



LAS VEGAS FIRE & RESCUE

Fire Engineering Division Information Sheet



Effective Date: March 23, 2023

CLV Ordinance #6821

The items listed are basic information only. Please refer to adopted codes for specific details. Codes are subject to change. Additional requirements may apply.

General Notes for Hydrants and Access

1. All work shall be done in strict accordance with the Las Vegas Fire and Rescue adopted Fire Code Ordinance # 6821 for Hydrant Specifications and Hydrant Installation Specifications.
2. Only fire hydrants that are on the Las Vegas Valley Water District's – Approved Products List are allowed to be installed.
3. A permit is required from Las Vegas Fire and Rescue for the installation of on-site water lines and fire hydrants. The permit and contractors material test certificate for underground piping form shall be obtained from the Fire Protection Engineer *before* commencement of work. IFC § 105.6.18
4. On any residential or commercial installations, fire hydrants shall be installed and fire apparatus access roads shall be maintained *before* commencement of any combustible construction. All fire hydrants shall be in good working order and shall be capable of delivering the required fire flow. IFC § 3311, § 3313
5. To identify the fire hydrant locations, the contractor shall place a blue reflective marker at the center line of the street adjacent to the fire hydrants. IFC § 507.5.7.3
6. All underground inspections, pressure and flush verifications of all fire hydrants and fire lines, shall be conducted *before* covering the lines. Center loading is acceptable for the hydro tests with prior Fire Prevention approval. IFC § 108
7. All on-site underground water mains and materials shall be U.L. listed, A.W.W.A approved and shall be rated for the appropriate working pressure. IFC § 507.2.1, NFPA 24
8. Painting of curbs, fire hydrants, pads, protection of fire hydrants from physical damage, and all other work necessary per plans shall be completed before approval by Las Vegas Fire and Rescue, Fire Prevention Division. IFC § 507
9. Private hydrants shall be painted RED. IFC § 507.5.7.1
10. Prior to the final occupancy, a fire flow test shall be witnessed by Las Vegas Fire and Rescue, Fire Prevention Division to verify availability of the required fire flow. IFC § 507
11. Fire hydrant spacing shall be as follows: IFC § C102
 - Residential – 500 ft unsprinklered; 600 ft sprinklered.
 - Commercial – 300 ft unsprinklered; 400 ft sprinklered.
12. Where the water mains are extended along streets or new streets are installed where fire hydrants are not needed for protection of the structures, fire hydrants shall be installed at a maximum of 1000 ft spacing, to provide for transportation hazards. Where streets are provided with median dividers or have four (4) or more traffic lanes and have a traffic count of more than 30,000 per day, hydrants are required on each side of the street spaced at 500 ft on an alternating basis. All hydrants being utilized to deliver fire flow to the proposed location shall be located on the same side of the street as the proposed development. IFC § C102.8 & CLV Regulation
13. No fire hydrants shall be located within the radius of a cul-de-sac or within 20 ft of the perimeter of the radius of the cul-de-sac.
14. No fire hydrants shall be located within 6 ft of any curb return, driveway, power pole, streetlight or any other obstruction. IFC § C102.10
15. A maximum distance from a fire hydrant to a one-two family dwelling shall not exceed 300 ft, as measured by an approved route. IFC § C102.4
16. The maximum distance from a fire hydrant to a Fire Department Connection (FDC) shall not exceed 100 ft, as measured by an approved route. IFC § C102.7
17. The maximum distance from a hydrant to the end of a dead-end street shall not exceed 200 ft. IFC § C102.6

18. Two (2) sources of supply are required whenever there is 4 or more fire hydrants/sprinkler lead-ins are installed on a single system. For systems required to have two (2) sources of water supply, sectional control valves shall be installed so that no more than 2 fire hydrants and/or fire sprinkler lead-ins can be out of service due to a service interruption. For systems permitted to have one source of water supply, sectional control valves shall be installed so that no more than 3 fire hydrants and/or fire sprinkler lead-ins can be out of service due to a service interruption. IFC § C104
19. All fire apparatus access roads shall be paved to provide all-weather driving capabilities, and shall be designed and maintained to support the imposed loads of the fire apparatus. IFC § 503.2.3
20. The gradient for the fire apparatus access roads shall not exceed 12%. Angles of approach and angles of departure shall not exceed 6% for 25 ft prior to or after the grade change. Adjacent to the structures gradient shall not exceed 6%. IFC § 503.2.7, § 503.2.8
21. The turning radius of the fire apparatus access roads shall be no less than 52 ft outside and 28 ft inside turning radius. IFC § 503.2.4
22. Vertical clearance of all fire apparatus access roads shall not be less than 13ft 6 inches. IFC § 503.2.1
23. Dimensions for Access Roads Serving R-3 Occupancies. Fire apparatus access roads serving R-3 occupancies, as defined by the International Building Code Section 310, providing residential fire sprinkler systems, in accordance with City of Las Vegas Ordinance 6609 and City of Las Vegas approved "Residential Memorandum of Understanding" with Southern Nevada Home Builders for single family detached tract home developments, the unobstructed width of fire apparatus access roads shall be as follows:
 - Not less than 33 ft. (10.05 m) wide, measured from face of curb or flow line to flow line, where parking is permitted on both sides of fire apparatus road.
 - Not less than 28 ft. (8.34 m) wide, measured from face of curb or flow line to flow line, where parking is permitted on only one side of the fire apparatus road.
 - Not less than 24 ft. (7.32 m) wide, measured from face of curb or flow line to flow line, where NO parking is permitted on either side.
- Dimensions for Access Roads Serving Occupancies Other than R-3 Occupancies.
 - For all other occupancy types as defined by the International Building Code section 310, the unobstructed width of fire access roads shall be as follows:
 - Not less than 36 ft. (12.19 m) wide, measured from face of curb or flow line to flow line, where parking is permitted on both sides of fire apparatus road.
 - Not less than 32 ft. (9.75 m) wide, measured from face of curb or flow line to flow line, where parking is permitted on only one side of the fire apparatus road.
 - Not less than 24 ft. (7.32 m) wide, measured from face of curb or flow line to flow line, where NO parking is permitted on either side.
 - Not less than 24 ft. (7.32 m), for designated fire apparatus access roads through parking lots.
24. A fire apparatus access road shall be required when any portion of an exterior wall of the first story is located more than 150 ft from a fire department vehicle access. IFC § 503.1.1
25. Approved secondary fire apparatus access shall be provided for 200 or more dwelling units, road(s) with dead-ends or a single point of access in excess of 600 ft. CLV Regulation and MOU
26. All dead-end fire apparatus roads and/or fire lanes, public or private, in excess of 150 ft in length shall be provided with an approved turn around. CLV Regulation
27. All fire apparatus access roads shall be marked by placing approved signs at the start of the designated fire lane, one sign at the end of the fire lane and with signs at intervals of 100 ft along the designated fire lanes. Signs to be placed on both sides of an access roadway if needed to prevent parking on either side. Signs to be installed no higher than 10 ft or less than 6 ft from the roadway level. The curb along or on the pavement or cement (if no curb is provided) shall be painted with a red weather resistant paint in addition to the signs. IFC § 503.3
28. Electrically controlled access gates shall be provided with an approved emergency vehicle detector/receiver system. IFC § 503.6