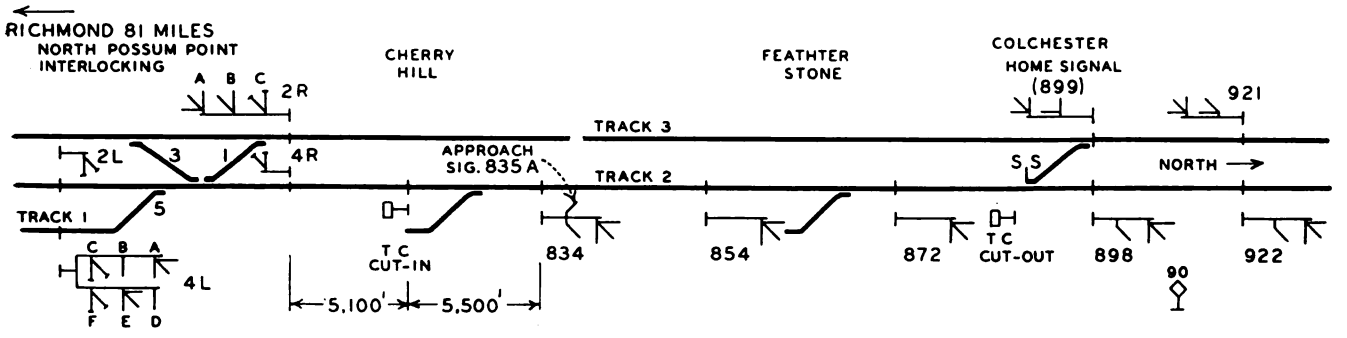
with "switch" padlocks.

If the gates have been raised as a result of the brakeman pushing the "Raise" button for the southward track, an approaching train on the northward track will operate the flashing lights and lower the gates automatically regardless of the push button controls.

A track circuit BO5, about 100 ft. long, extends the width of the pavement, plus part of a rail length beyond in each direction. When such a track circuit is occupied, the gates stay down regardless of any other control features.

At the crossing the street pavement is 65 ft. wide. On each side of the track, one gate, when lowered, obstructs the right-hand lane of traffic approaching the crossing. This leaves an unobstructed path for a vehicle on the track to depart. The gate masts are 3 ft. from the edge of the pavement, and the arms are 35 ft. long, so that they reach to the center line of the pavement. The gate lamps, flashing-light signals and signs are in accordance with standard Signal Section AAR practices. This project was planned and installed by Frisco forces under the direction of R. W. Troth, superintendent of communications and signals. The gate motors are fed by a set of 12 cells of Edison B6H storage battery. The lamps in the flashing-light signals and on the gate arms are ordinarily fed from a.c., but if the a.c. fails, they are fed from battery. Each track circuit is fed by two cells of 500-a.h. Edison primary battery. The crossing protection including the electric gates, flashing-light signals and signs were furnished by the Transport Products Corporation. The relays were furnished by the Union Switch & Signal.

How to Run Reverse Temporarily



IN ORDER to allow large mechanized track crews to work continuously for eight hours on one track of a section of double track without being required to clear the track for trains, the Richmond, Fredericksburg & Potomac is using signals to direct trains of both directions to use one track between two existing crossovers which may be 5 to 8 miles apart.

The plan herewith shows the layout of main tracks and signals between Colchester and North Possum Point, 8 miles. The switches and signals at North Possum Point are included in an interlocking remote controlled by train dispatchers at Richmond, 81 miles from North Possum Point. The crossover between the main tracks at Colchester has a hand-throw stand at each end. Southward signal 899 at Colchester is ordinarily an automatic block signal.

Recently new rail was to be laid and new ballast added on some sections of the southward track, no. 3, between Colchester and North Possum Point. Preparations were made for large mechanized crews to do this work in three days, between the hours of 6:30 a.m. and 6:01 p.m. To provide for train movements both ways on track no. 2 during the time work was being done, several temporary changes were made.

At Colchester, the north end of the hand-throw crossover was reversed and spiked in that position. At the south end of this crossover, a spring switch mechanism was added to the existing hand-throw stand. This switch was lined for the "straight-track" on track no. 2. Thus southward trains approaching Colchester on track no. 3 would be diverted on the crossover, and would trail through the spring switch to track no. 2, to proceed southward toward North Possum Point.

Also at Colchester, the southward signal 899, which is normally an ordinary automatic block signal, was converted to a home signal, additions being made to extend the control of the signal via the crossover reversed and on track no. 2 to the interlocking at North Possum Point, under the control of the dispatcher at Richmond by using telephone selectors on the dispatcher's telephone line. The aspects displayed by this home signal 899 are Medium-Clear, Rule 283; and Stop, Rule 292. Southward movements were made under absolute block operation while northward movements were made under automatic block rules.

Signal 921, which is in approach to 899, was changed so that when signal 899 displayed the Medium-Clear aspect for a diverging move via the crossover, signal 921 would display Approach-Medium. Temporarily, a southward signal was attached to the rear of northward signal 834. This temporary signal, designated 835A, was arranged to display the Approach aspect, Rule 285. Train control, including cab signals on locomotives operating southward, was "Cut Out" at Colchester and "Cut In" at a test circuit before reaching North Possum Point interlocking.

The main track hand-throw switches leading to spurs at Cherry Hill and at Featherstone were spiked in the normal position. A General Order was issued, authorizing southward trains to operate on track no. 2, between the crossover at Colchester and North Possum Point, on signal indication between the hours of 6:30 a.m. and 6:01 p.m. Trains receiving the Medium-Clear aspect on signal 899 could proceed through crossover to track no. 2, at maximum authorized speed to the Approach signal 834, where speed was reduced in accordance with Rule 285. This general order was effective for the three days only, while track work was being done. The signaling was returned to normal each day after work was completed.