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Walkerville Underground Sewage-Pumping Plant

Circular, Two-Story, Reinforced Concrete Structure, Approximately 23 ft. Diameter and 20 ft. High, Built Entirely Below Ground Level Excepting Housing for Stairway—Lower Compartment, Containing Pumps, Encircled by Suction Well and Force Main

By CHARLES W. TARR

Deputy Chief Engineer, Morris Knowles, Ltd., Windsor, Ont.

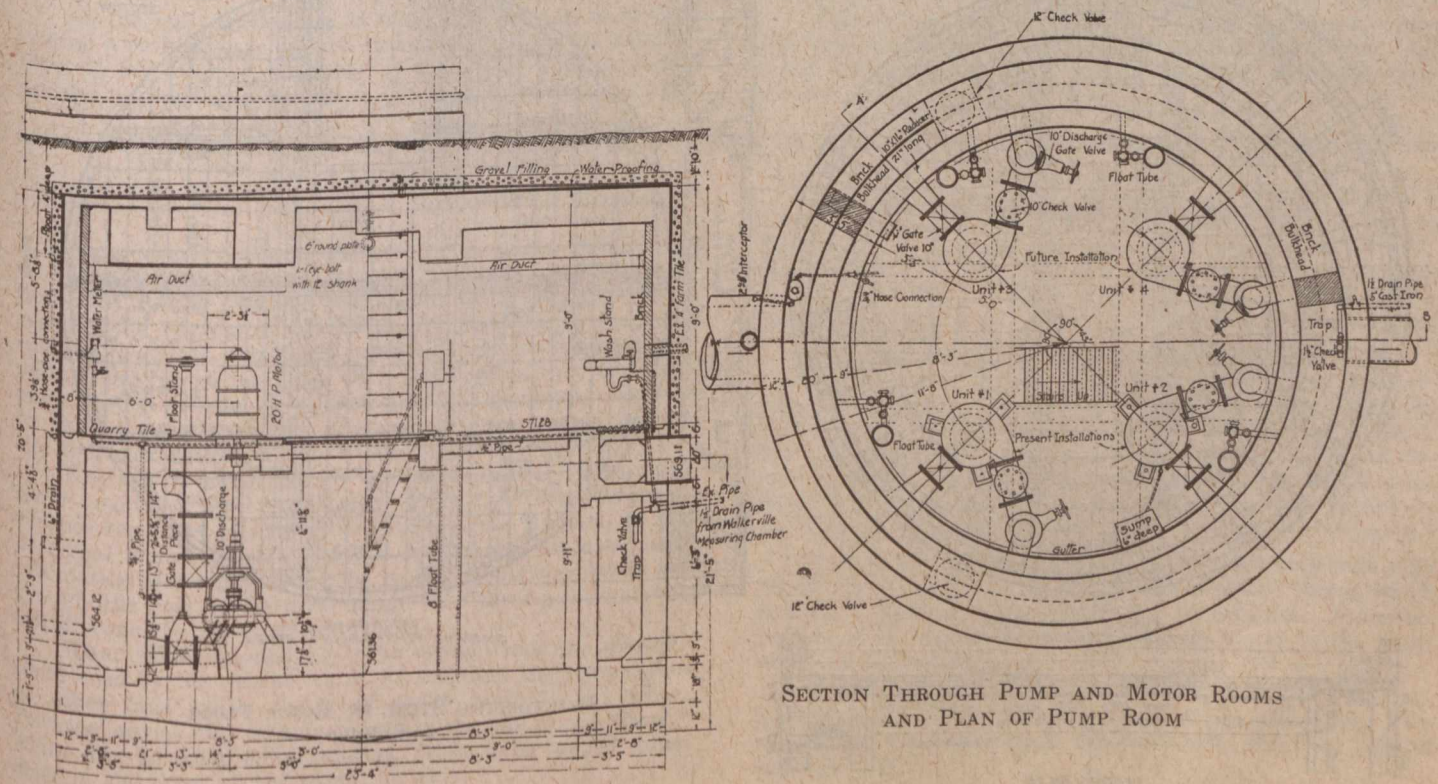
THE sewage pumping station referred to in this article is located in Walkerville, Ont., and is part of a general scheme of the Essex Border Utilities Commission to provide sewerage and sewage disposal for the Essex Border District. This district includes an area about 2 miles wide by 10 miles long, bordering on the Detroit River, and includes Windsor, Walkerville, Ford City, Sandwich, Ojibway and portions of the townships of Sandwich West and Sandwich East.

The commission now has under construction 2½ miles of intercepting sewer to serve the south end of the district, and in June last completed 2½ miles of sewer which will serve the east end, the latter sewer being known as the east interceptor.

The Walkerville pumping station is necessary to complete and put into operation the east interceptor. Owing to the level topography along the Detroit river, the depth to which it would have been necessary to carry the interceptor to secure a proper gradient, would have been prohibitive, so provision has been made to raise the sewage at an intermediate point, from which it will again flow by gravity to the disposal site. Until such time as the central section of the interceptor is built, the sewage will pass through a temporary outlet into the Detroit river below the water works intakes.

The pumping station is a circular, two-story, reinforced concrete structure, 23 ft. 4 ins. in diameter and 20 ft. 5 ins. high, all built below ground with the exception of the superstructure which houses a stairway leading to the floors below, somewhat on the style of a subway entrance. The upper compartment contains the electric motors, while the lower compartment contains the vertical pumps and is entirely encircled by an annular suction well, above which is the force main. The circular design for the station was chosen, after a careful study of all the factors, because it gave a very efficient and compact arrangement for the pumping units, and allowed a very considerable saving of reinforcing steel and concrete.

The pumping equipment will consist of four units, two of which will be installed at present. The other two will be added when required. Each unit consists of a 20-h.p. vertical motor and a 2,000-gal. vertical centrifugal sewage pump. The units will be automatic in operation, and the motors will



SECTION THROUGH PUMP AND MOTOR ROOMS AND PLAN OF PUMP ROOM