3.11. Yard Hydrant Systems

3.11.1. The requirements for Yard Hydrant System material, design, installation shall be as per **Table 9.13.** and Applicable general requirements of **Table 9.3.**

Table 9.13.: Yard Hydrant System Requirements

ITEMS	REQUIREMENTS
1. DEFINITION	i. A fire hydrant system is a water supply with a sufficient pressure and flow delivered through pipes around the protected premises, at open yards or along the fire access road in public spaces to a strategically located network of hydrant valves for fire-fighting purposes or to refill the Civil Defence water tankers. ii. Consideration should be given to establish Public Fire Hydrant System as part of UAE infrastructure. iii. Private Fire Hydrant Systems are the Hydrant network System provided on private property specifically to protect the buildings and structures within that particular property.
2. APPLICATION	i. Where a private Fire Hydrant network is required by the Civil Defence, the Fire Hydrant network system shall be 'dedicated'. Combined networks with irrigation, processes or domestic use are not allowed. ii. All new developments greater than 20,000 m^2 shall be provided with private yard hydrant system. iii. All storage, warehouse and factories, having a built area and/or storage yard exceeding 3600 m^2 shall be provided with a private yard hydrant system.
3. COMPONENTS	i. Fire Pumps, Control System, Fire Water Tank, Pipes, Fittings, Hydrant pillar with instantaneous coupling valve outlets, pressure gauges, Isolation valves, Hose, Signs. ii. All components of the yard hydrant system shall be listed and approved by Civil Defence. iii. System components shall be rated for the maximum working pressure to which they are exposed, but not less than 12.1 bar (175 psi).
4. HYDRANTS	i. Hydrants shall not be less than 6 inch. (152 mm) in diameter. ii. Hydrants shall be of wet type and above ground. iii. Hydrant outlet shall be of instantaneous coupling for hose connection.
5. FLOW AND PRESSURE	i. The minimum flow rate for each fire hydrant shall be 500 Gallons per Minute at 250 gpm per outlet (1900 LPM at 950 LPM/outlet). ii. Two number of fire hydrants shall be considered for hydraulic demand calculations which is, a total flow requirement of 1000GPM (3800 LPM) per single yard hydrant system. iii. The minimum Pressure required for the most remote fire hydrant in the system loop is 6.9 bars.
6. PIPING	i. Pipes and Fittings for the fire Hydrant system shall be approved by Civil Defence. See **Section 9.20.** ii. Steel piping shall not be used for general underground service. iii. The type and class of pipe for a particular underground installation shall be determined through consideration of factors such as Corrosion, working pressure and temperature, soil conditions, susceptibility of pipe to external loads of earth and traffic. iv. The underground Hydrant piping shall be HDPE (High Density Polyethylene), with a minimum of standard dimension ratio (SDR) 9.