

Fig. 2—Head House and Filter Buildings in Section

water or by providing additional filtering area. In view of local conditions and for economic reasons, the latter method has been adopted, i.e., of providing additional filter units.

The rate of filtration upon which the plan is based is 125 million Imperial gallons per acre per day. This rate, although somewhat higher than that ordinarily used with rapid sand filters, is nevertheless twenty-five per cent. lower than that which has been used with success at the Detroit City Test Filter Plant; but in order to provide for readily overcoming excessive turbidity or occasional biological growths in the raw water, it has been deemed conservative to use the rate above mentioned for the Walkerville design. The total filtering area in the initial plant, therefore, at the rate per acre above stated, will have a capacity of 6.7 million Imperial gallons per day.

The filtered water storage under the filters and head

house will amount to 250,000 gallons; so that starting with a full basin, it will be possible to run for four hours at a rate in excess of eight million gallons per day without drawing out the water from beneath the filters, or without increasing the rate of filtration above that specified. It will be noted, therefore, that while the nominal capacity of the initial plant is five million gallons per day, it can be safely operated at a much greater rate.

Figure 2 shows the head house and filter building in section, while Figure 3 gives a sectional view of the filters on a larger scale.

Low Lift Pumps

The low lift pumps will be installed in the present pumping station, one having a capacity of three and the other five million gallons per day. If it is found impossible to get delivery of steam turbine pumps, centrifugal pumps direct connected to electric motors will be used.

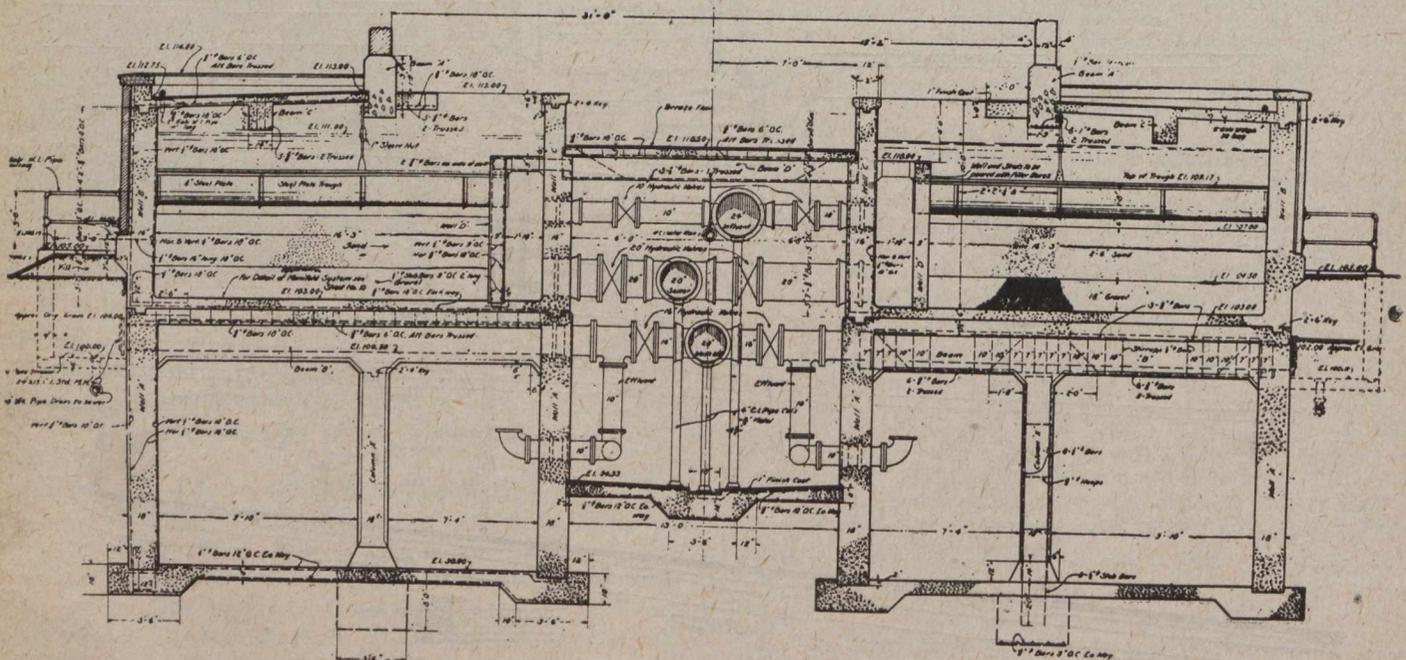


Fig. 3—Sectional View of Filters and Gallery