

# Haryana Municipal Drainage and Sanitation Bye-laws, 1977

HARYANA

India

## Haryana Municipal Drainage and Sanitation Bye-laws, 1977

### Rule

### HARYANA-MUNICIPAL-DRAINAGE-AND-SANITATION-BYE-LAWS-1977 of 1977

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Haryana Municipal Drainage and Sanitation Bye-laws, 1977 Published vide Haryana Government Notification No. GSR 121/HA24/73/Sections 200 and 214/77, dated 24.6.1977

### 1. Short title and extent.

(1) These Bye-laws may be called the Haryana Municipal Drainage and Sanitation Bye-laws, 1977. (2) They shall apply to all the Municipalities.

### 2. Definitions.

- In these Bye-laws, unless the context otherwise require, -(i)"Act" means the Haryana Municipal Act, 1973 ;(ii)"anti-syphonage" means a device to preserve the water seal in traps by providing ventilation ;(iii)"cess pool" includes a septic tank, a settlement tank or other tank for the reception or disposal of foul matter from a premises ;(iv)"connection" means the junction of a foul water drain, surface water drain or sewer from a building or buildings with a public sewer ;(v)"drain" means a line of pipes including all fittings and equipment such as manholes, inspection Chambers, traps, gullies and floor traps used for the drainage of a building or a number of buildings or yards appurtenant to the building, within the same curtilage and includes a house drain ;(vi)"drainage" means removal of any liquid by a system constructed for the purpose. Drainage work means the design and construction of system of drainage;(vii)"drop connection" means a branch drain of which the last length of piping of the incoming drain, before connection to the sewer, is vertical ;(viii)"interceptor manhole or interceptor chamber" means a manhole incorporating an intercepting trap and providing means of access thereto and equipped with a fresh air inlet on the up stream end of the trap and a vent column on the down stream side;(ix)"invert" means the lowest point of the

interior of a sewer or drain at any cross section. In a manhole chamber, the channel in the floor of the chamber which carries the flow of sewage through the manhole ;(x)"licensed plumber" means a person registered by the municipal committee for the purpose of these bye-laws, and possessing qualifications as given in the Schedule-I;(xi)"manhole" means an opening by which a man may enter or leave a drain or a sewer or other closed structure for inspection, cleaning and other maintenance operations fitted with a suitable cover ;(xii)"privy" means a place set apart for defecating or urinating or both, together with the structure comprising such place, the receptacle therein for human excreta and the fittings and apparatus, if any, connected therewith and includes a closet of the dry type, an acquex privy, a latrine and a urinal ;(xiii)"rain water pipe" shall mean a pipe or drain situated wholly above ground and used or constructed to be used solely for carrying rain water directly from roof surfaces ;(xiv)"rodding eye" means an access having a removable cover to enable obstructions to be cleared by means of a drain rod ;(xv)[water seal latrine] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.] and "service urinal" shall mean respectively a latrine and urinal from which the excreta are removed by manual agency and not by water carriage system;(xvi)"sewer" shall mean a closed drain, provided for the purposes of carrying the liquid waste of a household or community including human excreta otherwise known as sewage, constructed and maintained by the Government or by a local authority;(xvii)"soakage pit" means a pit suitably prepared to receive soil water or partially treated sewage for seepage into surrounding ground ;(xviii)"soil waste" means the discharge from water closets, urinals, slop sinks, stable or cowshed gullies and similar appliances ;(xix)"soil pipe" means a pipe which receives the discharge from soil fitments such as water closets, urinals, slop sinks, etc. ;(xx)"storm water drain" means any open channel or conduit whether within private premises or public premises and reserved exclusively for conveyance of rain water;(xxi)"sub-oil water drain" means a drain used or constructed to be used solely for conveying to any sewer (either directly or through another drain) water that may percolate from the sub-soil ;(xxii)"surface water drain" means a drain conveying surface water including storm water;(xxiii)"trade effluent" means the discharge, other than soil or waste from any manufacturing process ;(xxiv)"vent" means a pipe line installed to provide flow of air to or from a drainage system or to provide circulation of air within such system to protect traps seals from syphonage and back flow ;(xxv)"ventilating pipe" means a pipe which provides a safe outlet into the atmosphere for the foul gases in the drain or sewer ;(xxvi)"waste water (Sullage)" means spent water from baths, wash basins, sinks and similar appliances which do not contain human or animal excreta ;(xxvii)"waste pipe" means the pipe which receives waste water from the corresponding sanitary appliances ;(xxviii)"water-borne sanitary installations" means sanitary fitments such as urinals, latrine, water closets, bidet, slop sink, hospital, sanitary fitting such as bed pan and urinal bottle sink or other similar fittings, the solid or liquid waste from which is intended to be discharged by a flush of water, and shall include all manholes, strapes, gullies, soil pipes, waste pipes, ventilating pipes, anti-syphonage pipes and drains communicating with sewers ;(xxix)"water closet" means a closet which has a separate fixed receptacle connected to a drainage system and has separate provision of flushing from supply of clean water either by the operation of a mechanism or by automatic action:(xxx)"Executive Officer" and "Secretary" shall mean the Officer, acting for the time being, as Executive Officer, or Secretary of the committee and shall include an Assistant Secretary, if any ;(xxxi)"two pipe system" means the system in which soil and waste pipes are distinct and separate the soil pipes being connected to drain direct and waste pipes through a trapped gully. All traps of all sanitary appliances are completely ventilated in this system

;(xxxii) Words and expressions used herein and not defined in these bye-laws shall have the meanings assigned to them in the Act.

### **3. Intention to construct.**

- Every person who intends or is required to layout any water borne sanitary installations and drainage works or any other works connected therewith within any building or site shall not do so without prior permission of the committee and shall comply with the requirements of bye-laws 4 to 8.

### **4. Application to construct.**

(1) Any person intending to carry out any new or additional water borne sanitary installations or any new or additional drainage works within any building or site shall make an application in writing to the committee in form A (in duplicate) accompanied by the plans mentioned below, prepared and signed by an architect. The plan will also be signed by the applicant. (2) Such application shall bear the full name and address of the applicant and shall state the street and assessment number of the premises upon which such works are intended to be executed and all other particulars required, in form A.

### **5. Building plans.**

(1) With the application, referred to in bye-law 4, shall be deposited plans and specifications in quadruplicate clearly and indelibly made on a durable material and drawn to a scale of one in fifty for plots upto one thousand square metres in size and one in hundred for plots over one thousand square metres and shall show the following :-(a) every floor of any building in connection with which the pipes or drains are to be used.;(b) the position, levels and arrangements of the several parts of such building including the roofs thereof ;(c) the whole of the intended new drains with their proposed sizes and gradients in figures;(d) the levels of the ground surface and depths of the proposed drains ; and(e) the position of every manhole, gully, soil pipe, ventilating pipe, rain water pipe, water closet, urinal, latrine, bath, lavatory, sink, trap or other appliances on the premises proposed to be connected with any drain and in a distinctive colour in respect of drains, etc-, mentioned in caused [e] [ '(e)' seems to be a mistake for '(c)' and (d).] This information shall be shown complete both on elevations and sections as well as in plans; provided always that in the case of an alteration or addition to an existing building this condition shall be deemed to be satisfied if the plans convey sufficient information for the proposals to be readily identified with the original or subsequently sanctioned plans.(2) The plans shall also show :-(a) the position of all windows and other openings in the building ;(b) the height and position of all chimneys in the building within a distance of fifteen feet from the open end of a soil pipe or ventilating pipe ;(c) in detail, the nature of all sanitary connections including the manner of disposal of rain water and its discharge to the storm water drain ;(d) the scale to which the plan is drawn ;(e) the disposal of bathroom and kitchen and connections to the waste and soil pipes and the nature of the connection of the soil pipe to the sewer with a suitable intercepting chamber, when such chamber has been required by the committee by a general or special order.

## **6. Block plan of premises.**

- With the application referred to in bye-law 4, shall be deposited a block plan of the premises (in triplicate) upon which the building is to be situated or any such work is to be carried out drawn to a scale of-(i)1 to 200 for sites up to 1,000 square metres ;(ii)1 to 400 for sites above 1,000 square metres and under 4,500 square metres ;(iii)1 to 800 for sites of 4,500 square metres and above; and shall show the following, namely :-(a)the block plan of the building and the position of all other buildings on the premises and such parts of adjoining buildings as may be affected by the proposed works ;(b)the names of the street adjoining to premises ;(c)the difference in level between the lowest floor of the building and of any courtyard and of the adjoining ground ;(d)the lines, size and gradients of all drains and surface drains, if any ;(e)the scale of the plan ; and(f)the drains and other appliances shown by distinctive colours :Provided that it shall not be necessary to deposit a block plan in any case where the particulars required to be shown on the block plan are shown on the building plan hereinbefore required.

## **7. Cross section when to be provided.**

- If considered necessary in any case by a committee, the plans shall be accompanied with cross sections, with dimensions shown in figures and drawn to a scale of not less than 1 : 50 of all open drains, showing the ground level and the verbs or other means, already existing or proposed, for exclusion of all storm water, except the first washing from courtyards and paved open spaces.

## **8. Description of work proposed.**

- The plans for the building drainage shall in every case be accompanied by specifications for the various items of works involved. This information shall be supplied in form B with the plan referred to in these bye-laws and shall be deposited with a detailed description (in triplicate) of the intended mode of construction, joining or fixing any such drains, manhole, gully, pipe, water closet, urinal, bath, lavatory, basin or trap.

## **9. Commencement of works.**

- After the plans have been sanctioned, by the committee, one copy thereof shall be returned to the applicant and the work may then be proceeded with.

## **10. Notice of covering up drains or other drainage work.**

- Every person who constructs or alters any drain or other drainage work shall, before proceeding to cover up any foundations, drains or appliances connected with the drainage, give to the committee notice in writing that such foundations, drains or appliances are ready for inspection and specify the date and hour on which he will proceed to cover up such foundations, drains or appliances. Such notice shall be given in form C in duplicate.

## **11. Notice and certificate of completion of work.**

- No connection to any public sewer shall be made nor any water borne sanitary installations and drainage work intended to be connected through the connection, shall be brought into use, until a certificate after completion of the minimum works has been applied for by the applicant to the committee and a certificate has been issued by the latter in form D to the effect that the sanitary installations and drainage have been satisfactory completed in compliance with these bye-laws. If no decision is communicated on the application for a certificate within twenty days of the receipt of the application, the certificate shall be deemed to have been granted. The certificate in form D shall only be issued after a certificate in form D in duplicate is furnished by the owner to the committee.

## **12. Application before connection with public sewer.**

(1)After grant of the certificate referred to in the foregoing bye-law or in the event of the said certificate having been deemed to have been granted, every person intending to connect a drain to a public sewer shall apply to the committee at least seven days before the date on which connection is required.(2)The application shall be accompanied by a certificate referred to in clause (1) above and fee as given in bye-law 81.(3)On receipt of the application and subject to the requirements of the foregoing bye-laws, the committee shall accept or reject the request.[However, the ground of rejection of application shall be communicated to the applicant at the earliest.] [Added by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.](4)In the event of the required connection having been sanctioned, the same shall be made only through officer authorised by the committee and through licensed plumber.

## **13. Connection with public sewer.**

(1)Every drain discharging into a public sewer shall join the sewer obliquely in the direction of flow of the sewer.(2)If practicable the connection shall be made at an existing junction in the sewer or there shall be an intercepting manhole before the connection, when such manhole has been required by the committee by a general or, special order.

## **14. Inspection of work.**

- Every person by or for whom any water borne sanitary installation or drainage work or any other work in connection therewith is carried out for any existing or new building or in any other premises, shall at all reasonable times [i.e. after sunrise and before sunset] [Added by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.], afford the committee or any officer duly authorised by it, free access to such water borne sanitary installation or drainage work or other work in connection therewith, for the purpose of inspection. The committee shall ensure that the basic requirements of these bye-laws are carried out, but it shall not, relieve the house owner or his plumber of the duty of taking due care in the execution of the work and providing good and sufficient material and workmanship.

## **15. Minor alteration in case of emergency.**

- In any case in which a minor alteration to a water borne sanitary installation or drainage work must be carried out at once, every person who is about to carry out such alteration shall, in lieu of depositing the plans, sections and particulars referred to in the foregoing bye-law, forthwith inform the committee in writing of such proposed alterations. He shall also within fourteen days of the commencement of such alterations, make the deposits required by these bye-laws

## **16. Carrying out of work.**

- All work required to be done for the installation or repair of water borne sanitary fittings shall be entrusted to a licenced plumber duly registered with the committee and holding any of the qualifications laid down in the schedule to these bye-laws.

## **17. [ List of licensed plumbers. [Substituted by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.]**

- The committee shall publish or display in local newspapers or on the board of the committee in April or October each year a list of licensed plumbers. Every person who employs a licensed plumber to execute any work under these bye-laws, shall furnish to the committee the name and full particulars of such plumbers.].

## **18. Adequacy of water supply.**

- Before undertaking the installation of water borne sanitary installation in any building, adequate [and regular] [Added by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.] supply of water to the premises shall be ensured to the satisfaction of the committee.

## **19. Maintenance.**

- The owner of any building shall at all times keep and maintain in a proper state of repair and in proper working order all drainage work and water borne sanitary installation in or in connection with such building, and he shall at all times keep and maintain all such drainage work and water borne sanitary installation to conform with these bye-laws.

## **20. Water borne sanitary installation.**

(1)It shall be compulsory to have a water borne sanitary installation wherever committees sewer lines are available and without that no plan shall be approved.(2)In the absence of a sewer line in the locality, the house-owners can be allowed to use the present conservatory methods of night soil disposal and where the plot areas are less than 300 square metres method of disposal should conform to the provisions laid down in bye-law 59.(3)Where the plot area is 300 square metres or

more, the house-owner shall install a dug well type latrine (Bucket flush latrine) or a septic tank in accordance with the provisions of bye-law 51.

## **21. Level of lowest storey.**

- The lowest or the only storey of a building (other than so much of a storey as comprises a basement of cellar or other chamber intended for storage only and constructed in a dry soil or as to be impervious to water) shall be at such a level or so constructed as to allow the construction of a drain or drains sufficient for the effectual drainage of that story :Provided that if drainage of the basement has to be done, the owner of the building shall install suitable pumps for pumping the waste water into the drain or sewer without any risk of the sewage of sullage leading back into the basement at any time whatsoever.

## **22. Sanitary installations and execution of works to conform to P.W.D. specifications.**

- All water borne sanitary installations, drainage work including soil and waste pipes and other items used in the execution of these works shall be as per specifications laid down for such items in the Punjab Public Works Department specifications, 1963 edition as applicable to the State of Haryana and if there are no standards or specifications laid down for any item in the Punjab Public Works Department specification, 1963, as applicable to the State of Haryana then the same shall conform to the specifications as laid down for such items by the Indian Standards Institute.

## **23. Drain to be air, smoke and water tight.**

(1)Every drain shall be so constructed as to be air, smoke and water tight and to be capable of resisting a pressure of at least 1.50 metres head of water above the highest pipe.(2)No drain shall be covered up until it has been tested in the presence of a representative of the committee and passed by the committee. A record of the passing of drain shall be given to the registered plumber.

## **24. Net work of soil and waste water drainage to be kept separate.**

- The system of plumbing shall be "Two pipe system" and shall be designed according to the requirement of schedule II attached to these bye-laws.

## **25. Junctions.**

- Every drain including a pipe draining into any other drain or a sewer shall be constructed in such a manner as not to form any right angled junction, either vertical or horizontal. All drain junctions shall be obliquely in the direction of the sewage flow.

## 26. Minimum requirements of sanitary fitments.

(1) Dwelling with individual convenience shall have at least the following fitments, namely :-(a) one bath room provided with a tap ;(b) one water close ; and(c) one Nahani or sink either in the floor or raised from the floor. Where only one water closet is provided in a dwelling, the bath and water closet shall be separately accommodated.(2) Dwelling without individual conveniences shall have the following fitments, namely :-(a) one water tap with draining arrangements in each tenement ;(b) one water closet and one bath for every two tenements ; and(c) water taps in common bath rooms and common closets.(3) The requirements for fitments in the case of buildings other than residences such as office buildings, factories, cinemas, concert halls, public assembly halls and hostels, etc, shall be in accordance with the tables annexed to these bye-laws.

## 27. Water closet.

(1) Every water closet pan composition of which should be as per specifications laid down by Indian Standard Institute, shall have an efficient syphon trap with a minimum water seal of 75 mm beneath so that sufficient water seal, between the pan and any drain or soil pipe, is maintained. D trap shall not be fixed in connection with the water [closet] [Substituted for the words 'closets' by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.].(2) No person shall build a water closet in such a position or manner as to be directly over or directly under any room or part of a building other than a privy or water closet or passage or a bathing place or bath room or terrace: Provided that the committee may dispense with this requirement if they are satisfied that the flooring beneath such privy water closet is sufficiently impervious by reason of its material composition or thickness.(3) No person shall build a privy in such a position or any manners as to be within distance of 30 metres from any well, or stream of water, where it is likely to be used for human consumption or domestic purposes.(4) The minimum floor area of water closet shall be 1.25 square metres, the smallest side being 1 metre.(5) No part of the water closet shall be directly connected with water supply distributing pipe. For flushing and cleaning of the pan, flushing cistern with suitable ball cock and of not less than 12 litres capacity shall be provided.(6) Except in the case of 'Low Level' flushing cistern a head of at least 2 metres measured from the bottom of the cistern to the point of discharge of the flush pipe shall be provided.(7) All flushing system shall be of a mosquito proof pattern.(8) No self acting or automatic flushing apparatus shall be constructed or fixed except with the prior permission of the committee.(9) The capacity of every flushing storage tank shall be at the scale of 270 litres for one water closet connected to the tank and 180 litres for each additional seat in the same premises.(10) The flushing pipe connecting the cistern with the pan, basin through or other receptacle, with which the water closet or latrine may be provided, shall be of sound material and all connections should be water tight.(11) Where the water closet discharges into a soil pipe which also receives the discharge from another water closet i.e. where there is another water closets pan above the other, the trap of the water closet shall be ventilated by a pipe called "antisiphonage pipe" which shall :-(a) have an internal diameter of not less than 50 mm. ;(b) be connected with the arm of the soil pipe at a point not less than 7.5 cm. and not more than 30 cm. from the highest part of the trap, on that side of the water seal which is nearer to the soil pipe and in the direction of the flow ; and(c) either have an open and as high as the top of soil pipe or be carried into a soil pipe at a point not less than 1.5 metres



above the highest connection of the soil pipe.(12)The walls of every Indian type water closet or [water seal latrine] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.] upto a height of not less than one metre above the platform, shall be constructed of well burnt bricks, plastered with cement mortar 1 : 3 or of other hard smooth impervious material and corners rounded.

## 28. Urinals.

- A urinal connected with a building, which has a supply of water laid on, shall comply with the following requirements :-(i)the urinals shall be provided with a basin, stall, trough or other suitable receptacle or receptacle of non-absorbent material ;(ii)in a urinal constructed or adapted to be used for receiving any urine or liquid filth for conveyance to any sewer, an efficient syphon capable for maintaining the urinal and any drain or waste pipe in connection therewith shall be provided ;(iii)no trap of the kind known as a bell trap, a dip trap or D trap nor any non self cleansing trap shall be constructed or fixed in or in connection with the urinal;(iv)it shall be provided with suitable automatic flushing cistern for effectively flushing and cleansing the receptacle provided ;(v)the outlet from the receptacle or receptacles shall be provided with an efficient gratings;(vi)the discharging or flushing capacity shall not be less than one gallon of water for each connection basin, or each with or length not exceeding 70 cms. of stall or trough respectively;(vii)it shall be capable of being filled or charged with water within a period of twenty-five minutes or such less period as will permit, while the urinal is in use or available for use a flushing operation of sufficient frequency to ensure the maintenance of such basin, stall or trough in a state of cleanliness;(viii)It shall be fitted with a suitable automatic flushing cistern connected to the urinal basin, stall or trough, by an adequate flush pipe or pipes of the lead, copper, iron or other equally suitable material having a minimum internal diameter of 12 mm and fitted with a suitable spreader or sparger pipe so as effectively to distribute the water over the internal surface of every basin, stall or trough ;(ix)no part of the urinal apparatus shall be directly connected with a supply or distributing pipe ;(x)when a room is used only as a urinal it will have a minimum floor area 1.25 square metre and a minimum width of 1.6 metre. The floor and the walls of any room which is used as urinal shall be constructed of an impervious and non-absorbent material to a height of one metre;(xi)no urinal shall be constructed so as to make it approachable directly from any room used for the purpose of human habitation or for the manufacture/preparation or storage of food for consumption or as a factory, workshop or work place until and unless a properly ventilated passage of 1 metre is provided ;(xii)the floor of all urinals on the ground floor shall be raised at least 15 cms. above the outside grounds ;(xiii)if the urinal can be entered from within the buildings and is constructed to discharge into a soil pipe which also received the discharge from another urinal, or from a water-closet, bidet or lavatory basin, the trap of the urinal shall be ventilated by a pipe which shall-(a)be of internal diameter of not less than that of the trap or 50 mm whichever is less;(b)be connected with the waste pipe from the urinal at a point not less than 7.5 cm. and not more than 30 cm. from the highest part of the trap on that side of the water seal which is nearer to the waste pipe ; and(c)either have an open and as high as the top of the waste pipe or be carried into a waste pipe at a point not less than 1.5 metres above the highest connection to the waste pipe:Provided that the internal diameter of the waste pipe of urinal may not be less than 500 mm in the case of urinal having not more than two basins and 400 mm in case of a single urinal basin :Provided further that where the two or more

urinals are fixed in a range, the waste pipe may discharge without the inter position of trap into a semi-circular and accessible open channel of glazed stoneware, or other equally suitable non-absorbent material formed or fixed in or on the floor immediately beneath or in front of such a basin or stall, but not exceeding [literally] [Substituted for the words 'laterally' by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.] beyond such range and discharging into a suitable and efficient trap. Laying out Installation of Drain Pipes

## **29. Laying out drains.**

- (i) Every drain shall-(a)be of a suitable size, and if it is intended for the conveyance of soil water or waste water, shall have an internal diameter of not less than 100 mm ;(b)be laid with a suitable gradient, and where practicable, in a direct line. The standard gradient shall be 1 in 40 for a 100 mm drain and 1 in 80 for 150 mm drain. The maximum and minimum gradients shall respectively be 1 in 20 and 1 in 80 for a 100 mm drain and 1 in 40 and 1 in 140 respectively for a 150 mm drain ;(ii)a drain shall not be constructed so as to be within or under any building, except in a case where any other situation is impracticable ;(iii)where any such drain or part thereof is constructed within or under any building, such part thereof shall be laid or fixed in a direct line, and where practicable, be provided with adequate means of access ;(iv)where such drain is laid under a wall, it shall be protected at that part which is under the wall by means of a relieving arch, flag stone, iron or any other support which shall not bear in the drain and shall be of sufficient size and strength to prevent any [blockade or damage] [Substituted for the words 'disturbance or other injury' by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.] to such drain ;(v)a drain shall not be constructed in such a manner that there shall be within a building any inlet to such drain except such inlet as may be necessary from any sanitary fittings or any sanitary installation connected directly to such drain ;(vi)every branch drain shall join any other drain obliquely in the direction of the flow of that drain and as near as practicable to the invert thereof ; and(vii)every inlet other than a ventilating pipe to such drain shall be properly trapped by a suitable and efficient trap, and such trap shall be formed and fixed so as to be capable of maintaining a water seal of ;-(a)50 mm where such inlet has an internal diameter of less than 80 mm ;(b)75 mm where such inlet has an internal diameter of more than 80 mm ;(viii)every trapped gully shall be covered with a grating the bars of which shall be not more than 10 mm apart ;(ix)have a suitable and efficient intercepting trap, when such trap has been required by the committee by a general or special order, with a water seal at least 100 mm at a point as far as may be practicable from the building and as near as may be practicable to the point at which the drain shall be connected with the sewer, which shall be provided to such a drain before connecting it. Such a trap shall be provided with a raking or leaning arm, fitted with a secure and suitable stopper as a means of access shall be-(a)constructed so as to be water-tight ;(b)fitted with a suitable cover at the level of adjoining ground surface; and(c)if placed within a building fitted with an airtight manhole cover.

## **30. Material for drains and construction.**

- Materials and methods of construction for drains shall conform to P.W.D. specifications, 1963 and subsequent amendments. If there are no specifications laid down for any item then the same should conform to the specifications as laid down for such item by the Indian Standard Institute.

### **31. Drain connection for trade effluent.**

- Every drain and private sewer intended solely for conveyance of industrial or chemical or other trade effluent shall be constructed of good sound pipes of material unaffected by the chemical action of the effluent and shall be laid as described heretofore.

### **32. Ventilation of drains.**

- The drains intended for conveying "soil waste or waste water" from a building shall be provided with at least one ventilating pipe situated as near as practicable to the building and as far as practicable from the points at which the drain empties into the sewer or other means of disposal :Provided that a soil pipe from a water-closet or waste pipe from a slop sink constructed in accordance with these bye-laws may serve for the ventilating pipe of the drain, if its situation is in accordance with the bye-laws.

### **33. Soil pipes and ventilating pipes.**

- A soil or a ventilating pipe shall be -(i)easily accessible throughout its course and adequately protected where necessary from damage ;(ii)of an internal diameter of not less than 100 mm ;(iii)circular ;(iv)carried upwards to such a height and in such manner so as to prevent any nuisance or injury or danger to health arising from the omission of foul air from such pipe, the minimum height being 150 cm. above flat roof or terrace parapet whichever is higher or top of the window within a horizontal distance of 3 metres and be fitted with suitable cowl. In case the adjacent building is taller, the ventilating pipe shall be carried higher than the roof of the adjacent building wherever it is possible.

### **34. Sizes and material for soil pipe, waste pipe, ventilating pipes and their installation.**

- Materials for soil pipe and installation of soil pipe and ventiating pipes and waste pipes will conform to specifications of bye-law 30.

### **35. Separation of soil pipes from rain water pipes.**

- No soil pipe or ventilating pipe shall be connected with any rain water pipe or waste water pipe.

### **36. Waste water pipes.**

- A waste water pipe from a bath, sink (not being a slop sink), bidet or lavatory basin and pipe for carrying dirty water shall-(i)not discharge as to cause dampness in wall or foundation of a building ;(ii)it discharges into a drain it shall be disconnected from the drain by a trapped gully with a suitable grating above the level of the water in the trap ;(iii)if it is more than 1.80 metres in length, be provided with a suitable trap.

### 37. Manholes.

- At every change in alignment gradient or diameter of a drain, there shall be a manhole or inspection chamber. Bends and junction in the drain shall be grouped together in a manhole as far as possible. The maximum distance between manholes shall be 30 m. The distance between manhole and gullychamber shall not exceed 6 m. Where the diameter of a drain is increased the crown of the pipes shall be fixed at the same level and the necessary slopes given in the invert of the manhole chamber. In exceptional cases where the required fall is not available, connection may be made up to half the difference in the diameter. Chambers shall be of such size as will allow necessary examination or clearance of drain. The minimum internal size of chamber (between brick faces) shall be as follows -

- |  |  |
|--|--|
| (a) for depth of 0.8 m. or less          | 0.75 x 0.75 m.   |
| (b) for depths between 0.8 m. and 2.1 m. | 1.2 x 0.9 m.   |
| (c) for depths more than 2.1 m.          | rectangular chamber with minimum internal dimensions of 1.1 x 0.9 m. |

### 38. Provision of trap

(1) There shall be no traps in any soil or ventilating pipes, nor between any other pipe and drain to which it is connected but every sanitary fittings connected to a soil pipe, ventilating pipe or drain shall be provided with a trap, so constructed as to be capable of maintaining a sufficient water seal. (2) In no such drain shall be constructed or fixed any trap which becomes unsealed on the removal of the cover. (3) All gullies, traps, gratings, covers or other appliances shall conform to specifications mentioned in bye-law 30.

### 39. Ventilation for floor traps.

- If the floor trap on upper floor is directly connected to a waste water pipe, the waste pipe shall be continued upwards, without any diminution of its diameter and (except where unavoidable) without any bend or angle, to such a height and in such a position as to afford, by means of the open end of such waste pipe, a safe outlet for foul air, the position of and covering to the open end being such as to comply with the conditions set out in the bye-laws relating to ventilation.

### 40. Floor surrounding the floor trap.

- Where any floor trap is provided, the floor surrounding the floor trap shall be formed of hard, smooth and impervious material having a slope towards the floor trap.

### 41. Overflow pipe.

- An overflow pipe from a flushing cistern shall discharge in an exposed and conspicuous position so as not to cause dampness on any part of a building.

#### **42. Pipes not to be exposed on external walls.**

- Wherever possible no rain water pipe, waste pipe, soil pipes and ventilating pipe shall be exposed on any external wall of a building and shall be placed in a recess or chase or a duct. Drains for storm water shall be constructed within the thickness of walls.

#### **43. Testing of pipes.**

- A ventilating pipe to a drain a soil pipe and waste pipe shall be capable of with standing after erection a smoke or air test under pressure.

#### **44. Construction of open drains and surface channels.**

- In no case shall a drain interior to a building or for the conveyance of the sewage to the street sewer be an open drain. All open drains or surface channels shall be constructed according to PWD specifications No. 1963 and subsequent amendments, made from time to time.

#### **45. Trap and silt catcher.**

- At the end of the open drains, a silt chamber. 61 cm. long by 18 cm. wide and 30 cm. deeper than the bed of the drain shall be constructed with a vertical cast iron grating 40 cm. from the open drain to the full size of the silt chamber. This shall discharge into a trap connected to an inspection chamber.

#### **46. Drainage of houses having high plinth.**

- In the event of the plinth of a house being much higher than the bed of an open drain, all washing pleas on the ground floor shall discharge into the open drain by means of 75 mm discharge pipe brought down to such level as to avoid a splash.

#### **47. Paving ground surface.**

- The surface of all house gullies, not occupied by, or beyond what is occupied by an open drain shall be paved with fine dressed blue stone or Indian Patent stone or other stone approved by the committee. Where a separate system of disposal exists, at the lower end of the gully whether the open drain for sullage or sewage be at the centre or the side, a jump weir shall be formed so that while any ordinary flow of sewage will discharge into the connection with the inspection chamber, a rush of storm water will jump over the opening and pass into the storm water drain.

#### **48. Water closet not to be connected with open drain.**

- No water closet or any arrangement by which night soil is to be removed by the water carriage system shall be connected with an open drain.

## **49. Bye laws for open drain etc.**

- The provision of bye-laws 45 to 48 shall apply to all open drains or other similar works communicating with the committee's sewer.

## **50. Method of disposal.**

(1) Every water borne drainage installation shall be connected with the sewer but in case no sewer exists in the vicinity of the said premises, the drainage work may be as a temporary measure and subject to the previous written approval of a committee be connected to a septic tank from which the effluent shall be drained of:-(a) into absorption pits ; or (b) by sub-soil irrigation : Provided that no absorption shall be allowed in the case of any premises or area in which domestic supply is taken from sub-soil water : Provided further that if at any future period a sewer is constructed which can serve the premises, the owner shall at his own expense construct the said drainage work to be connected to the sewer. (2) [ Effective arrangements shall be made to treat the effluents from the sewer system so as to ensure that the untreated effluents do not enter any canal, river or water body.] [Added by Haryana Notification No. S.O. 82/H.A.24/1973/Section 200 and 214/2002. dated 11.10.2002.]

## **51. Septic tank.**

(1) No septic tank shall be located -(i) at a distance of less than 25 metres, from a dwelling house or any other building used for human habitation or for work or recreation or within a public thoroughfare; (ii) within 30 metres from any percolation well, water-course or stream used or likely to be used for drinking or domestic purposes or for manufacture or preparation of any article of food or drink for human consumption and it shall be readily accessible so as to permit cleaning operations being carried out without interference with the operation of any water borne sanitary installation as a whole. (2) Every septic tank intended to serve a population of 24 or more persons shall be constructed into two separate compartments so that one compartment when required can be put out of use for cleaning purposes. The capacity of every compartment of the septic tank shall be  $2\frac{1}{2}$  times the total water supply allowance for the total number of residents of the buildings. (3) Every inlet pipe into a septic tank shall be effectively trapped. (4) The design of septic tank shall be in accordance with I.S.I specifications No. I.S. 2470 Part (1) - 1968 and I.S. 2470 (Part II) - 1971 Code of Practice for design and construction of septic tanks.

## **52. Absorption pits.**

(1) In the matter of location, every absorption pit shall conform to same restrictions as are laid down for a septic tank in bye-law 51. (2) No absorption pit shall have, any outlet into, or means of communication with any sewer, storm water drain or surface drain. (3) The walls of every absorption pit shall be at least 0.5 metre above ground level so as to exclude effectively the entry of storm water or irrigation water into the absorption pit. (4) The absorption pits shall be constructed in duplicate so that one pit can be put out of use for cleaning purpose. The capacity of the absorption pit shall be as

approved by the committee.(5)Other details should conform to I.S.I. specification No. I.S. 2470 (Part I) - 1968 Code of Practice for design and construction of septic tanks.(6)Such absorption pits shall be provided with adequate means of access for removing the filtering media and cleaning the same.

### **53. Sub-soil irrigation for disposal of effluent.**

- No sub-soil irrigation work for the disposal of effluent from a septic tank shall be laid within a premises till a suitable area of open land, the situation and extent and sub- soil of which is previously proved by the committee, is set apart within the premises to be used as a farm or a garden.(2)The area set apart shall be one hectare for every twenty-five thousand liters of effluent per day.(3)No part of any area reserved for sub-soil irrigation shall be within a distance of 25 metres from the nearest point of any dwelling house or any other building used for human habitation or for work or for recreation and of any canal or irrigation well.(4)No such works shall be laid out within a distance of 30 metres from any percolation well, tubewell, or water-course or streams used or likely to be used for drinking and domestic purposes or for the manufacture or preparation of any articles of food or drink for human consumption.Storm Water Drainage

### **54. Drainage of roofs.**

- The roof of every building shall drain rain water into gutters chutes or trough and shall be carried down through adequate number of down pipes without causing dampness in any part of the wall or foundation of the building or any adjacent building :Provided that in the case of detached or semi-detached buildings not exceeding one storey in height, rain water pipe, khasi or concealed pernellas may be provided for so long as these do not discharge into any public road, foot-path or on private land of adjoining owners.

### **55. Drainage of courtyard.**

- The storm water of an inner courtyard shall be discharged to the sewer or the storm water drain as the case may be.All other courtyard must be provided with one or more outlets through which rain water may pass to the drainage work.Explanation. - (a) An inner courtyard means a courtyard in which all its sides are bounded by rooms or verandahs or by dividing walls of the next houses and includes courtyard on the other floors of building.(b)An outer courtyard is a courtyard in which at least one of the walls faces out into the open.

### **56. Size of rain water pipes.**

- A rain water pipe of minimum area of 75 sq. m. shall be provided for every 50 sq.m. of the flat roof area (slope of roof being 1 : 48 or for every 100 sq. metres of sloping roof area).

## **57. Materials of rain water pipes.**

- The rain water pipes should be of Cast Iron and Asbestos Cement conforming to ISI Standards.

## **58. Drains for storm water constructed within the thickness of wall.**

- No drain for the disposal of storm water shall be constructed within the thickness of any wall of a building unless the drain constructed is water tight. Dry System-Service Latrine, Privy Service Urinals

## **59. Service latrine, privy and service urinals.**

- Service latrine, privy and service urinals constructed on the dry system to be provided with a building shall comply with the following requirements :-(i)It shall have only direct entrance which shall be external.(ii)For the purpose of cleaning, access shall be provided to all [water seal latrines] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.] and service urinals from a public road and such accesses shall in no case be less than 75 cm. wide through a building.(iii)Every [water seal latrine] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.] should have a minimum floor area of 2 sq. metres and a minimum width of 1 metre.(iv)It shall not be less than 30 metres from any wall, spring, or stream of water, used or likely to be used by human beings for drinking or domestic purposes, for the manufacture or preparation of articles of food or drink for human consumption, or for the cleaning of vessels, and otherwise in such a position so as not to render any such water liable to pollution.(v)It shall be provided with a sufficient opening for lighting and ventilating as near the top as practicable and communicating directly with the external air.(vi)Every [water seal latrine] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.] or service urinal shall be so constructed that when the outer door thereof is open the seat shall not be visible from a road or other public place.(vii)The floor shall be of non-absorbent material, which shall in every part, including the part beneath the seat, be not less than 75 mm. above the surface of the adjoining ground level and have a fall or inclination towards the exterior of the room of not less than 1 in 10.(viii)The receptacle for faecal matter in the case of [water seal latrine] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.], etc. (hereinafter in these bye-laws called the "the receptacle") shall be of non-absorbent material.(ix)The receptacle shall be of a sufficient capacity so as to hold excreta, etc. for one day.(x)The [water seal latrine] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.] and service urinal walls shall be rendered with a non-absorbent material such as cement plaster (1 : 2) upto a height of at least 1.20 metres above the floor level,(xi)The latrine and urinal slope to a drain should be provided in such a way that the liquid will flow off quickly.(xii)Every [water seal latrine] [Substituted for the words 'service latrine' vide Notification, dated 7.4.1995.] and service urinal shall be provided with a drain which shall be constructed of glazed pipes or other impervious material and shall connect the floor of the latrine or urinal with a public drain or if in the opinion of the committee this is not practicable, with a property designed soakage pit, which shall further be provided as per the provisions of these bye-laws.Cesspool



## **60. Proximity to building.**

- Every person shall provide a cesspool at a distance of at least 25 metres from a dwelling house or from any public, religious, educational building or any building in which any person may or may be intended to be employed in any manufacture, trade or business, or any place of recreation, or any public thoroughfare.

## **61. Proximity for water supply.**

- Every person shall provide a cesspool in connection with any building or other premises and shall not construct such a cesspool within a distance of 30 metres from any percolation well, tube-well, water course or stream used or likely to be used for human consumption or otherwise in such a position as to render any such water liable to pollution.

## **62. Open drains to be provided for buildings not within 30 metres of a municipal drain.**

- As far as practicable buildings with this description shall be drained by the open drain in accordance with the provisions hereafter contained :-(1)The house drain if open, shall discharge by means of a 15 cm. by 15 cm. stoneware gully trap into the cesspool.(2)All cesspools shall be closely covered and fitted with a cast iron airtight frame and cover, provided with adequate means of ventilation.(3)All cesspools shall be provided with adequate means of access for cleaning each manhole being fitted with suitable airtight cast iron frame and cover.

## **63. Discharge from washing places.**

- The sullage from all washing places shall be discharged among vegetations or used for gardening purposes but if this is impossible then the sullage shall discharge into a cesspool having capacity of at least 0.14 cu.m.

## **64. Capacity of cesspool.**

- The capacity of cesspool shall be calculated from below the bottom of the inlet drain.

## **65. Ventilation of cesspool.**

(1)Every cesspool shall be ventilated by a cast iron or galvanized iron pipe not less than 75 mm. in diameter or equivalent sectional area.(2)The vent pipe shall be protected at the top by a wire dome and shall be:-(a)carried at least 4.50 m. higher than any skylight or window situated within a distance of 12 m. therefrom.(b)carried at least 1.50 m. higher than eave or the roof, if affixed to a wall supporting the eave ; and(c)erected or affixed so as to cause the least practicable nuisance or inconvenience to the inhabitants of the neighbourhood.

## **66. Cesspool for latrine to be separated.**

- There shall be a cesspool for the latrine, separated from that for the washing places and it shall have a capacity of at least 0.84 cu. m. per seat or plot, with a minimum of 0.7 cu. m.

## **67. Location of cesspool.**

- Every cesspool must be placed in a position convenient for the access of committee carts.

## **68. Construction of cesspool.**

- Every cesspool shall be constructed of brick work in cement mortar and internally plastered with a 25 mm. coat of cement and sand (1 : 2). The work shall be brought up to 15 cm. above the surface of ground and provided with a manhole with suitable cover.

## **69. Floor of ashpits.**

(1)The floor of every ashpit, or receptacle for refuse shall be flagged or paved with hard tiles or other non-absorbent material, and it shall be so constructed that it is not less than 15 cm. in every part thereof above the level of the surface of the ground adjoining the ashpits or receptacle for refuse and that the ashpits or receptacle for refuse shall have a fall towards the washout drain of not less than 1 : 24.(2)No ashpits or receptacle of refuse shall be connected directly with the drains.Horse Stables (Public or Private)

## **70. Floors of horse stables.**

- The floor of every horse stable shall be paved over the whole area with suitably dressed stone or, other suitable material laid on 15 cm. bed of good lime of cement concrete. The paving shall have a slope of at least 1 in 48 towards the channel.

## **71. Channels for horse stables.**

(1)A half round channel 30 cm. wide of suitably dressed blue stone or other suitable material shall be constructed which shall meet the paving and shall be at right angles to the stable.(2)The channel shall have a longitudinal slope of at least 1 in 100 at one point or more as may be selected and at each of such point a 5 cm. stoneware gully traps fitted with a horizontal and vertical cast iron-gratings shall be fixed.

## **72. Gully traps for more stables.**

- All the gully traps shall be connected by a 15 cm. stoneware pipe drain or drains with an inspection chamber complete with a 15 cm, intercepting trap constructed on a line of 15 cm. stoneware drain connected with the street sewer.

### **73. Bye-laws for pipe drains to be complied with.**

- The construction of an inspection chamber, the laying of the pipe drain and connection with the street sewer shall be in accordance with bye-laws laid down for pipe drains.

### **74. Floor for cattle stables.**

- The floor of every cattle stable shall be paved over the whole area with suitable dressed blue stone or other suitable material laid on 15 cm. bed of good lime or cement concrete. The paving shall be sloped at a gradient of at least 1 in 48 towards the channel hereinafter described.

### **75. Channel for cattle stables.**

- Behind every range of stall of half round channel 30 cm. wide shall be formed with a slope of at least 1 to 48 to every trap hereinafter described.

### **76. Catchpit for cattle stables.**

- The channel shall discharge into a catchpit through a glazed S.W. gully trap. The catchpit shall be 0.90 m. by 1.20 m. by 1.50 m. deep. It shall be covered with a strong cast iron cover fitted into a rivetted frame. The catchpit shall be placed immediately at the point of discharge or lowest point of the channel and connected with the pipe drain within the premises by means of an inspection chamber built complete with 15 cm. intercepting sewer trap.[77. Granting to be provided for catch pits. - A horizontal and a vertical cast iron granting made of bars with spacing not more than 12 mm shall be fixed in the catch pits.] [Substituted by Haryana Notification No. S.O. 120/H.A. 24/1973/Sections 200 and 214/2007. dated 11.12.2007.].

### **78. Bye-laws for pipe drains to be complied with.**

- The laying of the pipe drain, the construction of the inspection chamber, and the connection with the street sewer shall be subject to the bye-laws for pipe drains.

### **79. Registration of plumbers.**

- A plumber who is holding any of the qualifications laid down in schedule I and is desirous of registration with the Committee shall do so in accordance with the provisions of Appendix.

### **80. Renewal.**

- The licence/registration issued under bye-laws shall be got renewed every year from the committee on payment of annual renewal fee as prescribed in Appendix.

## 81.

[Omitted by Haryana Notification No. GSR 34/HA 24/73/Section 200 and 214/84, dated 27.4.1984.]

## 82.

[Omitted by Haryana Notification No. GSR 34/HA 24/73/Section 200 and 214/84, dated 27.4.1984.]

## 83. Penalties.

(1) Any person who commits a breach of these bye-laws shall on conviction be punishable with a fine which shall not be less than Rs. 25 and more than Rs. 200 and where the breach is a continuing breach with a further fine of Rs. 10 for every day after the first during which the breach continues. (2) That in case the bill is not paid by the due date, 10% penalty will be charged and if the bills are not paid for a further fortnight the connection shall be disconnected without any further notice.

## 84. Repeal.

- Any bye-laws applicable to the Committee, which is in force immediately before the commencement of these bye-laws are hereby repealed: Provided that any order made or action taken under the bye-laws so repealed shall be deemed to have made or taken under the corresponding provisions of these bye-laws. Form A (See Bye-laws 4) Municipal Committee

\_\_\_\_\_ (To be submitted in duplicate) Drainage of Premises Application for  
Drainage of Premises (See Bye-law 4) To The Executive  
Officer/Secretary \_\_\_\_\_ Committee

\_\_\_\_\_ Sir, I/We, the undersigned, hereby make application for permission to  
drain the premises known as \_\_\_\_\_. Street

\_\_\_\_\_ House tax assessment No.

\_\_\_\_\_ The sanitary arrangement and drains of the said  
premises are shown on the accompanying plans and sections in triplicate and a description of the  
specifications of work/material used is also appended in Form 'B' in triplicate. The premises are  
open to inspection by the officers of the Committee. I/We undertake to carry out the work in  
accordance with the provisions of the drainage and sanitary installation bye-laws and to pay the  
Committee the cost of connection to the Committee's sewer at the rate given in the Committee's  
schedule of fees. Signature of applicant and full name Date Address Name and address of plumber  
carrying out the work. Note :- The application shall be signed by the owner of the premises and shall  
be countersigned by the licensed plumber. Form B (Annexure to Form A) (See Bye-law 8) Municipal  
Committee..... (To be submitted in triplicate) Drainage of Premises (To be filled in by applicant or  
person/s depositing plans) N.B.- Only new or altered work to be described in this form. Copies of  
bye- laws relating to drainage work may be obtained from the Committee's office on payment.

**1. Separation of rain-water and foul-water.**

**2. Rain-water drains, curbs and points of discharge.**

**3. Rain-water gutters, pipes or spots where discharging.**

**4. Open foul-water drains, materials, sizes, curbing and other main places, verandahs, latrines and fitting discharging into such drains.**

**5. Silt-catcher and grating, size and position.**

**6. Drains :-**

- (a) Main Sewage Drains { fallsize
- (b) Branch Sewage Drains (c) Materials, (d) Method of joining.

**7. Bedding of pipes :-**

- (a) Method of Bedding. (b) Thickness and width of beds of concrete. (c) Thickness of concrete round pipes.

**8. Protection of drain laid under wall.**

**9. Traps, description of Interceptor Lavatory waste pipes.**

Bath waste pipes. Sink. G. Gully traps. Water-closet traps. Grease traps. Slop sink. Urinal. Others.

**10. Manholes and inspection chambers.**

Thickness of walls. Description of bricks. Description of rendering channels. Description of invert channels. Depth of chambers. Size and description of cover and manner of fixing.

**11. Ventilation of drain :-**

- (a) Position Height above nearest ground level, (b) Outlet shaft position of terminal at top.

**12. Soil pipe, waste pipe and ventilating pipe connections.**

- (a) Lead and Iron pipes. (b) Lead pipe of trap with cast iron pipe. (c) Stoneware pipe or trap with lead pipe. (d) Lead soil pipe or trap with stoneware pipe or trap. (e) Cast iron pipe with stoneware drain. (f) Stoneware trap with cast iron soil pipe.

### **13. Ventilation of water closet trap sink laboratory and other traps materials and supports.**

### **14. Water closets (Apartment) :-**

(a) At or above ground level. Approached from. Floor material. Floor fall towards door. Size of window made to open. Position of same. Means of constant ventilation. Position of same. (b) Water closet apparatus :-

Description of pan, basin, etc. { kindCapacity

Flushing cistern. Material of flushing pipe. Flushing of pipe. Internal diameter. Union with basin.

### **15. (a) Number and description of sanitary fittings in room and rooms in which they are to be installed.**

(b) Capacity and position of water storage tanks. (c) Size and number of draw off taps and whether taken off storage tanks or direct from main supply. (d) Details of draw off taps i.e. whether they are of plain screw down pattern or "waste note." Description of any other sanitary work to be carried out not included under above headings.

### **16. Depth of sewer below surface of street.**

### **17. Level of invert of house drain at point of junction with sewer. Level of invert sewer at point of junction of house drain. Distance of nearest manhole on sewer from the point at which the drain leaves the premises.**

### **18. Schedule of pipes.**

Materials Diameter Weight Method of Joining. Sub-Soil drains Main Sewage drains Branch Sewage drains Soil Pipes Ventilating Pipes Other than soil pipes Waste pipes Rain water pipes Anti syphon pipes Signatures of the Licensed Plumber. Name and address of the Licensed Plumber. Form 'C' (See Bye-law 10) Municipal Committee \_\_\_\_\_ (To be submitted in duplicate) Drainage Of Premises Form For Intimating Intention To Cover Up The Work To The \_\_\_\_\_ Committee \_\_\_\_\_ Sir, I/We the undersigned, hereby give you notice of my/our intention to cover up the drainage work on \_\_\_\_\_ [days] [This notice must reach the Committee's office seven clear days before the works intended to be covered up.] at \_\_\_\_\_ time in the premises known as [\_\_\_\_\_] [Insert the number or name of the house and the same of street or road.] and request for inspection and approval of the same. The work was sanctioned by the committee, -vide their resolution No. \_\_\_\_\_ date \_\_\_\_\_ The sum of Rs. 10/- being inspection fee has been paid -vide C.R.No. \_\_\_\_\_ dated \_\_\_\_\_ dated this \_\_\_\_\_ day of \_\_\_\_\_

{ Signature of person in charge of the drainage of premises }

Address

{ Name of the owner of the house and addresses }

No \_\_\_\_\_ Dated \_\_\_\_\_ 19

Transmitted to the Engineer \_\_\_\_\_ Committee \_\_\_\_\_ for favour of disposal. Executive Officer/Secretary \_\_\_\_\_ Committee \_\_\_\_\_ Certified that the above works have been inspected and approved. Dated \_\_\_\_\_ Engineer, Committee, Form 'D' (See Bye-law 11) Municipal Committee. .... (To be submitted in duplicate) Drainage of Premises Form For Licensed Plumber's Completion Certificate Certified that I/We have completed the plumbing work of drainage and sanitation system for the premises and detailed below. This may be inspected approved and connection given. Ward

No \_\_\_\_\_ Street \_\_\_\_\_ Locality \_\_\_\_\_ BL

No \_\_\_\_\_ House No. \_\_\_\_\_ Details of

work \_\_\_\_\_ The work was sanctioned by the

Committee \_\_\_\_\_ Vide \_\_\_\_\_ Signature

of the owner Name and

address \_\_\_\_\_ Signature

of Licensed Plumber Name and address \_\_\_\_\_ Dated

\_\_\_\_\_ Committee's Report Certified that the plumbing works of drainage and sanitary installation system for the premises, have been laid, applied, executed in accordance with the provisions of drainage and sanitary installation bye-laws. Drainage connection to the main will be made on \_\_\_\_\_

Date \_\_\_\_\_ The Committee

Table 1 Office Building (See Bye-law 26) For accommodation other than for Principals

Sr.No.	Fitments	For Male Personnel	For Female Personnel
1	2	3	4
1.	Water Closets	for every 25 persons or part thereof	1 for every 15 persons or part thereof
2.	Ablution taps	1 in each water closet	1 in each water closet, 1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closets and urinals
3.	Urinals	Nil, upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons From 101 to 200 persons add at the rate of 3 per cent; For over 200 persons add at the rate of 2.5 per cent	
4.	Wash basins	1 for every 25 persons or part thereof	
5.	Drinking water	1 for every 100 persons with a minimum of one on each floor	

pountains

6. Baths Preferably 1 on each floor
7. Cleaner's sink 1 per floor, minimum, preferably in or adjacent to sanitaryrooms

Table 2Factories(See Bye-law 26)

Sr. No.	Fitments	For Male Personnel	For Female Personnel
1	2	3	4
1.	Water closets	1 for 1-15 persons2 for 16-35 persons3 for 36-65persons4 for 66-100 persons	1 for 1-12 persons2 for 13-25 persons3 for 26-40persons4 for 41-57 persons5 for 58-77 persons6 for 78-100 persons
		From 100 to 200 persons add at the rate of 3 per cent	From 101 to 200 persons add at the rate of 5 per cent
		From over 200 persons add at the rate of 2.5 per cent	From over 200 persons add at the rate of 4 percent
2.	Ablution taps	1 in each water closets 1 water tap with draining arrangementsshall be provided for every 50 persons or part thereof in thevicinity of water closets and urinals	1 in each water closets 1 water tap with draining arrangementsshall be provided for every 50 persons or part thereof in thevicinity of water closets and urinals
3.	Urinals	Nil, upto 6 persons1 for 7-20 persons2 for 21-45persons3 for 46-70 persons4 for 71-100 persons	
		From 101-200 persons, add at the rate of 3 per centForover 200 persons, add at the rate of 2.5 per cent	
4.	Washing taps with drinking & draining arrangements	1 for every 25 persons or part thereof	
5.	Drinking water fountains	1 for every 100 persons with a minimum of one on each floor	
6.	Bath (preferably showers)	As required for particular trades or occupations	

Note. - For many trades of a dirty or dangerous character, more extensive provisions are required by law.Table 3(See Bye-law 26)(Sanitation Requirements for Cinema, Theatres and Public Assembly Halls)

Fitments	For Male Public	For Female Public	For Male Staff	For Female Staff
			1 for 1-15 persons	



Water Closet	... 1 per 100 persons up to 400 persons	2 per 100 persons up to 200 persons For over 200 persons add at the rate of 1 per 250 persons or part thereof	2 for 16-35 persons	1 for 1-12 persons 2 for 13-25 persons
Ablution taps	... 1 in each water closet  1 water tap with drainaing arrangements shall be provided forevery 50 persons or part thereof in the vicinity of waterclosets and urinals	1 in each water closet	1 in each water closet	1 in each water closet
Urinals	... 1 for 50 persons of part		*Nil up to 6 persons1 for 7-20 persons2 for 21-47persons	
Wash Basins	... 1 for every 200 persons or part thereof	1 for 200 persons or part thereof	1 for 1-15 persons2 for 16-35 persons	1 for 1-12 persons2 for 13-25 persons

\*Note. - It may be assumed that two-third of the number are males and one-third females. Table 4(See Bye-law 26) Art Galleries, Libraries and Museums

Sr. No.	Fitments	For Male Public	For Female Public	For Male Staff	For Female Staff
1	2	3	4	5	6
1.	Water Closets	... 1 per 200 persons up to 400 persons. For over 400persons, add at the rate of 1 per 250 persons or thereof	1 per 100 persons up to 200 persons. For over 200 persons addat the rate of 1 per 150 persons or thereof	1 for 1-15 persons2 for 16-35 persons	1 for 1-12 persons2 for 13-25 persons
2.	Ablution taps	... 1 in each water closet  1 water tap with draining arrangements shall be provided forevery 50 persons or part thereof in the vicinity of waterclosets and urinals	1 in each water closet	1 in each water closet	1 in each water closet
3.	Urinals	... 1 per 50 persons	...		...

					*Nil up to 6 persons 1 for 7-20 persons 2 for 21-45 persons	
				1 for every 200 persons or part thereof. For over 200 persons add at the rate of 1 per 150 persons or part thereof		
4.	Wash basins	... 1 for every 200 person or part thereof. For over 400 persons, add at the rate of 1 per 250 persons or part thereof			1 for 1-15 persons 2 for 16-35 persons	1 for 1-12 persons 2 for 13-25 persons
5.	Cleaner's sink	----- 1 per floor, Minimum-----				

Note. - It may be assumed that two-third of the number are males and one-third females. Table 5 (See Bye-law 26) Sanitation Requirements for Hospitals (Indoor Patient Ward) For Males and Females

Water Closet	A minimum of 2 (1 European type and 1 Indian type) for every 16 No. of beds or part thereof.
Ablution tap	1 in each W.C. plus one water tap with draining arrangements in the vicinity of W.C's and Urinals for every 50 persons or part thereof.
Wash Basins	2 upto 30 beds, add 1 for every additional 30 beds or part thereof.
Baths	1 bath with shower for every 8 No. of beds or part thereof.
Bed Pan Washing Sinks	1 for each ward
Cleaner's Sink	1 for each ward
Kitchen Sinks and dishwasher (where kitchen is provided)	... 1 for each ward).

	Male	Female
Water Closet	1 for every 100 persons or part thereof	2 for every 100 persons or part thereof
Ablution tap	1 in each W.C.  In the vicinity of W.C.'s and Urinals one water tap with draining arrangements shall be provided for every 50 persons or part thereof.	1 in each W.C.
Urinals	1 for every 50 persons or part thereof	...
Wash Basins	1 for every 100 persons or part thereof	1 for every 100 persons or part

thereof.

Table 6 Sanitation Requirements or Hospitals (See Bye-law 26) (Administrative Buildings Medical Staff Quarters Nurses Home)

Fitments	For Administrative
	For Male Personnel
Water Closets	1 for every 25 persons or part thereof
Ablution taps	One in each W.C.
Urinals	In the vicinity of W.C.'s and urinals a water tap with draining arrangement shall be provided for every 50 persons or part thereof Nil, upto 6 persons 1 for 17 to 20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons; from 101 to 200 add at the rate of 3% for over 200 and @ 2½%
Wash basins	1 for every 25 persons or part thereof
Baths with shower	1 on each floor

Note. - Cleaner's Sink Minimum of 1 per floor shall be provided. Table 7 Hotels (See Bye-law 26)

Sr. No.

Fitm

For Males

1

For  
Fer

2

1.

Wa  
Clo

2.

Abl  
tap

1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of waterclosets and urinals

3.

Uri

4.

Wa  
Bas

5.

6.

7.

Note. - It may be assumed that two-thirds of the number are males and one third female. Table 8 Restaurants (See Bye-law 26)

Sr. No.	Fitments	For Male Public	For Female Public	For Male Staff	For Female Staff
1.	Water Closets	1 for 50 seats upto 200 seats. For over 200 seats, add at the rate of 1 per 100 seats or part thereof	1 for 50 seats upto 200 seats. For over 200 seats, add at the rate of 1 per 100 seats or part thereof	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
2.	Ablution taps	1 in each water closet	1 in each water closet	1 in each water closet	1 in each water closet
1 water tap with draining arrangement shall be provided for every 50 persons or part thereof in the vicinity of					

waterclosets and  
urinals

3.	Urinals	1 per 50 seats	Nil, upto 5 persons
4.	Wash basins	1 for every water closet provided	
5.	Kitchens sinks and dishwashers	1 in each kitchen	
7.	Slop or service sinks	1 in the restaurant	

Note. - It may be assumed that two-third of the number are males and one-third females. Table  
9(See Bye-law 26) Sanitation requirement for Schools Sanitation

Fitments

---

For Boys

W.Cs, (Water Closets)

Ablution tapes

Wash Basins

Urinals

Baths

Drinking water fountains

Note. - Cleaner's sink at least 1 per floor shall be provided. Table 10 Schools (See Bye-law 26)

Sr. No.

---

For Boys

1

1.

2.

3.

4.

5.

6.

7.

Note. - For teaching staff, the schedule of fitments to be provided shall be the same as in the case of office buildings (See Table 1).Table 11Hostels(See Bye-law : 26)

Sr. No.

---

For Males



1.

2.

3.

4.

5.

6.

Appendix(See Bye-law 79)

**1. An application for the grant of licence shall be submitted to the committee in the form E. When such application has been sanctioned the applicant shall be called upon to pay the required fee and deposit the security required in para 2 and on receipt of the amount of the fee and the security, and not otherwise, licence shall be issued in the prescribed form:**

Provided that if an applicant fails to pay the fee and deposit the necessary security within one month from the date on which intimation was sent to him that his application has been sanctioned, no licence shall be issued to him except in pursuance of a fresh application and his original application shall be deemed to have been refused. When an application for a licence is refused, the reasons for such refusal shall be communicated to the applicant.

**2. Annual licence fee at the following rates shall be paid for each licence and in addition, every plumber shall deposit a security of Rs. 400 with the committee for the due performance of his obligations to the committee under the drainage and water supply bye-laws :-**

(i) For Class I committee      Rs. 75

(ii) For Class II committee    Rs. 45

(iii) For Class III committee   Rs. 25

**3. Licences will be granted to firms or individuals of sufficient standing, who employ licensed plumbers and who are considered by the committee, as competent to undertake the execution of water borne sanitary installation and water supply works.**

**4. (i) No licence shall be issued for a period of more than one year and will be valid only upto the 31st day of March next following the date of issue.**

(ii) Every such licence shall be in form L. 3 enclosed and shall be granted subject to the conditions printed on the reverse of the form. (iii) A licence may, at any time, after due notice has been given to the licensee, be cancelled for a breach of any condition on which it was granted. In the event of such cancellation the licensee shall not be entitled to any refund of any portion of licence fee. (iv) The licence shall not be transferable. On the licensee ceasing to work as a licensed plumber for any reason other than that his licence has been cancelled for a breach of the condition of the licence, he shall surrender his licence for cancellation and the committee shall refund to the licensee such

portion of the licence fee as to cover the unexpired portion of the licence.(v)No licence shall be re-issued or endorsed for continuance when its term has expired. On the expiry of the period for which the licence was granted the licensee shall, if he still requires a licence surrender his old licence within 30 days of its expiry and apply for a new licence.Provided that an application for grant of new licence, as aforesaid shall in all cases be made to the committee by the last date of February of each financial year and the committee shall ordinarily issue the licence not later than the 10th of April of the following year.

## **5. The licence shall be renewed on payment of following fee :**

For Class I committee Rs. 50

For Class II committee Rs. 20

For Class III committee Rs. 10

## **6. Every licensed plumber shall be bound by the following conditions :**

(a)The plumber in all matters in which he may be employed, shall afford every assistance in his power to the committee and their officers in carrying out and enforcing the rules and orders for the time being in force.(b)The plumber shall in every work in which he may be employed as far as his employment extends, comply with the provisions of this appendix and such orders may be issued by the committee.

## **7. Any provision applicable to the plumbers and which is in force immediately before the commencement of these provisions is hereby repealed.**

Provided that any order made or action taken under the provisions so repealed shall be deemed to have been made or taken under the corresponding provision of this appendix.

Form EApplication for Grant of Plumber's LicenceToThe Executive  
Officer/Secretary,-----Committee-----Application for Grant of Plumber's LicenceDear  
Sir,I hereby apply for a licence to work as a plumber in the \_\_\_\_\_ committee  
\_\_\_\_\_ during the period from \_\_\_\_\_ to 31st March, 19.

**2. I have read the rules for the grant of plumber's licence and am fully conversant with all the provisions and directions embodied in the filtered water supply and drainage bye-laws of the committee and the rules and regulations framed thereunder.**

**3. I hereby accept without reserve all terms and conditions applicable to the grant of this licence as laid down in the rules and further I bind myself to abide by all the provisions of the water supply and drainage and Sanitary Installation bye-laws and rules and regulations framed thereunder.**

**4. I undertake to carry out and obey, at all times all the orders and instructions given to me by the \_\_\_\_\_ committee or its officers in the discharge of my obligations responsibilities under this licence and I hereby agree to pay a sum of Rs. \_\_\_\_\_ to the committee or any other sum of money that may become due to the committee on account of any default on my part. In case of my failure to pay I fully authorise \_\_\_\_\_ committee to recover such sum of money from my security deposit.**

**5. I undertake to remit rupees \_\_\_\_\_ in payment of :-**

(1)Licence fee for the period from \_\_\_\_\_ to \_\_\_\_\_ (2)Security deposit Rupees 400as soon as I am informed that the grant of a licence to me has been approved.

**6. I give below the full particulars required.**

Date \_\_\_\_\_ Yours faithfully,  
 Name of applicant in full \_\_\_\_\_ Father's Name \_\_\_\_\_  
 \_\_\_\_\_ Designation \_\_\_\_\_  
 \_\_\_\_\_ Caste \_\_\_\_\_  
 \_\_\_\_\_ Trade \_\_\_\_\_  
 \_\_\_\_\_ Address \_\_\_\_\_  
 \_\_\_\_\_ Form No. L. 3

PAGE

BookNo. 1

BookNo. 1 Not Transferrable

COUNTERFOIL FOR LICENCE

No. \_\_\_\_\_ LICENCE

\_\_\_\_\_ Committee \_\_\_\_\_

Municipal Committee \_\_\_\_\_

| Dated \_\_\_\_\_ 19

Name of Licensee \_\_\_\_\_

Whereas \_\_\_\_\_

Father's Name \_\_\_\_\_

has paid to the \_\_\_\_\_ Committee Rs. \_\_\_\_\_

Address \_\_\_\_\_

he is permitted to \_\_\_\_\_

Caste \_\_\_\_\_

within the Committee of \_\_\_\_\_

Trade \_\_\_\_\_

from 1st \_\_\_\_\_ to \_\_\_\_\_

DESCRIPTION OF LICENSEE

Purpose of Licence \_\_\_\_\_

\_\_\_\_\_

Date of Licence \_\_\_\_\_

Name Father's Name Caste Trade Address Remarks

Period of Licence \_\_\_\_\_

Amount paid \_\_\_\_\_

\_\_\_\_\_

| Signature of Licensing Officer

Progressive TotalRs. Ps. \_\_\_\_\_ Signature of Licensing OfficerNote. This licence is subject to the conditions prescribed in the appendix for the grant of licences to Plumbers. The conditions are given in brief on the reverse. [See Below]Conditions[in respect of Licence in Form L 3 ](1)This licence may, at any time after due notice has been given to the licence be cancelled for breach of any condition on which it was granted. In the event of such cancellation the licensee shall not be entitled to any refund of any portion of the licence fee.(2)This licence is not transferrable. On the licensee ceasing to work as licensed plumber for any reason, other than that his licence has been cancelled for a breach of the condition of the licence, he shall surrender this licence for cancellation and the Committee shall refund such portion of licence fee as may be deemed to cover the un-expired period of the licence.(3)On the expiry of the period for which this licence was granted the licensee shall if he still requires a licence surrender the licence and apply for a new licence.(4)A Plumber, in all matters in which he may be employed shall afford every assistance in his power to the committee and its officers in carrying out and enforcing the rules and orders for the time being in force.(5)A Plumber, shall in every work in which he may be employed as far as his employment extends, comply with the rules in force at the time and such orders as may be issued by the committee and are applicable to the circumstances of the case.

I

(See bye-law 79)Qualification of PlumberOne of the following or higher qualification shall be essential for a plumber-(1)Qualification approved by the Institute of Engineers for its associate membership.(2)Diploma in Civil Engineering from any College or Institution recognised by Government of Haryana, with atleast 3 years experience in Sanitary Engineering works.(3)Plumber of atleast 5 years practical experience and who has passed the test conducted by the P.W.D. Public Health Branch, Haryana.

II

(See bye-law 24)Estimation of Maximum Flow of Waste Water

**1. The maximum flow in a building drain or a stack depends on the probable maximum number of simultaneously discharging appliances. For the calculation of this peak flow certain loading factors have been assigned to appliances in terms of fixture units considering their probability and frequency of use. These fixture unit values are given in Table I.**

**2. For any fixture not covered under Table 1, Table 2 may be referred for deciding their fixture unit rating depending on their drain or trap size.**

**3. From Tables 1 and 2, the total load on any pipe in terms of fixture units may be calculated knowing the number and type of appliances connected to this pipe.**

**4. For converting the total load in fixture units to the peak flow in litres per minute, Fig. 1 is to be used.**

**5. The maximum load in fixture units permissible on various recommended pipe sizes in the drainage system are given in Tables 3 and 4.**

**6. Results should be checked to see that the soil, waste and building sewer pipes are not reduced in diameter in the direction of flow. Where appliances are to be added in future, these should be taken into account in assessing the pipe sizes by using the fixture units given in Tables 3 and 4.**

**7. The maximum rate of flow shall be taken as thrice the average rate, allowance being made in addition for any exceptional peak discharges. A good average rule is to allow for a flow of liquid wastes from buildings at the rate of 0.03 m<sup>3</sup> per minute per 100 persons based on a water consumption of 135 litres per head per day.**

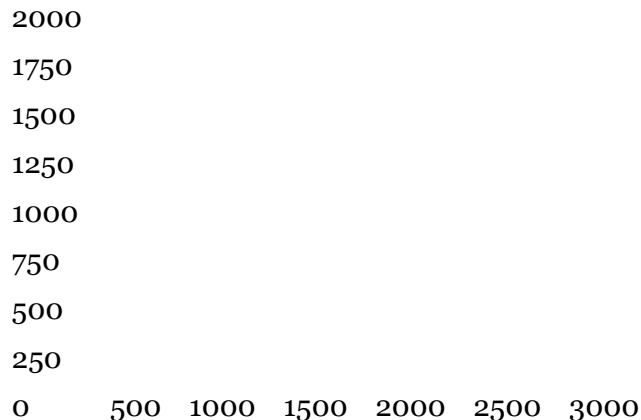


Fig. 1 Peak Flow Load Curves

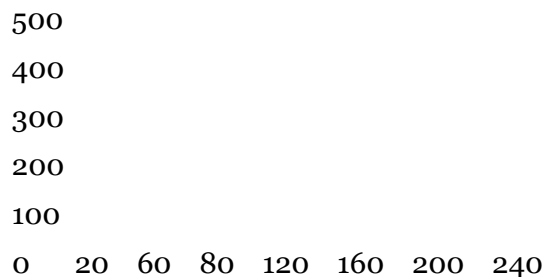


Table 1 Fixture Units for Different Sanitary Appliances of Group

Sr. No.	Type of Fixture	Fixture Unit value as Load Factors
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1	2	3
1.	One bathroom group consisting of water closet, wash basin and bath tub or shower stall :	
	(a) Tank water-closet	6
	(b) Flush-valve water-closet	8
2.	Bath tub*	3
3.	Bidet	3
4.	Combination sink and tray (drain board)	3
5.	Drinking fountain	1/2
6.	Floor traps**	1
7.	Kitchen sink, domestic	2
8.	Wash basin, ordinary***	1
9.	Wash basin, surgeon's	2
10.	Shower stall, domestic	2
11.	Showers (group) per head	3
12.	Urinal, wall lip	4
13.	Urinal, stall	4
14.	Water closet, tank-operated	4
15.	Water-closet, value-operated	8

\*A Shower head over a bath tub does not increase the fixture unit value.\*\*Size of Floor trap shall be determined by the area of surface water to be drained.\*\*\*Wash basin with 32 mm and 40 mm trap have the same load value.

Table II Fixture Unit Values for Fixtures Based on Fixture Drain or Trap Size

Sr. No.	Fixture Drain on Trap size	Fixture Unit value
1	2	3
1.	30 mm and smaller	1
2.	40 mm	2
3.	50 mm	3
4.	65 mm	4
5.	75 mm	5
6.	100 mm.	6

Table III Maximum Number of Fixture Units that can be Connected to Branches and Stacks  
Maximum Number of  
Fixture Units\* that can  
be connected

Sr. No.	Diameter of Pipe	Any Horizontal Fixture Branch	One Stack of 3 Storeys in Height or 3 Intervals	More than 3 Storeys in Height
Total for stack				

Total at one storey or branch interval					
1	2	3	4	5	6
	mm				
1.	30	1	2	2	1
2.	40	3	4	8	2
3.	50	6	10	24	6
4.	65	12	20	42	9
5.	75	20	30	60	16
6.	100	160	240	500	90
7.	125	360	540	1,100	200
8.	150	620	960	1,900	350
9.	200	1,400	2,200	3,600	600
10.	250	2,500	3,800	5,600	1,000
11.	300	3,900	6,000	8,400	1,500
12.	375	7,000	..	..	..

\*Depending upon the probability of simultaneous use of appliances considering the frequency of use and peak discharge rate. Does not include branches of the building sewer. Table IV Maximum Number of Fixture Units that can be Connected to Building Drains & Sewers

Sr. No.	Diameter of Pipe	Maximum number of Fixture Units that can be connected to any portion* of the Building Drains or the Building Sewer					
		For Gradients					
		1/200	1/100	1/50	1/25		
1	2	3			4	5	6
	mm						7
1.	100	...			...	180	216
2.	150	...				700	840
3.	200	...			1,400	1,600	1,920
4.	250	...			2,500	2,900	3,300
5.	300	...			3,900	4,600	5,600
6.	375	...			7,000	8,300	10,000

\*includes branches of the building sewer.