

MODEL PLUMBING BY-LAW.

IN view of the advances which have been made in the art of plumbing during the past ten years, due to the increased knowledge of the physical and mechanical principles underlying the construction of sewers, house drains and house plumbing, the Provincial Board of Health has drawn up the following rules, which are suggested as applicable for adoption by those cities, towns and villages in Ontario which have not already a by-law of a similar character in force. Under the powers given in section 113 of the Public Health Act these rules may at any time be made a town by-law in place of the rules relating to plumbing which are contained in Schedule A of the Public Health Act. Whenever any municipality purposes to establish a system of public sewerage the Provincial Board has, as a condition of the approval of such system, adopted the rule of requiring that a plumbing by-law of a character similar to the following be adopted by the town council as a part of such sewerage system :

I.—1. No house drain or sewer shall be constructed or extended to connect with any private, common or public sewer ; nor shall any house plumbing be placed within any house until the plans and details of construction, and the qualities of materials used shall have been approved of by the Local Board of Health or such municipal officer or officers to whom said work is delegated by the Board.

2. The owner, or his agent, shall, before the commencement of construction of the drainage or plumbing of any house or building within the municipality, have sent for filing to the clerk of the municipality the plans and details of construction thereof, together with the necessary specifications of information as set forth in this by-law for examination and approval. Such plans shall be submitted to the town engineer and medical health officer, or to such officer of the municipality as may with their approval be delegated by the Local Board of Health for the purpose. The plans, when satisfactory, shall be approved of and a permit granted under the hand of the officer designated by the Local Board of Health, when the following conditions have been fulfilled :—

II. The plans and specifications submitted shall show :—

1. The location, depth and size of the house drain or sewer, and position of traps, cleaning screws and pipes, if such exist thereon.

2*. The location of soil pipe, and of all pipes within the walls of the house ; also their size, weight and kind, also the position and size of all traps and vents, and the location and kind of all closets sinks, baths or other fixtures connected therewith.

3. That the house drain must not in any case be less than 4 inches in diameter, and may in no instance exceed 6 inches, except by special permission of the properly constituted official or officials.

4. That the soil-pipe, drain or sewer within the house be of a minimum diameter of 4 inches, and the pipes connected directly therewith shall in every case be constructed of iron, either cast or wrought iron, or steel, and such as shall be approved of by the proper official as suitable for the work, and such soil-pipe shall extend to a point at least three feet outside the wall of the building, and there be properly connected with the house drain or sewer by proper bedding and jointing in Portland cement.

5. That any cast-iron pipe used shall have the specified minimum weights as below, and all fittings thereof shall correspond in weight and quality.

If 2 inches in diameter	5½ lbs. per lineal foot.
" 3	" "	9¾ " "
" 4	" "	13 " "
" 5	" "	17 " "
" 6	" "	20 " "
" 7	" "	27 " "
" 8	" "	33½ " "

6. If wrought iron pipes be used the following shall be standard weights :—

1 inch	1.67 lbs. per lineal foot.
1¼	" "	2.24 " "
1½	" "	2.68 " "
2	" "	3.61 " "

*NOTE.—The vertical portion of the soil pipe should not be hung or fastened to any floor or wall, but should rest on a stone foundation at its foot, as any settlement or heaving of the floor or house is liable to pull joints apart.

2½ inch	5.74 lbs. per lineal foot.
3	" "	7.54 " "
3½	" "	9.00 " "
4	" "	10.66 " "
4½	" "	12.34 " "
5	" "	14.50 " "
6	" "	18.76 " "
7	" "	23.27 " "
8	" "	28.18 " "

7. That the vent pipes and other attachments of the soil pipe and fixtures may, if under 2 inches in diameter, be of lead, but if over 2 inches, they must be of iron. Such lead pipes shall have the specified minimum weights of—

If 1 inch in diameter	2 lbs. per lineal foot
" 1¼	" "	2½ " "
" 1½	" "	2¾ " "
" 2	" "	3½ " "
" 2½	" "	5⅓ " "
" 3	" "	7¼ " "
" 4	" "	8 " "

8. That the wrought iron pipes shall have screwed cast iron fittings ; that all joints in cast iron pipes shall be caulked with tow and molten lead, properly bedded and hammered ; that joints between iron and lead pipes be made with brass thimbles or ferrules of same size as lead pipe, and properly wiped and soldered to it, and properly gasketed, loaded and caulked to said pipe.

9. That sinks, wash-trays and closets are designated as to quality ; wooden or other absorbent materials for fixtures must not be used inside of houses, and approved strainers and grease traps must be provided for in those fixtures requiring them, or on such as the proper official may direct.

10. That the plans show location and arrangement of all pipes which must be as direct and as accessible as possible, and on inner walls when danger from frost exists.

11. That the soil pipe and attachments have a minimum fall of one inch in every four feet towards the outlet ; shall open freely above the house without a hood, and be one inch larger in diameter above the roof than inside.

12. That all vent pipes passing through the roof, have a minimum diameter of 3 inches, and are in no part of the system less than 1¼ inches internal diameter.

13. That every waste pipe from any fixture be shown connecting with the main soil pipe, and in no case with the trap of a water-closet or any other fixture, and must in no case be less than 2 inches in diameter.

14. That every water-closet, urinal, bath, sink, wash tray and tub or set of tubs, be shown separately trapped as near the fixture as possible ; and that overflow pipes from any fixture, connect with the fixture pipe, on the proximal or fixture side of the trap.

15. That every trap or fixture be shown to have its vent pipe to prevent siphonage, except where some anti-siphon attachment, approved of by the proper official, be shown. The vent pipes from several fixtures may be shown connected with one outlet vent pipe of proportionately larger size, or with the soil-pipe above the highest fixture.

16. That the overflow pipe from the water-closet supply tank be led into the water-closet basin, bath-tub or sink, but in no case be connected with the soil-pipe.

17. That the plans locate water-closets in rooms where light and ventilation are provided for ; and that no water-closet be located in a cellar, except where specially permitted by the proper official with special provision for lighting and ventilation.

III. The following rules shall be the guide for contractors and inspectors :—

1. The house-drain or sewer must be laid on an even grade and in straight lines from the house to the street connection ; and where soil is newly made or of a loose character, the drain must be laid on well rammed clay, concrete or board bottom, and must have a grade not less than one inch in four feet, and so that the inner surface shall be left smooth, clean and of even grade through its entire length. All joints in the house-drain must be cemented with Portland cement.

2. The walls of houses must, wherever possible, be drained by field tiles, not less than two inches in diameter, laid around and outside the foundation walls, at a depth of at least 6 inches below the same, and on a grade of at least one inch in eight feet. Such tiles must be led directly to a system of tiles laid alongside the house drain and street sewer for sub-soil and cellar drainage, and if not then must connect with the house sewer with provision made for trapping the same, and keeping trap sealed automatically with water.

3. Where no special provision is made for ventilating street