

If the plans are solely for the extensions of an existing system, then only such information as is necessary for the comprehension of the plans will be required. This information must in general conform to the above requirements for a complete system.

Systems on Separate Plan.—Under ordinary circumstances the board will approve such plans only when designed upon the separate plan, in which all rain water from roofs, streets and other areas and all ground water, other than unavoidable leakage, is to be excluded.

No by-passes which may allow raw or partly purified sewage to be discharged from the sewers or disposal works shall be included in the plans, except by special permission of the board.

Water Supply and Water Purification Systems.—The plans for a complete water supply and water purification system shall consist of the following parts:

A general plan of the municipality or district, showing the proposed system.

Detailed drawings showing construction of any special structures in the distribution system.

General and detailed plans for the water purification works.

A comprehensive report upon the proposed system by the designing or consulting engineer. This report to be typewritten upon letter-size paper, and the sheets firmly bound together. A preliminary report, containing data and information sufficient for the complete understanding of the project may be submitted to the State Board of Health for their consideration, prior to the submission of detailed plans.

General Plan.—The general map referred to in paragraph 2 shall be drawn to a scale not greater than 100 nor less than 300 feet to 1 inch, and covering the entire area of the municipality or district to be supplied with water, and shall accompany each application in the case of a new water system, or any extension or modification of any water supply or water purification system, unless such a general plan of the entire area has been previously submitted.

If the municipality is greater than two miles in length, the map may be divided into sections, conforming in size to those mentioned under "Specifications." The sheets shall be bound together and a small index map supplied, showing by number the area covered by the various sheets.

This map shall show all existing or proposed streets, the surface elevations of all street intersections, and the elevations of the principal parts of the water system, such as water at the intake, in the reservoir or standpipe, etc. The map should show that water supply facilities can be provided for all sections of the municipality or district, even though the construction of pipe lines in some of the streets is to be indefinitely deferred. The location of intakes, valves, hydrants, reservoirs, pumps, standpipes and purification plant, and any special structures, shall be shown and referenced in a legend near the title. The size of pipes shall be written between the street lines and along the pipe. The map shall also show the true or magnetic meridian, title, scale, date, the municipal or district boundaries, the mean, low and high water elevations of water at the intake. If the site of the pumping plant is subject to flooding, the elevation of the highest known flood water must be given.

Letters and figures shall be clearly and distinctly made. Pipe lines to be built at present shall be shown by

solid lines and those to be later constructed shown by broken lines. All topographical symbols used are to be the same as those used by the United States Geological Survey.

The elevations of the street intersections shall be placed outside the street lines in the upper right-hand angle or opposite their respective positions in the street.

Detail drawings of all special appurtenances, such as blow-offs, siphons, intakes, conduits, reservoirs, collecting galleries, filters, etc., shall be submitted.

Profiles of long conduits or pipe lines may be plotted to a convenient scale and shown on sheets of the sizes mentioned below.

Purification Works.—The plans for the purification works shall consist of a general plan upon which reserve areas or future extensions must be shown, and also the general layout of the various units of the process, together with the piping system.

The detail drawings shall include longitudinal and transverse sections sufficient to show the construction of each unit and part of the plant. They shall also show the distributing, drainage and cleansing systems, general arrangement of any automatic devices, sizes and depth of stone, gravel or sand used for filtering material, and such other information as is required for the intelligent understanding of the plans.

All drawings submitted shall be neatly and plainly executed and may be traced directly on tracing cloth, printed on transparent cloth or printed on any of the various papers which give distinct lines.

The following dimensions are suggested for ordinary use, with the exception of the general map: Distance from top to bottom, 20 or 30 inches; length, 24 inches, 32 inches, 40 inches or 48 inches or thereabouts. By this section it is intended to prevent the use of unnecessarily long or large maps, which are difficult to file or to use.

Each drawing shall have legibly printed thereon the name of the municipality or persons for whom the drawings are made, the name of the engineer in charge, the date, the scale, and such references in the title as are necessary for the complete understanding of each drawing.

Engineer's Report.—A report, written by the designing or consulting engineer, shall be presented with all plans for complete systems, and shall give all data upon which the design is based or which is required for the complete understanding of the plans.

When a purification or treatment plant is to be constructed, a measuring device shall be provided at some convenient point, and the installation of a recording device is recommended, and in particular instances may be required.

If no purification process is provided, the nature and extent of the watershed, with special reference to its sanitary condition, shall be fully and explicitly discussed, together with proposed methods and regulations for the prevention of accidental or other pollutions.

A small scale map of the watershed, showing the roads and the number and character of buildings, shall be included in the report. Other features which should be discussed in the report are: Storage capacity, average depth, general nature and area of the storage reservoir, liability of odors or tastes in supply, and removal of color, iron, or hardness.

If the water supply is to be taken from wells, describe the number, depth, size and construction of the same;