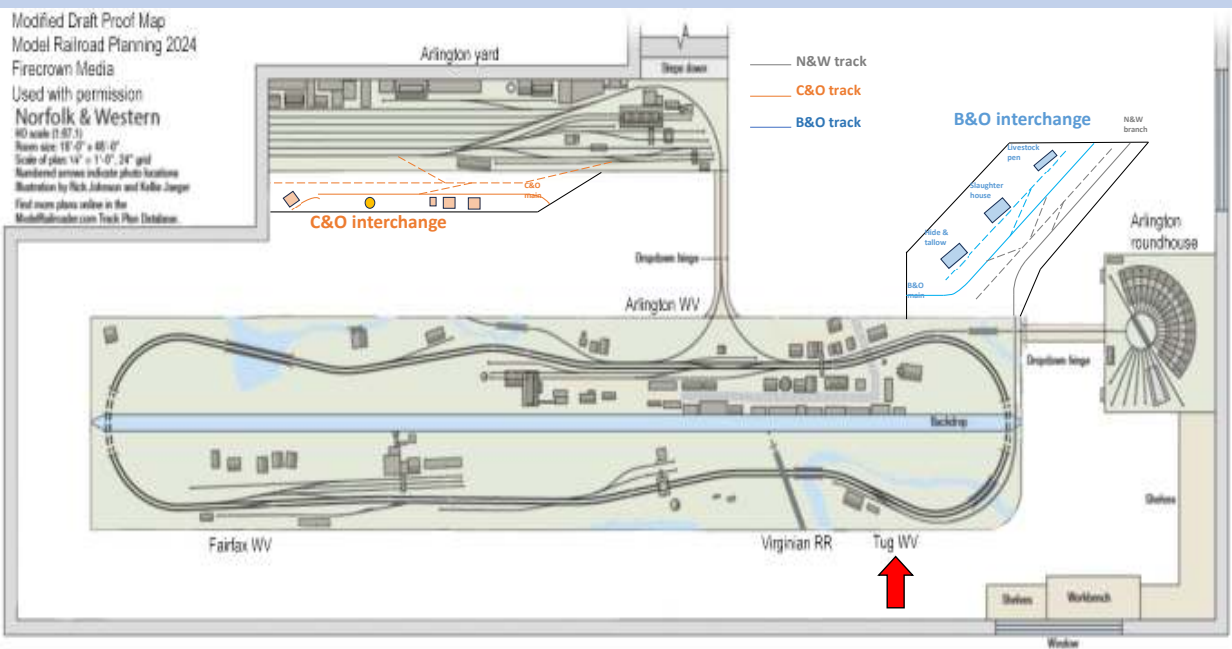


Virginian EL3 motors cross over the N&W main with J #609 westbound.



N&W M2c eastbound under the VGN track during light snow.

## Tug, WV



## Tug, WV

Gasoline and coal delivery

Tug Produce, Cold Storage &  
Feed

Passenger shelter

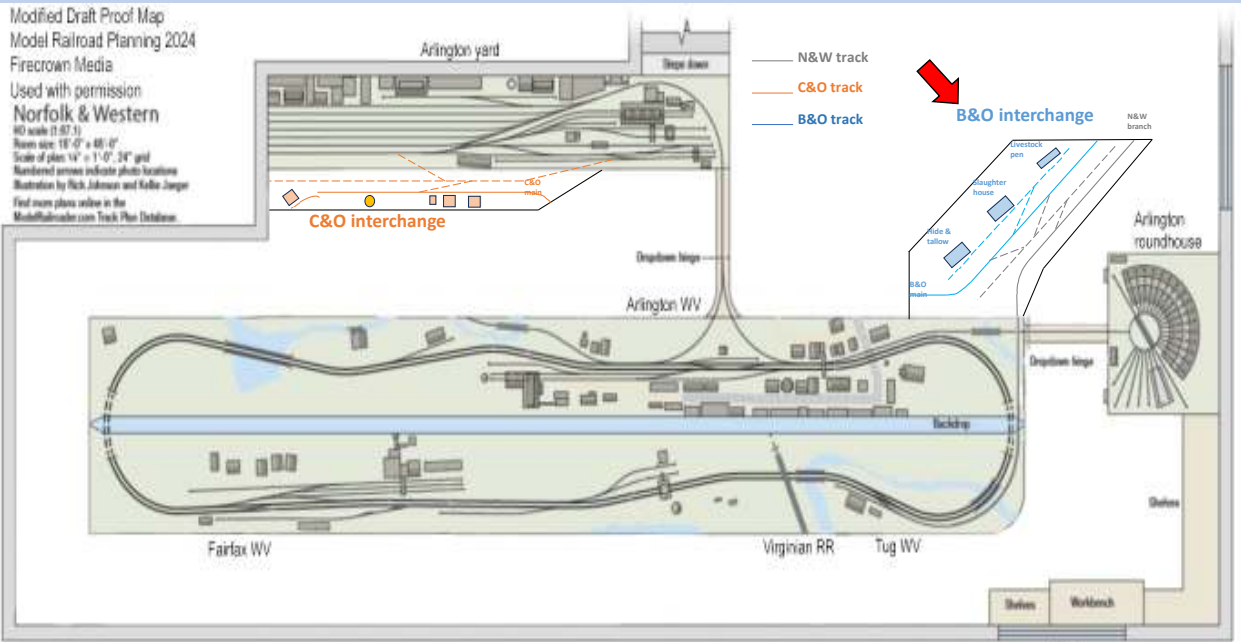


## Tug, WV

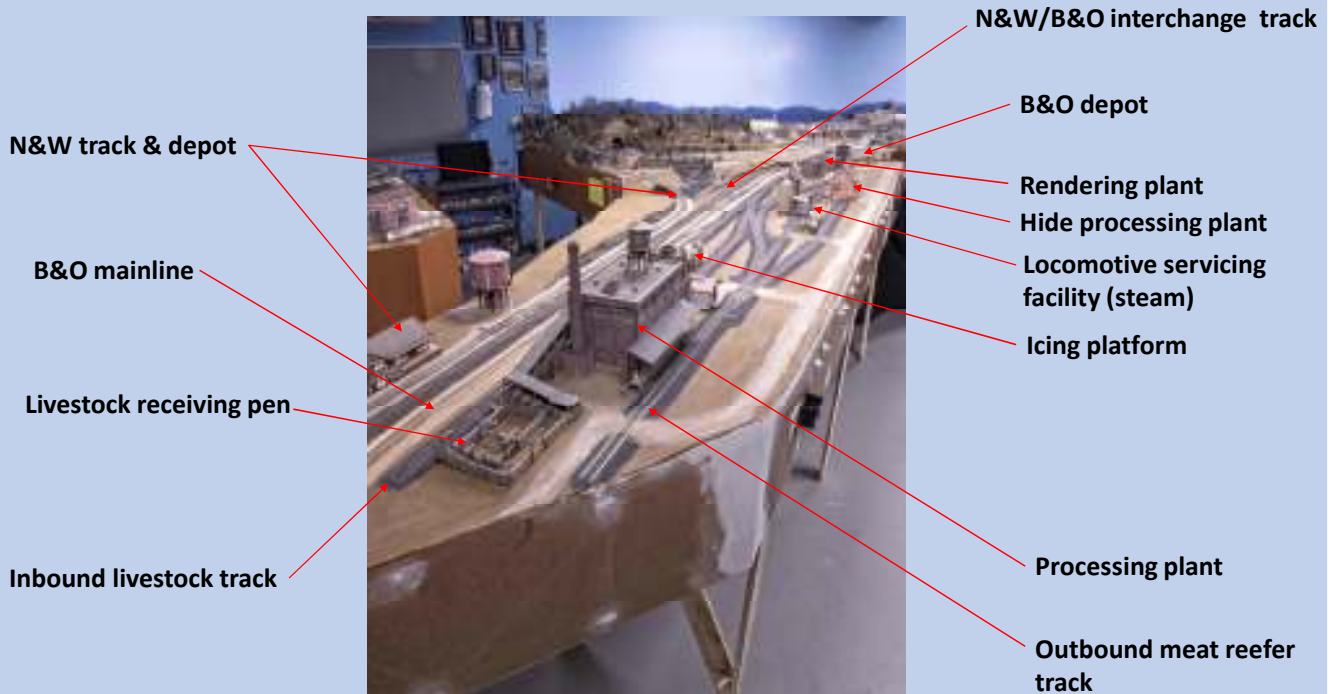


During light snow, Class A #1218 passes County Feed which was renamed to Tug Produce, Cold Storage & Feed

## B&O Interchange (Oak Valley, WV)

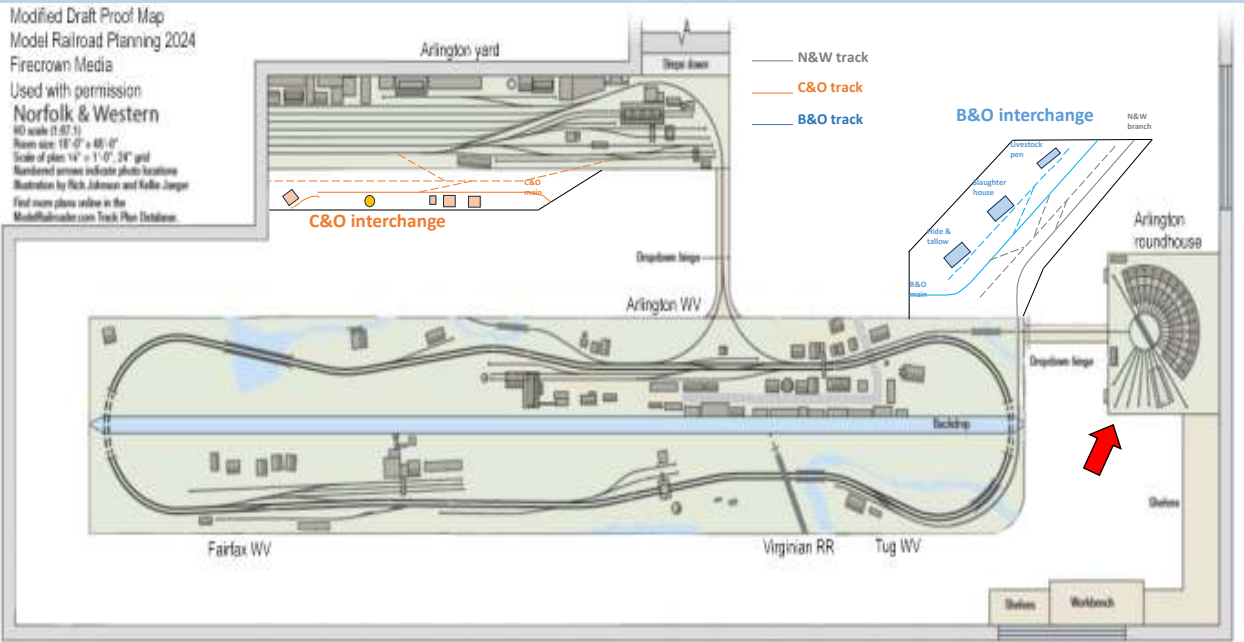


## B&O Interchange, Oak Valley, WV. (still under construction as of April 2025)





## Arlington Roundhouse



## Arlington Roundhouse

Scratch-built roundhouse  
based on Norfolk, VA  
prototype

Walthers 130'  
turntable modified  
to match N&W  
prototype. (Uses a  
DCC decoder to  
control the table.)



Rotary switches for roundhouse tracks

Dry-erase board for recording loco number (address)  
in each roundhouse stall



## Arlington Roundhouse



Z class 2-6-6-2 on turntable at sunrise



The next slide illustrates how this photo was made

## Photography

- Photos are shot in “RAW” format to preserve all detail and provide the best post-processing control and result.
- Most “scenic” photos are shot using depth compositing (photo stacking) to provide maximum depth of field.
- Post-processing is done using both ON1 Photo Raw and Photoshop Elements software. (Both are a one-time charge.)
- Real sky,, smoke and steam are added. Most everything else is what is on the layout in HO scale.



1. 4 RAW photos have been selectively “stacked” by ON1 to provide better depth of field (focus range). (Canon’s EOS90D automatically takes the required number of images at the different focus points—i.e. no need to manually change focus points.)



2. Post-processing (exposure, contrast, sharpening, white/black balance, etc.) completed. Backdrop “sky” has been removed. (All done in ON1)



3. Real sky, loco/roundhouse smoke and loco headlight glow added via Photoshop Elements

## Photography



The previous original photo was heavily cropped to focus more on the workers. Good detail is still present – a major benefit of shooting in RAW.



This photo was processed via Canon's "Digital Photo Professional" Software using the HDR (high dynamic range) program. This gives a "painted" look to the photo. (Canon DPP is free with the purchase of a Canon DSLR camera.)

## Photography -lighting

Genaray LED variable color temperature lights used for still photos.

Colbor LED variable color temperature lights used for video work – more lumens than Genaray. (Videos take a huge amount of light!)

Diffusion filters used for lights providing fill light.



*I hope you've enjoyed the clinic! What questions do you have?*



**"Tinplate" black & white east of Arlington, WV  
(ON1 program "preset" option)**



**C&O caboose at Arlington, WV yard  
(HDR processing via Canon Digital Professional software)**