

MODEL RAILROADING IS FUN

ICD08548

Model Railroader

MAY 1986 \$2.50

®

*The
North Shore Club's
Chesapeake
System*



**MODELING TRAILER TRAIN'S TWIN-45
DRAWINGS OF L&N'S CLASS L-1 MOUNTAINS
THE NORTHERN PACIFIC'S CASCADE LINE**

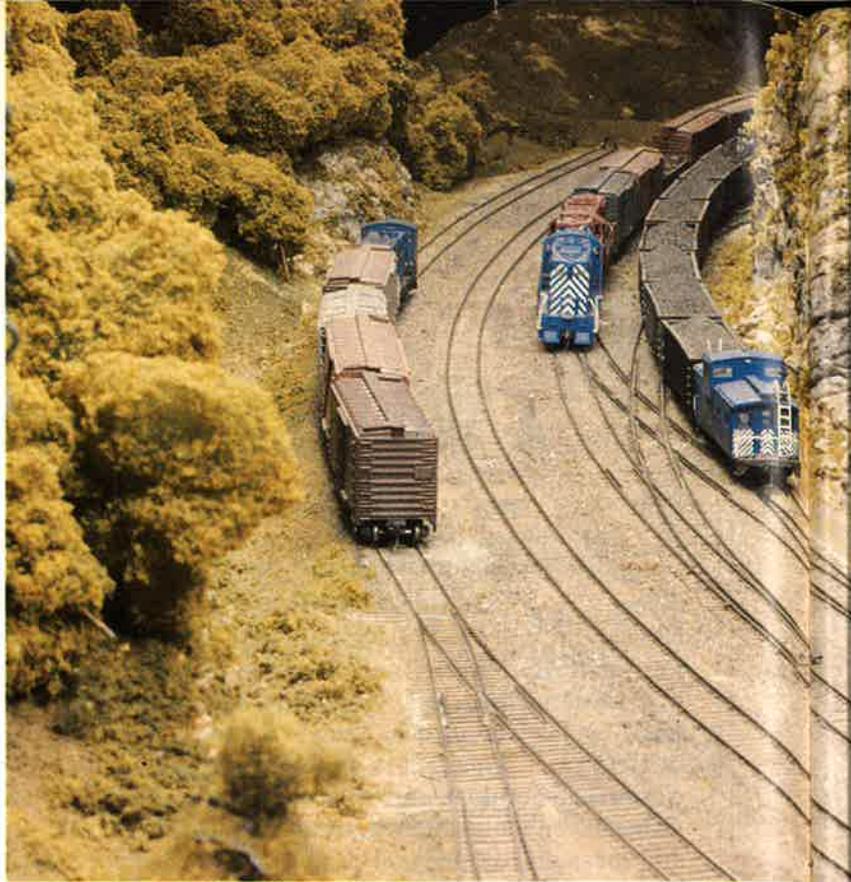


JULY 21-27

The North Shore Model Railroad Club

The club's HO Chesapeake System will be on tour during the 1986 NMRA convention

**BY JOHN BURROUGHS,
NORM LARKIN, SCHUYLER LARRABEE,
AND RALPH MAZZEO**



THE NORTH SHORE Model Railroad Club, founded in 1977, is located 10 miles north of Boston in the town of Wakefield, Mass. The Boston area is a hotbed of model railroad activity. There are many fine club and home layouts which will provide interesting layout tours during the 1986 National Model Railroad Association (NMRA) convention.

The guiding principles of the North Shore are stated in our bylaws. These include the promotion of fellowship and interest in the hobby as well as a dedication to informing and educating those who want to participate in model railroading. To this end we actively encourage new members. All that is required is a desire to support the club.

People hear about us through our annual train show, "Trackmeet," which includes a large assortment of dealers and, of course, open house at our club layout. The show is an integral part of financing our activities. We also have an open house during the Christmas season, and we welcome visitors to our regular Thursday night sessions. We participate in joint activities with other clubs, including helping out at each others' shows as well as exchanging visits for operating nights. To sum things up, we are a people-oriented club dedicated to building a fine model railroad.

The club was formed during the summer and fall of 1977 with a charter membership of 15 people. At first we met regularly in various members' homes. As the membership grew, the need for permanent quarters led us to the basement of a business block in downtown Wakefield. The area was ideal: it was clean, had plenty of open space, and was big enough — 40 x 95 feet — for any HO railroad we

could dream of building, or so we thought at the time. At any rate, a little paint, some new overhead lighting, and we were on our way.

Shortly before we moved in, we inherited a 13 x 30-foot, 25-year-old HO model railroad from former NMRA president Ivan Preble. Some ingenious members turned it into modular subsections, and it was moved to our new quarters. It's a credit to them that the layout was up and running within a month.

PLANNING

This interim layout gave the planners a grace period to work out a concept. From observing other model railroads, we learned that a key to success was a unified theme, a rational geographical location, and a purpose for the railroad. The committee also wanted to get as much input from the club members as possible. To achieve these goals, we prepared an extensive written questionnaire, tabulated

the results, and tried to incorporate the members' wishes in the planning process.

The only controversial issue was in determining the location of our prototype. The membership wanted mountain railroading, large urban/port activities, heavy coal, ore, grain, oil, merchandise, freight, passenger operations — you name it. While a number of members favored a New England setting, the region does not offer this variety. However, this type of operation does exist on the East Coast — from Chesapeake Bay westward over the Blue Ridge and the Alleghenies.

To satisfy the operational characteristics wanted by the members, we decided to locate the modeled portions of the railroad in the Virginia-West Virginia area with unmodeled routes to the Midwest, into New England, and also to the South. Such an arrangement would make it feasible for members to operate their favorite prototype equipment on the layout with a fair measure of credibility.



Fig. 1 THE NORTH SHORE CLUB'S CHESAPEAKE & LAKE ERIE SYSTEM



Color photos by John Burroughs

1. A westbound coal drag and an eastbound manifest freight meet at the west end of Nickless Yard in this late 1950's-era club operating session.



Black-and-white photos by Louis Edelstein

2. Jamie Robinson, a B&M tower operator, is shown working Nickless Yard which sprawls on both sides of the club's double-track main line.

Preliminary plans were prepared based on the foregoing, and the story line was formalized and presented to the club members for their approval. Detailed planning commenced, and what evolved was the Chesapeake System.

THE HISTORY OF THE CHESAPEAKE SYSTEM

The modern Chesapeake System is a consolidation of three railroads: the Chesapeake & Lake Erie (C&LE), the Cumberland Western (CW), and the Chesapeake & Hudson (C&H). The routes and the territories they cover are shown in fig. 1. Constructed in the late nineteenth century, these lines had to overcome stiff competition from existing, well-established railroads. Only the C&LE succeeded in the beginning. The management of the C&LE quickly recognized the potential of the other two roads which were struggling to complete their lines. After extensive negotiations the three were loosely consolidated into one informal system for mutual aid.

The Chesapeake & Lake Erie promoters were powerful steel interests in the industrial belt south of the Great Lakes. They wanted to be free from dependence on existing railroads headquartered in the East. They also wanted a direct route to the developing South. Additional benefits were anticipated by developing a major port facility, Hampton News, just to the south of Washington, and by exploiting major undeveloped coal deposits along the proposed route.

From Hampton News the C&LE runs in a northwesterly direction, across the rugged mountains of Virginia into Ohio. Originally, it only went to Cleveland, but the C&LE soon expanded west

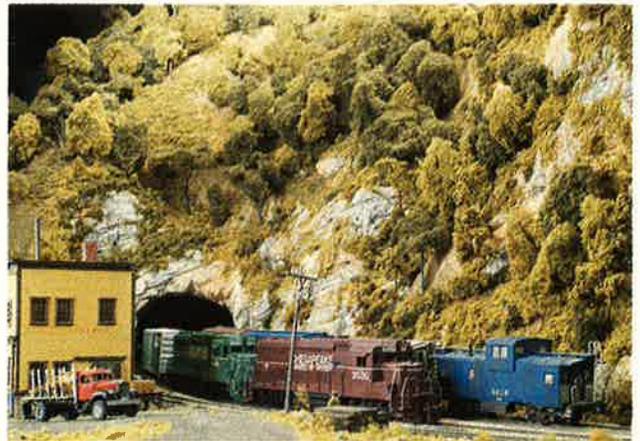


3. Above. Glen Newcomb makes a locomotive adjustment at Nadeau engine terminal. 4. Above, right. Schuyler Larrabee, right, discusses coupler mounting with an attentive Tom Niarchos. 5. Below. John Burroughs, left, and Ron Kaye are working their way through a constant-lighting circuit.

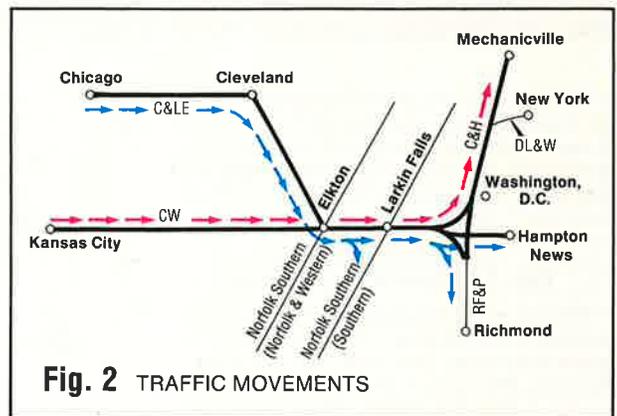




6. Left. The Erie's elegant paint scheme was applied to these east-bound F units by club member Schuyler Larrabee. They were photographed by John Burroughs in the fully scened area near Slayton.



7. It's the summer of 1961, and a freight headed by the first two GP30s that EMD built highballs eastbound through Ayres in a '60s-'70s era operating session. Schuyler Larrabee detailed and painted the units.



through the industrial belt to Chicago. It established connections with the Norfolk & Western at Elkton, Va.; the Southern at Larkin Falls; and the RF&P at Fredericksburg.

The Cumberland Western's promoters saw their railroad as a major east-west link between the western railroads and the major markets of the East Coast through the Kansas City and St. Louis gateways. From Kansas City where it connects with the Santa Fe, Union Pacific, and the Burlington, the Cumberland Western moves across Missouri, passing south of St. Louis, where it connects with the MoPac and Frisco, then across southern Illinois and Indiana, through Louisville and Lexington, Kentucky, to Huntington and Charleston, West Virginia. From Charleston it proceeds east and slightly north across the Alleghenies. East of the Alleghenies it connects with the C&LE. The original intent was to connect directly with the Chesapeake & Hudson, but financial problems forced the consolidation with the C&LE and the present configuration.

The Chesapeake & Hudson was conceived as a direct north-south route connecting existing Eastern roads with the South. An added benefit was seen by the promoters in making a connection with the Cumberland Western to take advantage of its direct route to the developing West. With the exception of a direct connection to New York City over the DL&W, the C&H passed just to the west of the major coastal cities. By so doing it avoided major confrontations with existing roads and traffic bottlenecks.

This situation was also largely responsible for the road's early difficulties, as there was little on-line revenue, but in more recent times this has been a great benefit, as it can provide the fastest north-south service. Also, as the size of freight cars has increased, traffic has been siphoned off the older railroads which have restrictive tunnels at Philadelphia, Baltimore, and Washington.

The system's final acquisition was 25 percent of the RF&P. This provided direct connections to the South in Richmond with the Atlantic Coast Line and

Seaboard Air Line railroads. The C&H line to the North from Fredericksburg to Mechanicville, N. Y. (B&M and D&H), provides connections to all major Northeastern railroads. Interchange with the B&M is particularly heavy, with a good deal of run-through equipment. (You'll see plenty of B&M power at the diesel house in Elkton.)

OPERATIONS AND TRAFFIC CHARACTERISTICS

Today, traffic on the C&LE line from Cleveland and Chicago moves mostly to either the South via connections with the Norfolk Southern at Larkin Falls and Elkton, Va., and the CSX at Richmond, or to the port at Hampton News. Some C&LE traffic moves north to Washington and Baltimore, but most of the traffic destined from the Chicago-Cleveland area to the Northeast Coast has always been conceded to other railroads better located for this purpose.

Traffic from the west on the Cumberland Western route moves all along the Northeast Coast via the C&H as the



8. A westbound coal drag rumbles through Slayton, W. Va., after descending the western slope of the Alleghenies. The two GP7s were painted by Schuyler Larrabee, and the F7 was painted by George Zonce.

original developers planned, as well as to Hampton News. The major traffic movements, therefore, resemble an "X." See fig. 2.

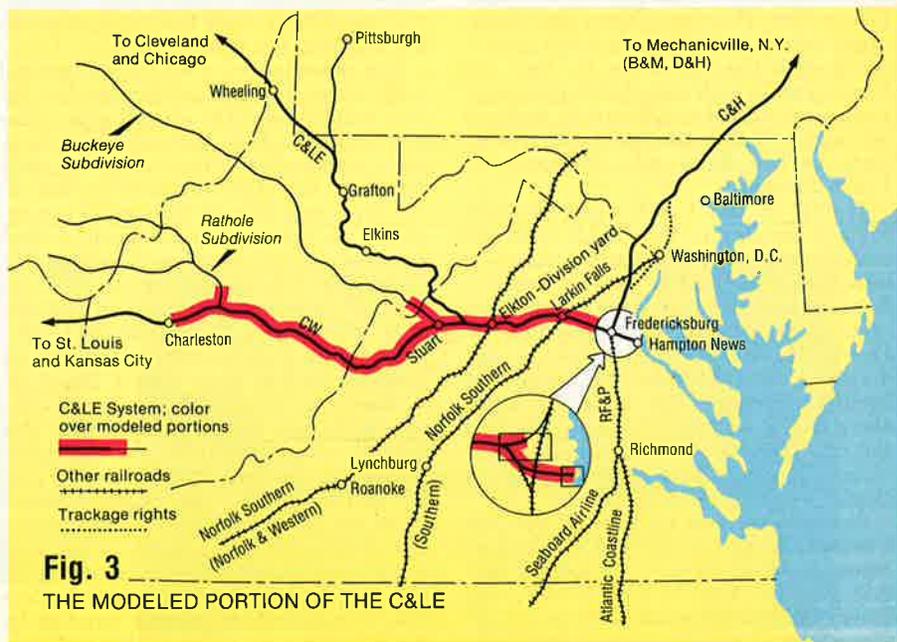
Traffic on the C&LE from Cleveland and Chicago (hidden return loops) consists of a wide variety of manufactured goods, finished steel, automobiles, and the like. A large percentage of this traffic is exported via Hampton News.

Grain from the upper Midwest and prairie states moves over the C&LE bound for export.

Coal, mined in the West Virginia mountains moves in both directions on the C&LE, northwest into the steel producing and power-hungry industrial belt along the Great Lakes and southeast to power plants in the South and to Hampton News for export.

As the best-grade iron-ore deposits of the Missabe and Vermillion ranges of northern Minnesota are depleted, foreign ores have been moving west from Hampton News to the steel centers inland.

Thus, freight traffic on the C&LE Line consists of large numbers of general



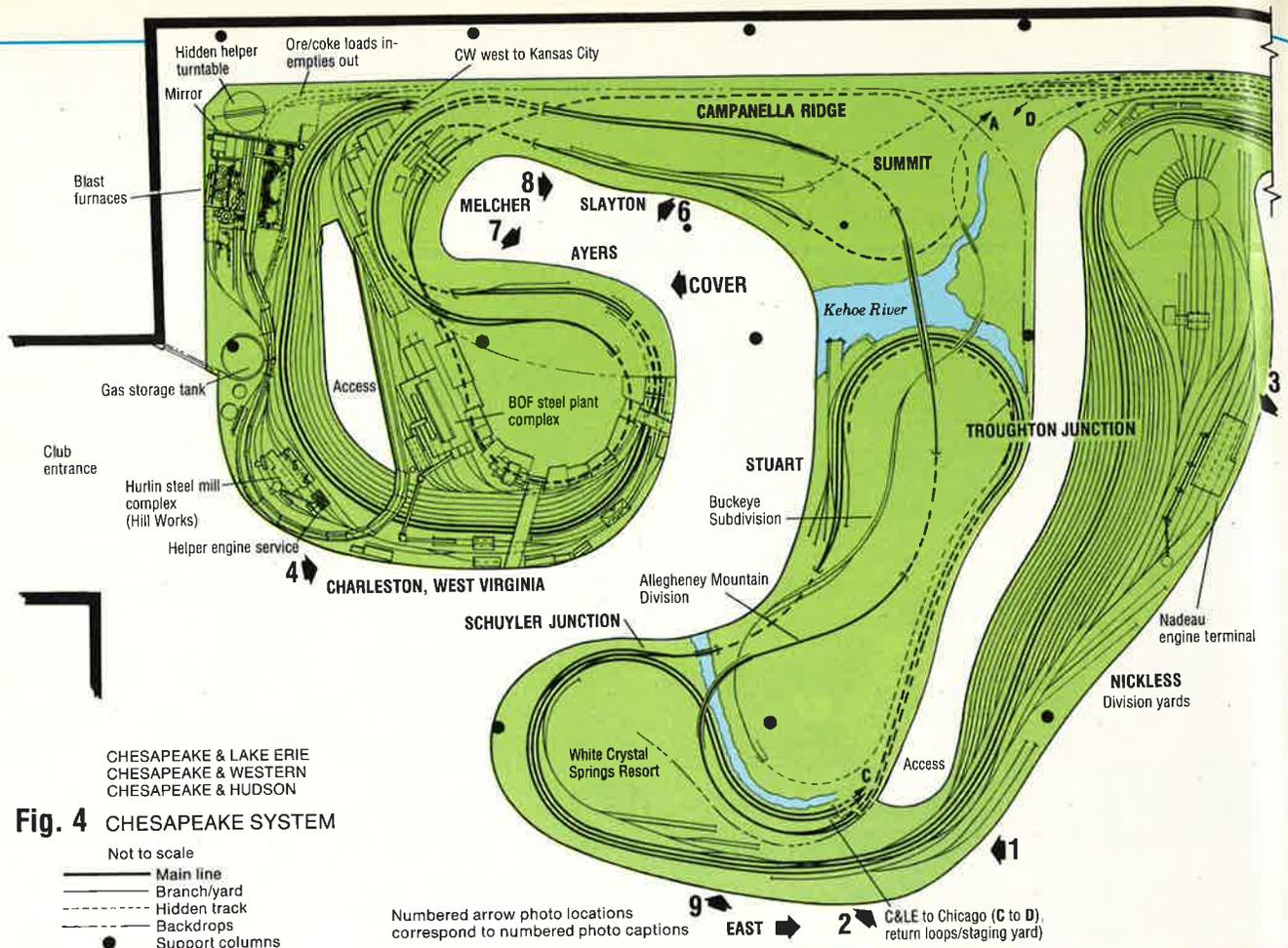


Fig. 4 CHESAPEAKE SYSTEM

CHESAPEAKE & LAKE ERIE
CHESAPEAKE & WESTERN
CHESAPEAKE & HUDSON

Not to scale

- Main line
- - - Branch/yard
- Hidden track
- - - Backdrops
- Support columns

merchandise trains, unit coal trains, unit ore trains, and various locals to serve on-line industries. Modern-era trains also include piggyback and container as well as autoracks in both solid trains and mixed in general merchandise trains.

Pre-Amtrak passenger service consisted of several daily limiteds between Washington and Hampton News and overnight service to Chicago in fierce competition with the Baltimore & Ohio and Pennsylvania railroads. Local passenger traffic was varied and frequent. Reduced commuter traffic continues to operate from Larkin Falls into Washington's Union Station.

Traffic on the Cumberland Western route is similar to the C&LE with the notable exception of a large volume of refrigerator car traffic moving produce from western connections to the vast markets of the Northeast megalopolis. Due to a lack of on-line industry on this division, local freights are somewhat limited. However, the mine-run locals serve mines on both the main line and the coal branch. This branch is also a secondary main line with some merchandise traffic moving over it.

Passenger service on the CW was less extensive than on the C&LE. Through trains were operated in long-haul service from the East to the Santa Fe and Union Pacific at Kansas City. Local service was sparse, indicative of the thinly

settled mountain territory. Present passenger service is provided by Amtrak.

THE LAYOUT

The envisioned C&LE system is too large to model in its entirety. However, we have picked the portion that combines the greatest traffic density and operating variety with the most interesting scenery. See figs. 3 and 4.

The selection of walkaround control contributed to the multipeninsular design that evolved. On several peninsulas the main line folds back on itself; however, with each fold moving in the same direction, the sense of travel in one direction is maintained. This gives the engineer an opportunity to spend several minutes in one location to watch his train wind through the scenery.

SWAT throttles (described in the August 1977 issue of *Railroad Model Craftsman*), with walkaround memory in six cabs, are used for train control. Power selection is via simple telephone jacks (six per block, one for each cab), with one shorted plug placed in the jack corresponding to the throttle in use. See fig. 5. Turnouts are electrically powered by motor-driven machines of our own design. Controlled by pushbuttons mounted in the track diagram on the fascia (fig. 5), they facilitate walkaround control. Control of mainline turnouts is handled by the dispatcher during operating sessions.

A train-detection system is under development to permit more realistic operating sessions with a dispatcher. When the railroad east of Elkton is completed, a second dispatcher will be used to control this division. Ultimately, a full signal system will be in place to permit prototypical CTC operations.

Two-way communication between road crews and dispatcher is maintained via belt radios with lightweight headsets.

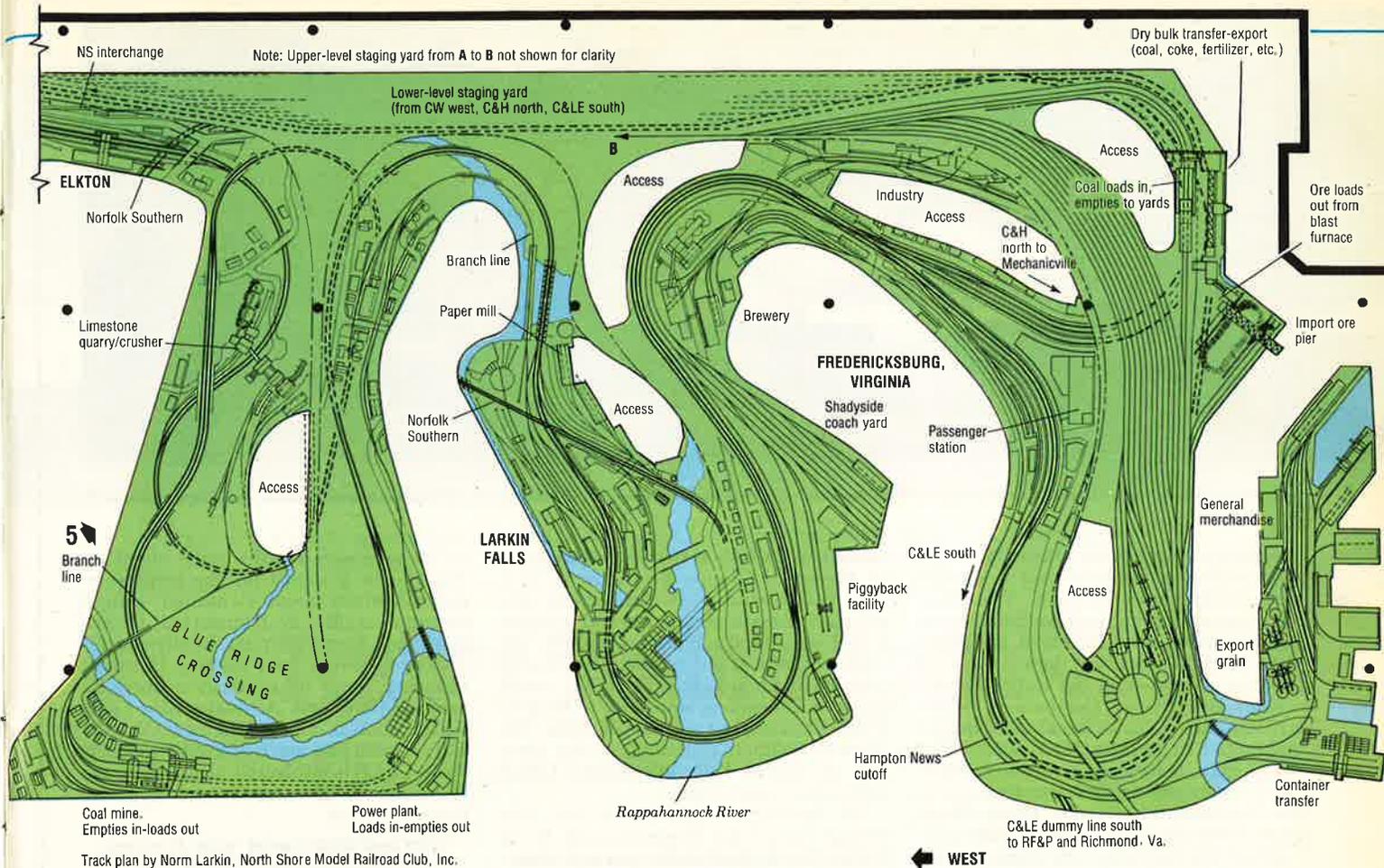
A fast clock has been installed (described in the September 1983 MR) to add more realism to our monthly operating sessions.

Considerable thought has gone into the creation of paint schemes for motive power, rolling stock, and wayside structures. We feel these schemes help convey the evolution of the present railroad and give a "sense of system" to our operations. We've developed paint schemes for three time periods:

- Early diesel mixed with steam with quite distinct paint scheme identities for the three railroads.

- A 1960s-1970s scheme with more commonality in the paint schemes, reflecting the tighter corporate control.

- And, finally, the 1980s scheme with brighter colors and contemporary graphics, and only a slight indication of the previous corporate identities. Custom decals have been designed and "company power" has begun to appear on the layout.



A TRIP OVER THE LINE

Our visit to the modern-day Chesapeake System begins at Charleston, W. Va. A large steel mill/blast furnace complex is located in the area, and in fact, the Chesapeake System main runs directly through the Hill Works of Hurlin Steel. This is the former Cumberland Western line which has its western terminus in Kansas City. However, our tour will take us eastward from Charleston to Chesapeake Bay.

Having enjoyed a double-track main from St. Louis, the dispatchers now have

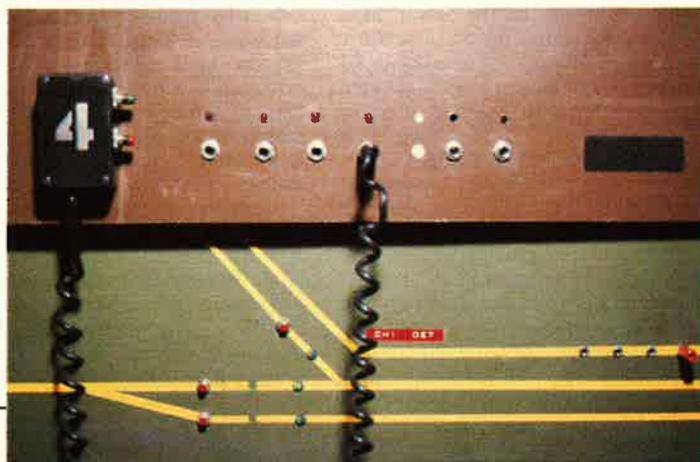
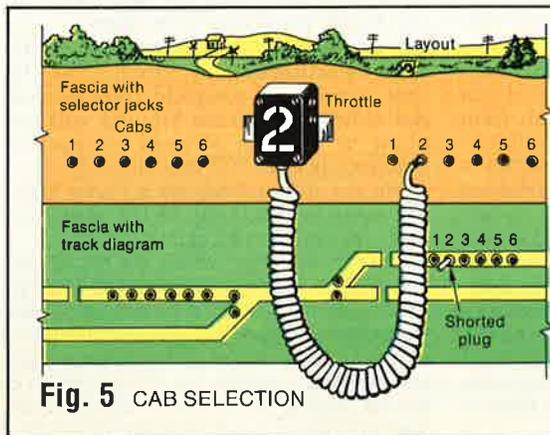
to contend with a single track for the long arduous grade up the west side of the Alleghenies.

After leaving Charleston the line immediately passes through several tunnels in quick succession, passes through the town of Ayres, and then Slayton, W. Va. Slayton is a junction with the Rathole Subdivision (a 55-mile mine branch). A coal loading facility located at Slayton is representative of the main industry in this segment of the Chesapeake System.

Leaving Slayton the line again plunges into a tunnel as the grade stiffens to 1.75 percent. Other coal mining facilities are

encountered on the western slope of the grade, including the large mine at Melcher. Campanella Ridge, with its long passing track, is just west of the summit. During steam days, retainers were set up at Campanella Ridge, but rolling meets prevail now. Today, with careful use of dynamic braking and train brakes, safe descents can be made.

Leaving the Ridge, the route passes through the short summit tunnel and immediately crosses one of the more spectacular steel trestles in the eastern U. S. Though little noted by railfans, the operation over these grades rivals the





9. A westbound freight, hauled by an SD40-2/SD45/SD40-2 lash-up in the club's '60s-'70s paint scheme, photographed at White Crystal Springs Resort.

Southern's over Saluda. During our 2.25 percent descent we pass over a smaller steel trestle and through Troughton Junction where the Buckeye Subdivision joins the main. The bottom of the grade is reached at Stuart, a local center of population located on the Kehoe River.

After Stuart, the Cumberland Western line meets the original Chesapeake and Lake Erie at Schuyler Junction. The C&LE main was built to very high standards for heavy traffic from Chicago to the Seaboard. Its double track disappears down the Kehoe River valley.

After the junction, the main passes White Crystal Springs. This notable old resort is a watering hole for the rich and famous, and still has its sidings for private cars. A daily local from Nickless Yard at Elkton, W. Va., serves the Springs with coal for the power plant and supplies for the hotel. Amtrak's Cardinal also stops here.

Moving through rolling country the C&LE threads a deep rock cut to enter Nickless Yard, a major division point. This yard, located in the Shenandoah Valley near Elkton, Va., was jointly operated by the C&LE and the CW. In fact, it was the CW's need to use this yard that gave the C&LE the upper hand in the relationship between the roads and led to the eventual amalgamation in 1961 and, finally, the Chesapeake System merger in 1977.

At Nickless Yard westbound trains are reclassified, depending on whether the traffic is for Chicago or the lower Midwest. Preblocked trains for St. Louis are usually shortened here, out of respect for the Cumberland Western's 2.25 percent westbound ruling grade. Eastbound trains are also reclassified; however, they face lower gradients and can be longer.

At the east end of Nickless Yard is the Nadeau Engine Terminal. The NET is one of the largest facilities on the Chesapeake System, and nowadays the old roundhouse facility handles heavy repairs and rebuildings, while the diesel house, built in 1951, handles running repairs.

After crossing the Shenandoah Valley, the C&LE moves up and over the Blue Ridge Mountains, with one of the lowest

crossings available through the water gap in Meyerford County, Va. Above us is a branch line which runs more or less parallel to the main, serving several villages, a coal mine, and a limestone quarry, the source of most of our ballast. This branch joins the main at Larkin Falls, Va., which bears an interesting similarity to Bellows Falls, Vt., complete with paper mills. The Norfolk Southern's crossing of the main line at Larkin Falls affords the C&LE with interchange traffic.

On leaving Larkin Falls the line swings across the Rappahannock River valley on a spectacular curved stone-arch viaduct (approximately 400 feet long and 120 feet high) and through a large cut which broaches the last ridge encumbering our route to the coast. The area is now urban, and many industries and rail-served facilities are prevalent. A large piggyback yard appears on the right, and just beyond is the Shadyside Coach Yard which serves the large passenger station in Fredericksburg.

This station (based on the B&A, B&M, NYNH&H station in Worcester, Mass.) was an extremely busy facility located in the middle of the junction of the C&LE and C&H. Trains from the north and the south were combined here for the trip west, while eastbounds were separated to wend their ways north and south. Commuter traffic originated here to Washington, Larkin Falls, and Richmond.

Although its heyday has passed, the edifice is maintained in near-pristine condition by Amtrak and the town's historical society. Commuter traffic for Washington still originates here, and an occasional commuter runs through from Larkin Falls, but the commuter stub terminal on the south side of the station is now used by a corn syrup distributor and is inhabited by tank cars.

Immediately south of the station the C&LE Hampton News cutoff crosses the line south to the RF&P via a flying junction. The cutoff leads us into Virginia's Tidewater area and the terminus of the C&LE at Hampton News, a large coal and ore classification yard complete with shipping and receiving facilities located on the Potomac River.

The yard also handles some merchandise freight destined for the large commercial wharf area. Container freight terminal traffic is transferred to the piggyback terminal near Shadyside for classification and final routing. However, Hampton News is primarily a specialty yard (coal and ore). All major East Coast classification is done in the new C&H facility located just north of Fredericksburg. Most C&LE southbound traffic through Richmond is preblocked and bypasses Hampton News.

THE PRESENT AND THE FUTURE

In model form, the railroad is largely complete from Charleston to Elkton. In addition to the yards at Charleston and Elkton, a temporary fiddle yard has been built which greatly assists our operating sessions. Trains can be fed into the completed portion of the layout from this yard in an easterly or westerly direction, effectively representing traffic from the unbuilt portion.

As the reader can readily see, we have a plan that provides ample inspiration, and though we have accomplished much to date, there are many years of enjoyment ahead before even the main line is completed in its final form.

We are still busy filling in gaps in the scenery on the first peninsula as well as expanding the number of mainline and local throttles. Track is being laid on the third peninsula, and the benchmark for the fourth peninsula is in place.

Work has started in earnest on the train-detection-system circuits as the first step in our complete trackside signal system. The track circuits will also allow us to push forward on our dispatcher's booth CTC machine.

We are still waiting for a major building boom to get many of the structures built (plans already exist).

Three years ago, when we heard that the NMRA national convention was going to be in Boston in 1986, we made that date our goal for the completion of many projects. We're still working hard, and time is flashing by. Please come to see us during Minuteman '86 this summer and see the progress we've made. ☐