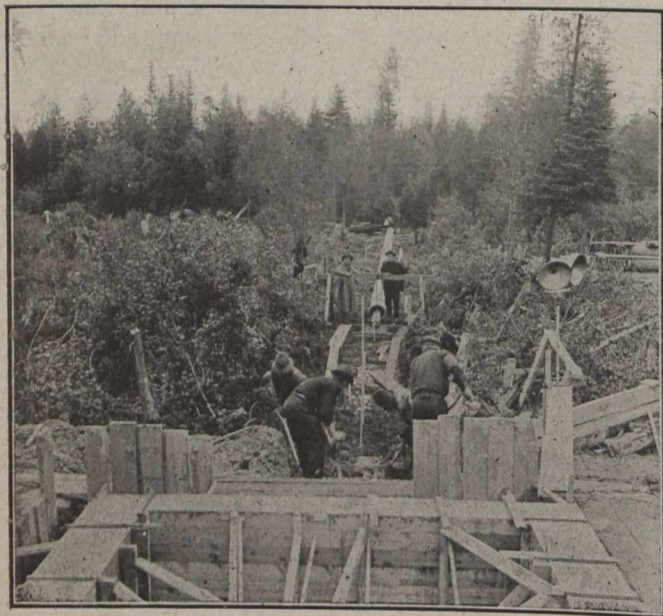


Sewers.—After a topographical survey had been made of the whole camp, and profiles set up, the sewers were designed. Work was commenced immediately upon completion of the plans, and there were constructed 15 miles



Twelve-inch Wood Stave Pipe Line from Flowing Wells to Pump Well.

of main sewers and connections ranging from 4-inch to 18-inch diameter. While the camp appears to be upon a perfectly level plain, there is actually a fall of 15 ft. and the sewers were constructed at an average depth of 7 ft. throughout the whole system. Three junctions were made for each battalion area, an 8-inch one for the latrines, and two 6-inch laterals extending 62 ft. to the building line and connecting the ablution tables, etc.

Square man-holes were placed on the main sewers at every 350 ft. They were built of brick with concrete foundations and had cast-iron covers. The water mains were laid in the same trenches as were the sewers, and at every second man-hole a 2-inch tee off the water main was run into the man-hole for use in flushing the sewers. All valves, expansion joints, etc., on the water mains were placed in the man-holes, thus making valve-chambers unnecessary. The main trunk, 18-ins. in diameter and 5,000 ft. long, runs north of the camp, with

a fall of 33 ft., to the disposal works, which are situated about a mile from the camp site, on a plateau overlooking Pine River and about 40 ft. above river level. The sewer pipe was furnished by the Hamilton and Toronto Sewer Pipe Co., Hamilton.

The tank is of the two-story type, built of reinforced concrete. Its inside dimensions are 56 ft. wide, 80 ft. long, 33 ft. deep. It has a sedimentation capacity of 200,000 gallons and sludge storage capacity of 400 cubic yards. Retention is 4 hours with a velocity flow of 1 inch in 30 seconds at 100,000 gallons per hour. The effluent from the tanks is carried down the hill to the low-lying level near the river, and eventually finds its way into Pine River by percolation.

The tanks are not roofed, as they will not be used in the winter. They will be emptied in the fall by means of a 12-inch iron sludge pipe which runs longitudinally through the tank about 3 ft. from the bottom and which discharges into sludge-drying beds. All iron work, such as valves, sluice gates, etc., was purchased from the Chapman Valve Manufacturing Co., Toronto.

Railroads.—The first gang of workmen to begin operations at Camp Borden was a Grand Trunk Railroad gang of two hundred men who built a three-mile line from Angus station to the camp, and two miles of sidings, in twenty days. Each siding holds a train of fifty freight cars.

As the land is practically level, not much cutting or filling was required. One of the accompanying illustrations shows a G.T.R. steam shovel supplying sand for one of the few small fills that were required, and this same shovel did whatever cutting was necessary. For most of the way the line followed an old roadbed which was used 20 years ago to haul lumber. Within a mile and a half from the camp the new line branches to the east and runs



Coating Metal Lath Wall with Gunite.

past the Army Service Corps to the G.T.R. depot site, where one of the largest depots on the G.T.R. system has been constructed, 400 ft. x 80 ft., with a platform nearly a mile long, giving ample room for loading and unloading