



Clark County Department of Building & Fire Prevention

4701 West Russell Road • Las Vegas NV 89118

(702) 455-3000 • Fax (702) 455-5810

Division:	Fire Prevention	Code Interpretation:	FP-CI-52
Subject:	APPLICABILITY OF 2016 NFPA 13R, SECTION 5.4.1 AS IT RELATES TO RESIDENTIAL GARAGES	Effective Date:	06/07/21
Code:	2016 NFPA 13R, SECTION 5.4.1	Revised Date:	NEW

A. SUBJECT:

Clark County Department of Building & Fire Prevention (CCDBFP) received a request for a formal code interpretation of the applicability of the provision of 2016 NFPA 13R, section 5.4.1 as it relates to the residential garages and whether these spaces can reliably maintain a temperature above 40°F to permit the installation of a wet pipe sprinkler system within the garage.

B. CODE REQUIREMENT:

2016 NFPA 13R, 5.4.1. A wet pipe system shall be used where piping is installed in areas that can be maintained reliably above 40°F (4°C).

C. INTERPRETATION:

As it relates to the applicability of 2016 NFPA 13R, section 5.4.1, in unincorporated Clark County, Nevada, a residential garage is generally deemed to be a space that cannot reliably be expected to maintain a temperature above 40°F (4°C).

D. RATIONALE:

Although specific garages may be capable of reliably maintaining a temperature above 40°F (4°C), due to the variability of the construction methods, materials and the elevation of the possible locations of the garages, the Fire Code Official cannot deem all garages in unincorporated Clark County that have been, or could be constructed in the future, to be able to reliably maintain a temperature above 40°F. The International Residential Code and the International Building Code (collectively referred to as “Codes”) do not have any provisions that require residential garages to be insulated except for in the walls and ceilings that separate the garage from condition spaces. The Codes do not require of any passive or active heating/cooling systems to justify considering garages to be conditioned spaces. Additionally, the National Weather Service reports that every year since 1937 the official lowest minimum temperature in Las Vegas has been at or below 30°F.

There are, however, methods available to provide wet sprinkler protection in these garages. 2016 NFPA section 5.4.2 sets forth five separate methods for piping in areas that cannot be maintained reliably above 40°F (4°C), and section 5.4.4 allows for water filled piping to be installed in areas where the temperature is less than 40°F (4°C) when heat loss calculation performed by a professional engineer verify that the system will not freeze.

In addition, Alternate Means and Method Report describing how a specific installation meets the intent and not less stringent than the Codes and Standards may be possible. For instance, NFPA 13 Section 22.38.2 Item 2 indicates that fully insulated garages attached to single family residential structures do not require a source of heat to fulfill the requirement of maintained 40°F, and it is reasonable to assume that the same treatment is available for similarly situated garages protected by NFPA 13R sprinkler systems.

Revision History:

POLICY #	TITLE	Effective Date	Revised	Reviewed

Approved by:
Jerome A. Stueve
Jerome A. Stueve, P.E., Director, Building Fire Code Official