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Going modern on the New Jersey Division Part 3



Model Railroad Hobbyist | January 2023

Having protected the crossing, the conductor of local MA-01 is now riding the engine while they put their train back together for the return trip west.

The red caboose they are passing is now a shoving platform assigned to Manville Yard & has repainted into the red scheme of Norfolk Southern, yet has been given the full Conrail graphics standard to its former owner. Small details like this can provide interesting backstories about the equipment on our railroads.

VIEW READER COMMENTS

M.R. SNELL TAKES US ON A TOUR OF THE LEHIGH LINE...

WELCOME TO THE THIRD INSTALLMENT OF OUR JOURNEY ACROSS THE New Jersey Division. In December, we explored the east end of the Lehigh Line, the mainline that gets the

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freight in and out of the Division. Today we will be starting at the west end and working eastward, ending where we had left off at CP Potter in Edison.

Although the line starts at Port Reading Junction in Manville, NJ, that is a staging yard (see the map in “Going Modern on The New Jersey Division” in *Model Railroad Hobbyist*, November 2022). [online](#).



2. Unlike the crowded urban areas we previously explored, Columbus Park offers an almost rural feel with astounding views of trains. The equipment cabinet for a defect detector is along the tracks at right.



3. Eastbound NS 24V rounds the curve at New Market as it passes Columbus Park, eastbound to Portside. This is the first location to view eastbound

trains entering the Division.



4. Although Columbus Park and its pond of still water are prototypical locations, their inclusion on the layout was by design. While planning a

layout we should always include one or two locations that will lend themselves to photography of our models.



5. CSX Q413 is passing westbound on its journey to Philadelphia. It will leave the Division, and proceed onto CSX trackage at Port Reading Junction.



M.R. Snell

DEFECT DETECTORS

Just west of Columbus Park at Middlesex, there's a defect detector. With the closure of wayside stations and towers, there was no longer anybody to view the train for defects.

Railroads developed defect detectors to compensate. Defect detectors have sensors to measure journal and wheel temperatures as the train passes to detect overheated wheel bearings – hotboxes. They also have a series of paddles mounted inside and outside the rails to detect dragging equipment or anything hanging too low.

The first detectors used a big digital readout beside the tracks that the conductor or brakeman in the caboose could read. As cabooses were phased out, defect detectors transmitted the information over the radio using a computerized voice.

If there are no issues, the crew gets a 'NO DEFECT' message. If the detector finds a problem, it sends an alarm tone and description of the problem [6, 7, 8, 9].



6. A defect detector installation is made up of several components mounted on the track, with the electronics housed in an adjacent equipment shed. This installation

has a security light, presumably to deter vandalism.



7. Closeup of an axle heat sensor.



8. The modern radio alarm defect detector uses a group of sensors to measure journal temperatures and a series of upright paddles to detect dragging equipment.



9. Modeling the visual components of a modern defect detector is easy using castings from Details West. Making it come to life requires a bit more work, but can be done using prerecorded

sound chips or technology available from Trainboss.

fliphtml5.com/buups/gfzx/index.html#p=85). We will begin in the New Market section of Piscataway instead. Columbus Park in New Market is one of the more photogenic places along the Lehigh Line [2].



10. South Plainfield Yard was once a base for local traffic, but has been transformed into a rail-truck transfer facility, a variation on the old-style

team track.



11. Maintenance-of-way equipment can add variety, color, and interest, while also providing non-revenue moves. Modeling a small MW facility can be done in minimal space, allowing us to display the

unusual equipment we are drawn to.



12. This CNJ car gives a nod to the history of the area, even if it resides along ex-Lehigh Valley Rails. Modeling a small rail park requires only

a short section of panel track, and with periodic changes to the equipment on display, we can use models that would otherwise remain in drawers.



13. Westbound CP257 holds the main at Oak Tree awaiting an eastbound train. CP inherited Delaware & Hudson's trackage rights between Allentown and Oak Island.



14. CSX Q300 passes the waiting CP train as it enters the controlled siding at Oak Tree. Sidings on a single-track railroad allow trains to pass each other and

provide operational flexibility.



15. NS 9251, displaying special Operation Lifesaver 25th Anniversary livery, leads a double-stack train west near Potter. Operation Lifesaver has been working to prevent collisions between trains and motorists since 1972. www.oli.org

SOUTH PLAINFIELD

South Plainfield features a small maintenance-of-way yard and a transload facility. All this represents former Lehigh Valley trackage.

THE MANVILLE JOB



16. A former Conrail GP15-1 switches the large Oakite building near the end of the Perth Amboy Running Track in Metuchen. Branches still exist in the modern era even if they are far

fewer in numbers or lengths than the transition era of the 1950s.



17. CSX 1547 eases across the unprotected crossing in Metuchen on its way back to the Lehigh Line. Details such as narrow roads, plank-style crossings, and older-style crossbucks

reinforce that the line is very lightly used.



18. MA-1 passes by Sherban's Diner, en route to Manville. In the distance are covered hoppers delivered at the South Plainfield transload facility.

Manville local MA-01 handles the west end of the Lehigh Line between Port Reading Junction and Potter. It works the transload and MW yard in South Plainfield, then it works Central New Jersey Cement, and heads down a truncated branch known as the Perth Amboy Secondary to work Lowe's, Mid-State, Handicap, and Oakite before reaching the end of the branch.

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19. Raritan is typical of most outlying transit stops, with a station and platform surrounded by the houses of a suburban neighborhood.



20. To save deadhead moves, some outlying commuter terminals such as Raritan have small facilities for servicing equipment assigned to the line. While these can provide daily service, major repairs usually require a trip to the transit system's main shops.



21. Not all commuter operations involve trains full of passengers. Many moves are deadheads of empty trains to position them for rush hour runs.



22. NJ Transit train 5436 crosses over Conrail's Lehigh Line en route to Newark. Adding a simple back-and-forth operation can add a job that allows visitors without railroading knowledge to participate in a session while learning about railroad operating practices.



23. NJ Transit train 5436 enters Amtrak's Northeast Corridor at Newark for its final stop at Penn Station. The large background high-rise office

buildings are N scale, but their size and background placement make them suitable for HO.



24. At Newark Penn Station an F40PH diesel idles alongside an ALP-44 electric. Modeling a commuter road can offer all sorts of possibilities for unique equipment that would be out of place on a freight-only layout.



25. Amtrak GP7 771 works a MW train as a background scene for the Northeast Corridor. Trains as scenery? My Northeast Corridor is only 24 feet long, but it

provides a place to display my small collection of Amtrak alongside the active tracks used by NJ Transit commuter trains.



26. A good visual trick is to hide trackage to avoid the “spaghetti bowl” look that older layouts often had. Beyond WC tower the track runs through and behind the backdrop, yet the angle of view makes it appear as if it recedes into the trees.



27. The bridge-mounted signals guarding CP River stand tall against the large crane of Raritan River Steel. Tight scenes such as this lend themselves

well to layout photography and should be considered while sketching layout plans.



28. The massive Raritan River bridge is a signature structure on the North Jersey Coast Line. Although selectively compressed, it immediately gives visitors a sense of location.



29. The old shop building still stands at South Amboy, although no longer used. By leaving the old yard and shop intact, I've created an interesting vignette I can use to store maintenance-of-way equipment such as this wire train. This keeps it

on the layout, and provides another facet of operations.



30. Modeling a busy suburban area does not necessarily require massive amounts of space. Modeling only one side of the Main Street stores (to the right of the train) implies that the aisle is the other side. This entire scene is only

30" deep and 72" long.

RARITAN

New Jersey Transit has handled commuter operations across New Jersey since 1983. NJT Rail is made up of two divisions: Hoboken and Newark. The Newark Division is made up mainly of ex-Central Railroad of New Jersey lines that head to Amtrak's Northeast Corridor, where NJT has trackage rights.



31. Cab car 5110 pulls out of South Amboy for a return run to Penn Station. Push-pull operation is favored on commuter roads and some Amtrak routes because it eliminates the need for turning the train on wyes or loops, saving time and money.

I hope this series has shown modern operations doesn't need to be only boring point-to-point runs. Heavy mainline railroading, local trains that still make the final delivery, and even short lines complete with power from the past add interest. Seven railroads work together on the New Jersey Division to get the job done. ☑

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M.R. SNELL



M.R. (Matt) Snell has been a model railroader and railfan for 30 years. His interest in railroading grew while growing up in New Jersey surrounded by freight and passenger rail lines.

Presently residing in Ohio, Matt and his wife Debie share the hobby, modeling the area he grew up in: north-central New Jersey.

Their "Conrail New Jersey Division" layout has been featured in *Great Model Railroads*, *Rail Model Journal*, and in the Allen Keller *Great Model Railroads* DVD series. Matt has had articles in *Railroad Model Craftsman*, *RailModel Journal*, *Scale Rails*, and *Model Railroader*, as well as online at railroad.net. ■