

## Site Planning Guide for Residential Occupancies based upon The 2003 International Fire Code as Adopted by the City of Wheat Ridge and the Arvada Fire Protection District

This site planning guide for residential occupancies is based upon the 2003 International Fire Code, as amended and adopted by the City of Wheat Ridge and the Arvada Fire Protection District. This site planning guide for residential occupancies is based upon the 2003 International Fire Code and the 2003 International Residential Code. Residential occupancies include for site planning purposes one and two family dwellings and town homes as classified by the International Residential Code as Group R, Division 3 Occupancies. This guide is prepared for use within the City of Wheat Ridge that is within the boundaries of the Arvada Fire Protection District. This information is intended to be used as a guide for site planning purposes. This guide is not designed or intended to be inclusive of all code requirements. Additional requirements based upon the International Fire Code as amended, may be addressed upon the submittal and review of site plans by the Division of Fire Prevention.

### Street Signs:

Streets and roads shall be identified with approved signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an approved size, weather resistant and be maintained until replaced by permanent signs. Street signs, temporary or permanent shall be installed prior to above grade construction.  
IFC 03 505.2.

### Private Street Signs:

Street signs for private streets are not provided by the City of Wheat Ridge. The installation of street signs shall be the responsibility of the developer. Street signs shall meet the requirements of the Model Traffic code. The street sign design shall be approved by the Division of Fire Prevention prior to installation.  
IFC 03 505.2.

## Building Address Numbers:

New buildings shall have approved address numbers, building numbers or approved building identification placed upon the building in a position that is plainly legible and visible from the street or roadway fronting the property. The address numbers shall contrast in their background. Address numbers shall be Arabic numerals or alphabet letters. Address or building identification numbers shall be a minimum height of not less than four (4) inches, and with a minimum stroke width of not less than 0.5 inches.

IFC 03 505.1.

When address numbers are placed on buildings that are provided from alleys or private streets from the main street frontage, address signs and or address numbers shall be posted at the entrance to the alley or private street. The address signs shall be approved by the Division of Fire Prevention prior to installation.

IFC 03 505.1.

## Fire Apparatus Access Roads:

Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into the Arvada Fire Protection District. The fire apparatus access road shall comply with the requirements of the fire code and shall extend to within one-hundred-fifty (150) feet of all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility.

IFC 03 503.1.1.

Exception: The fire marshal or designated representative is authorized to increase the dimension of one-hundred-fifty (150) feet where:

1. The building is provided throughout with an approved automatic sprinkler system installed in accordance with the fire code.
2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

3. There are not more than two Group R-3 or Group U occupancies.

#### Additional Access:

The fire marshal is authorized to require more than one fire apparatus access road based upon the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.  
IFC 03 503.1.2.

#### Dedication of Fire Apparatus Access Roads:

Fire apparatus access roads such as, but not limited to, private streets and alleys shall be dedicated on the Final Plat as “Emergency Access Lanes” or language that is acceptable to the Attorney’s Office of the City of Wheat Ridge.

#### Private Street and Alley Widths:

Fire apparatus access roads that are private streets or alleys shall have a minimum unobstructed width of twenty-six (26) feet.  
IFC 03 503.2.1. Amended.

#### Exception:

The width of private streets may be reduced from the required twenty-six 26 feet to twenty-four (24) feet of unobstructed width, if a specific access and parking design is approved by the fire marshal.

#### Vertical Clearance:

An unobstructed vertical clearance of not less than thirteen (13) feet, six (6) inches shall be provided and maintained.  
IFC 03 503.2.1.

#### Authority:

The fire marshal shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

IFC 03 503.2.2.

### Surface:

Fire apparatus access roads shall be designed and maintained to support the imposed loads of eighty-five thousand (85,000) pound fire apparatus and shall be surfaced with the first lift of asphalt to provide all-weather driving capabilities, and shall be installed prior to above grade construction.

IFC 03 503.2.3.Amended.

Grass-crete, Ritter Rings or similar landscape treatments that will prevent a fire apparatus access road from being maintainable as an all-weather surface and immediately discernable, shall be prohibited.

IFC 03 503.2.3.

### Turning Radius:

The required turning radius for fire apparatus shall be a minimum of forty-six (46) feet outside radius. The inside radius shall be a minimum of twenty-six (26) feet with a four (4) foot bumper overhang.

IFC 03 503.2.4.

Copies of approved turning radius templates are available from the Division of Fire Prevention upon request.

### Dead End Fire Apparatus Access Roads:

Dead end fire apparatus access roads in excess of one-hundred-fifty (150) feet in length shall be provided with an approved area for the turning around of fire apparatus.

IFC 03 503.2.5.

### Dead End Fire Apparatus Access Roads in Group R, Division 3 Occupancies:

Where a property is a Group R, Division 3 occupancy, the length of a dead end fire apparatus access road may be increased to one-hundred-seventy-five (175) feet without the provision for the turning around of fire apparatus if approved by the fire

marshal.

IFC 03 503.2.5.1. Amended.

### Bridges and Elevated Surfaces:

Where a bridge or elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHITO HB-17 and City of Wheat Ridge Engineering Standards. Bridges and surfaces shall be designed for a live load of a minimum of eighty-five thousand (85,000) pound fire apparatus. Vehicle load limits shall be posted at both entrances to bridges. Where elevated surfaces which are not designed as for use of fire apparatus, approved barriers or signs shall be installed and maintained.

IFC 03 503.2.6.

### Fire Apparatus Access Road Grades:

The grade of fire apparatus access roads shall not exceed City of Wheat Ridge Engineering Standards or Arvada Fire Protection District Standards.

IFC 03 503.2.7.

### Marking of Fire Apparatus Access Roads:

“No Parking Fire Lane” signs shall be installed on each side of fire apparatus access roads, private streets or alleys to identify such roads and to prohibit parking. The maximum spacing between signs shall not exceed one-hundred-thirty-five (135) feet. “No Parking Fire Lane” signs shall meet the requirements set forth within the City of Wheat Ridge Engineering Division Standards.

IFC 03 503.3

Copies of Arvada Fire Protection District approved signs are available on request from the Division of Fire Prevention.

### Mountable Curbs:

Vertical curbs shall not be placed at the entrance of or within fire access lanes or roads. Mountable curbs and gutter may be used, if approved by the fire marshal.

IFC 03 503.2.8. Amended.

## Gated Communities:

Gated communities may be permitted providing the community meets the following requirements detailed herein and is subject to the approval of the fire marshal. The fire apparatus access roads within a gated community shall be a minimum of twenty-eight (28) feet of unobstructed width.

IFC 03 503.2.9. Amended.

Fire apparatus access roads shall be maintained as an all-weather surface and shall meet the requirements set forth in Section 503 of the fire code.

IFC 03 503.2.9 Amended.

The unobstructed vertical clearance for fire apparatus access roads shall not be less than thirteen (13) feet six (6) inches.

IFC 03 503.2.9. Amended

Two (2) separate means of ingress and egress shall be provided into the site.

IFC 03 503.2.9. Amended.

Gates shall be staffed on a twenty-four (24) hour basis or be equipped with an automatic and manual release system approved by the fire marshal.

IFC 03 503.2.9. Amended.

## Water Supplies and Fire Hydrants for Fire Protection:

Water lines and fire hydrants shall be installed, operational and capable of providing the minimum required fire flow for the building sites prior to above grade construction.

IFC 03 508.5.1.

Water lines shall be installed and looped in accordance with the Water District of jurisdiction standards.

## Minimum Required Fire Flow:

The minimum required fire flow for one and two family dwellings are calculated from the International Fire Code and shall not be less than one-thousand (1,000)

gallons per minute for fire flow calculations for one and two family dwellings up to three-thousand-six-hundred (3,600) square feet. Fire flow calculations for buildings in excess of three-thousand-six-hundred (3,600) square feet shall be in accordance with Table B, 105.1. of the fire code.

Copy of this table is available from the Division of Fire Prevention upon request.

### Fire Flow Test Information:

Fire flow test information may be obtained from the Division of Fire Prevention. Fire flow tests are usually completed within ten (10) working days, unless conflicts or weather conditions arise in scheduling tests with the Valley Water District or the Division of Fire Prevention.

### Fire Hydrant Spacing:

Group R-3 and Group U Occupancies with streets having a thirty-two (32) foot flow line to flow line width or larger:

Fire hydrants shall be spaced at maximum distance of five-hundred (500) feet between units.

Group R-3 and Group U Occupancies with streets having less than a thirty-two (32) foot flow line to flow line width:

Fire hydrants shall be spaced at a maximum distance of three-hundred (300) feet between units.

IFC 03 508.5.1. Exceptions 2.2/2.3 Amended.

Fire hydrant locations shall be approved by the Water District of jurisdiction and the Division of Fire Prevention.

IFC 03 508.5.1.

### Fire Hydrants and Installation:

Fire hydrants shall be painted colors as approved by the Water District of jurisdiction.

IFC 03 508.5.7 Amended.

Fire hydrants shall be installed in such a manor that the four and one half (4-1/2) inch discharge nozzle on the fire hydrant is a minimum of eighteen (18) inches above finished grade or in accordance with the Water District of jurisdiction standards.

Fire hydrant discharge nozzle threads shall be National Treads in accordance with the Water District of jurisdiction standards

### Landscaping/Fencing/Obstructions:

#### Obstructions:

Posts, fences, vehicles, growth, trash storage, mail kiosks, transformers or other materials or objects shall not be placed or kept near fire hydrants that would prevent such equipment from being immediately discernable.

IFC 03 508.5.4.

#### Clear Space Around Fire Hydrants:

A minimum of a three (3) foot clear space shall be provided and maintained around the circumference of fire hydrants.

IFC 03 508.5.5.

#### Trash Enclosures:

Trash enclosures for community pick-up or community buildings shall be of non-combustible construction including gates or doors.

IFC 03 304.2.1. Amended.