

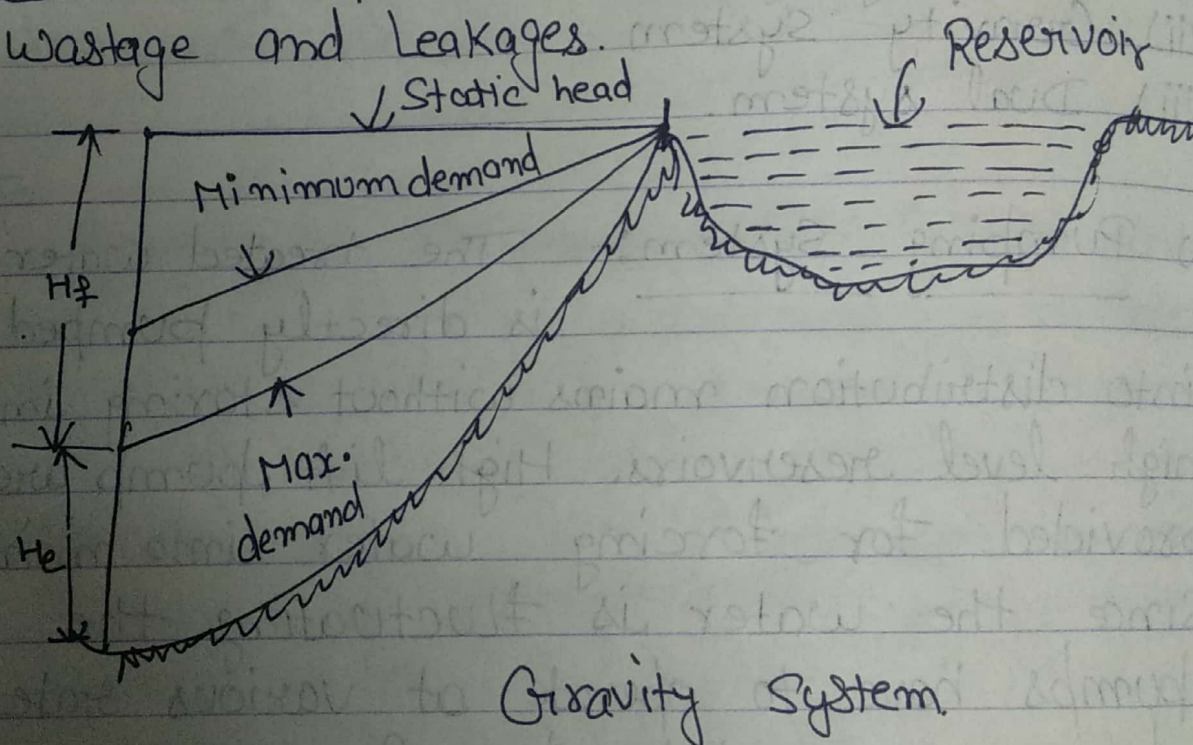
Water Distribution System:- Water distribution system manual here for free. Save time & costs, Reduce Complexity

Water Distribution system depending upon topography of the town, the water may be distributed by

- (i) Pumping System
- (ii) Gravity System
- (iii) Dual system.

(i) Pumping System:- The treated water is directly pumped into distribution mains without storing in high level reservoirs. High lift pump are provided for forcing water into mains. Since the water is fluctuating the pumps have to operate at various rate during the whole day. A continuous attendance is required at the pumping station to regulate the flow by running only the required number of pump out of total number of pump install.

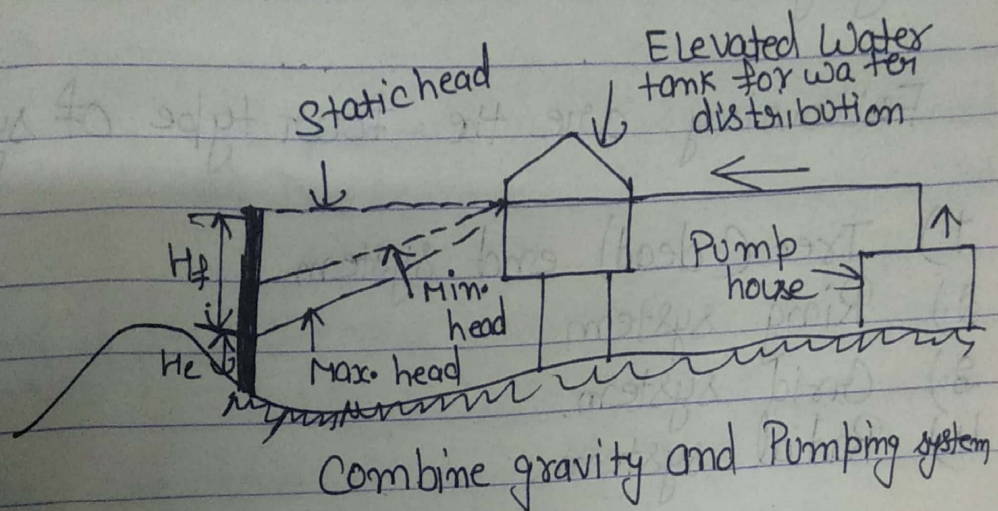
cii) Gravity System:- In this system the gravity force is used in distribution water from high level source to low level zone consumers. This eliminates pumping altogether. This method is economical, reliable and requires less maintenance. For proper working of the system the diff. of head available between service reservoir and low level zone should be sufficient to develop enough pressure at consumers tap. The method also minimises wastage and leakages.



Advantage:-

- Ci) Simple and economical
- cii) less maintenance
- Ciii) less leakage and wastage
- Civ) Reduction in Pipe size.

ciii) Dual System:- In this system the water after treatment is pumped and stored in the elevated services reservoir according to the supply hours the store water supply to the public by gravity.



Advantage:-

- 1.) This system is economical, efficient and reliable
- 2.) Pumping at constant rate increase efficiency.
- 3.) Special supervision is not required.
- 4.) Fire demand efficiency met with
- 5.) Water is available even during failure of pump and power.

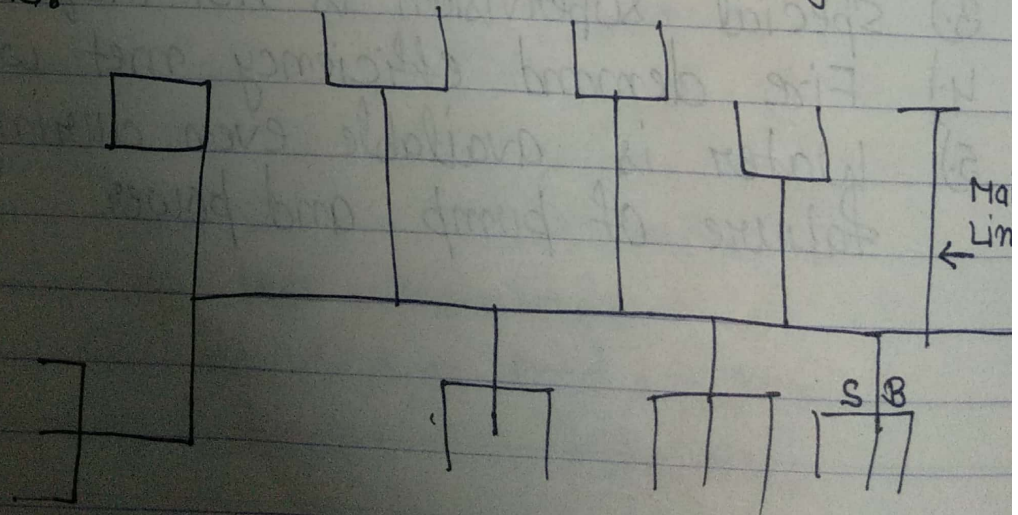
Layout of Distribution System

Distribution pipe are always laid below the roads prevailing in the town. Also they are laid on one side of the road keeping the other side of the road for laying of sewer in future.

Following are the four type of system.

- 1.) Tree (dead) end system
- 2.) Ring system
- 3.) Grid system.
- 4.) Radial system.

1.) Dead end system:- In this system there is one main pipe line is laid along main road and submain branches minor distributary are laid along the other road and streets connecting main road.



Advantage :-

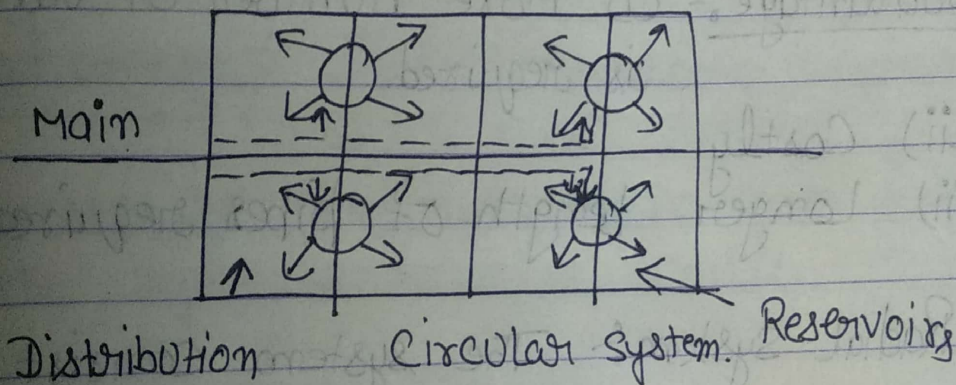
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- 1.) Cheap in initial cost
- 2.) Easy determination of pipe size
- 3.) Laying of pipe simple
- 4.) Less number of valve required.

Disadvantage :-

- 1.) This system can't meet fire demand
- 2.) Due to stagnation water get polluted

2.) Ring system:- In this system the area is divided into blocks. Water mains are laid around the blocks from all side.



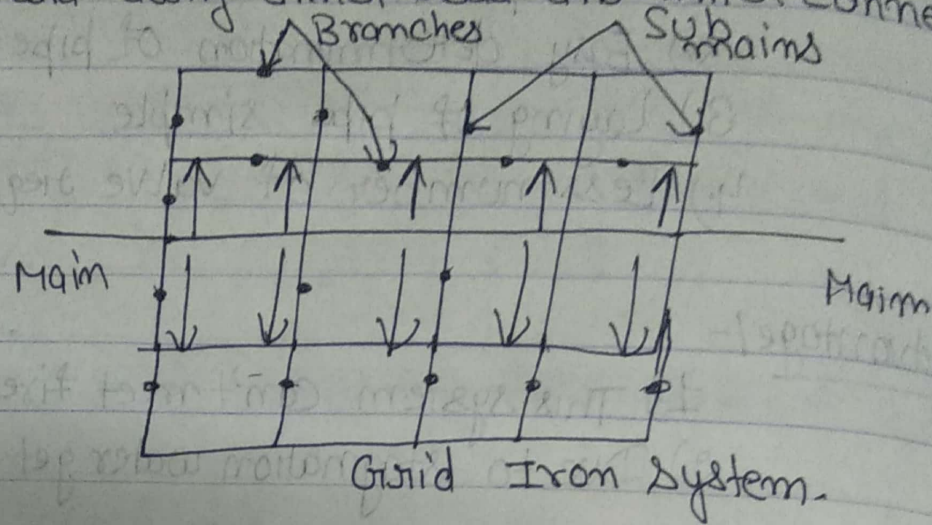
Advantage :-

- (i) Water is available for fire demand
- (ii) Designation of pipe is simple and easy.

Disadvantage :-

- (i) This system is costly to construct.
- (ii) It is required more length of pipe.

3.) Grid System:- A main pipe is laid along main road and submain branches are laid along inner road and inter connected



Advantage:- (i) There are no dead ends so water is not stagnated.

(ii) Size of pipe is reduced.

Disadvantage:- (i) More number of valves is required.

(ii) Costly

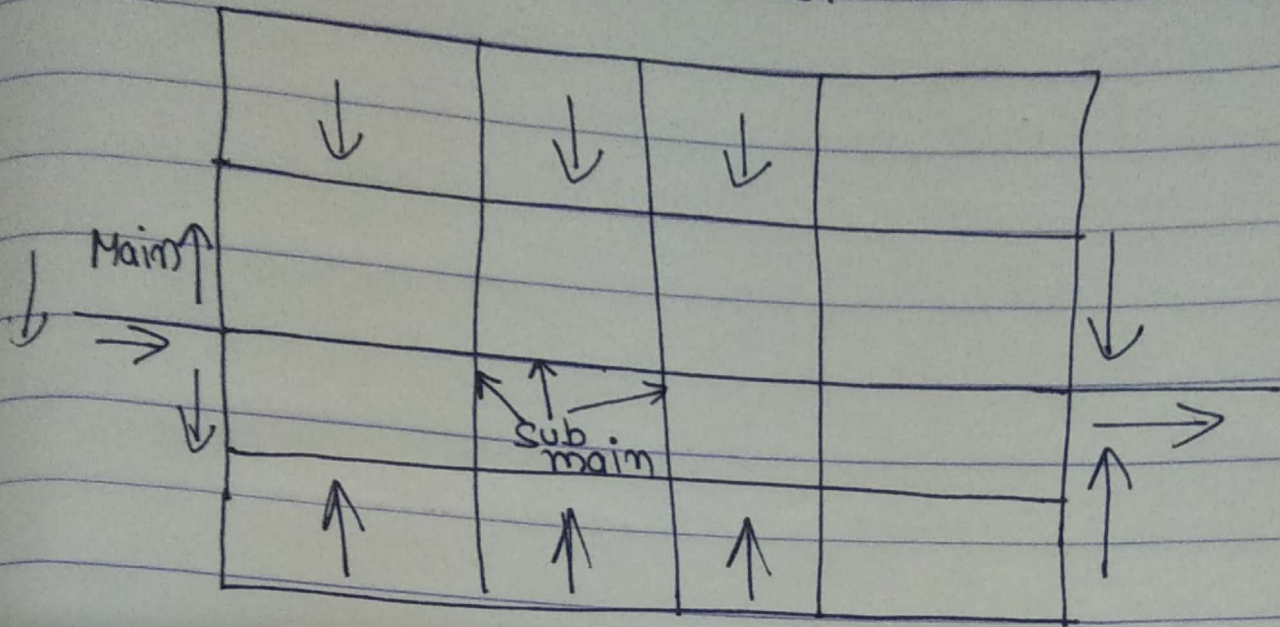
(iii) Longer length of pipes required.

4.) Radial System:- The system consist of laying pipeline radially end of the periphery of the area of the zone.

In the end zone elevated service reservoir is placed at it centre from where water is admitted to this radially

(7)

Laid pipe known as branches.



Advantage :-
Ci) Designation of pipe size is simple.
Cii) There is quick and efficient supply of water.

Disadvantage :- As every zone required a separate service reservoir required more and hence the systems become costly.