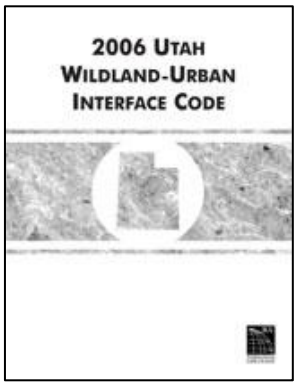
Wildland-Urban Interface Site Plan/Development Review Guide



SALT LAKE COUNTY

This document is a graphic representation of the major provisions of the Utah Wildland-Urban Interface Code and amendments adopted by the Unified Fire Authority.

This material is designed to be used as code interpretation for code authorities, architects, contractors, engineers and individual property owners. Questions pertaining to this document can be obtained by calling the Unified Fire Authority, Fire Prevention Division at 801-743-7233.

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Submittal Requirements:

- ☐ Completed Fire Severity Hazard Form

- ☐ Site Plan detailing the following:
  - topography
  - width and percent of grade of access roads
  - landscape and vegetation details
  - locations of structures or building envelopes
  - existing or proposed overhead utilities
  - existing or proposed above or below ground propane tanks
  - structures and their appendages
  - defensible space envelope

- ☐ Fire Protection Plan
  - The plan shall be based upon a site-specific wildfire risk assessment that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions and fire history. The plan shall address water supply, access, building ignition and fire-resistance factors, fire protection systems and equipment, *defensible space* and vegetation management.

- ☐ Vegetation Management Plan
  - Vegetation management plans shall describe all actions that will be taken to prevent a fire from being carried toward or away from the building. A vegetation management plan shall include at least the following information:
    1. A copy of the site plan.
    2. Methods and timetables for controlling, changing or modifying areas on the property. Elements of the plan shall include removal of slash, snags, vegetation that may grow into overhead electrical lines, other ground fuels, ladder fuels and dead trees, and the thinning of live trees.
    3. A plan for maintaining the proposed fuel-reduction measures.

- ☐ Vicinity Plan
  - Plan shall include details regarding the vicinity within 300' of property lines, including other structures, slope, vegetation, fuel breaks, water supply systems and access roads. (This may be incorporated into the site plan.)

Procedure:

1. Complete the Fire Severity Hazard Form. Consult the following table for defensible space requirement.

TABLE 603.2
REQUIRED DEFENSIBLE SPACE

WILDLAND-URBAN INTERFACE AREA	FUEL MODIFICATION DISTANCE (feet)[a]
Moderate hazard	30
High hazard	50
Extreme hazard	100

For SI: 1 foot = 304.8 mm.

a. Distances are allowed to be increased due to site-specific analysis based on local conditions and the fire protection plan.

2. Obtain water supply information. (Contact the water purveyor.)
   - Available Fire-flow
   - Water Tank Capacity
   - Location of nearest fire hydrants
3. Develop site plan. Site plan must include the items listed on page 3.
4. Submit application to Salt Lake County. Review cannot be completed without all of the items listed on page 3.

Upon receipt of a complete application the Fire Inspector will conduct a site visit. The following table will be used to determine the level of exterior fire rated construction.

TABLE 503.1
IGNITION-RESISTANT CONSTRUCTION[a]

	FIRE HAZARD SEVERITY					
	Moderate Hazard		High Hazard		Extreme Hazard	
	Water Supply[b]		Water Supply[b]		Water Supply[b]	
DEFENSIBLE SPACE[c]	Conforming[d]	Nonconforming[e]	Conforming[d]	Nonconforming[e]	Conforming[d]	Nonconforming[e]
Nonconforming	IR 2	IR 1	IR 1	IR 1 N.C.	IR 1 N.C.	Not Permitted
Conforming	IR 3	IR 2	IR 2	IR 1	IR 1	IR 1 N.C.
1.5 × Conforming	Not Required	IR 3	IR 3	IR 2	IR 2	IR 1

a. Access shall be in accordance with Section 402.
b. Subdivisions shall have a conforming water supply in accordance with Section 402.1.

IR 1 = Ignition-resistant construction in accordance with Section 504.
IR 2 = Ignition-resistant construction in accordance with Section 505.
IR 3 = Ignition-resistant construction in accordance with Section 506.
N.C. = Exterior walls shall have a fire-resistance rating of not less than 1-hour and the exterior surfaces of such walls shall be *noncombustible*. Usage of log wall construction is allowed.

c. Conformance based on Section 603.
d. Conformance based on Section 404.
e. A nonconforming water supply is any water system or source that does not comply with Section 404, including situations where there is no water supply for structure protection or fire suppression.

Fire Department Access Requirements:

Restricted access. Where emergency vehicle access is restricted because of secured access roads or driveways or where immediate access is necessary for life-saving or fire-fighting purposes, the code official is authorized to require a key box to be installed in an accessible location. The key box shall be of a type *approved* by the code official and shall contain keys to gain necessary access as required by the code official**. [UWUIC 403.1]**

Building and Facilities: Fire apparatus access roads must be provided such that no portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150-feet from fire apparatus access as measured by an approved route around the exterior of the building or facility. **[IFC 503.1.1]**

Specifications: Fire Department Access must be of an all-weather surface, a minimum clear width of 20-feet and a minimum vertical clear height of 13-feet 6-inches (13'-6"). **[IFC 503.2.1]**

Surface: Fire apparatus access roads must be designed and maintained to support the imposed loads of 75,000 lbs for fire apparatus. **[IFC 503.2.3 & D102.1]**

Turning Radius: The turning radius of 28-feet must be provided for the fire apparatus access road. **[IFC 503.2.4]**

Dead Ends: Dead-end fire apparatus access roads in excess of 150-feet in length must be provided with approved provisions for the turning around of fire apparatus. **[IFC 503.2.5]**

Bridges and Elevated Surfaces: When a bridge or an elevated surface is part of a fire apparatus access road, it must be constructed and maintained in accordance with AASHTO Standard Specification for Highway Bridges and must be designed for a live loading sufficient to carry the imposed loads of fire apparatus. **[IFC 503.2.6]**

Grade: The gradient for a fire apparatus access road must not exceed 10%, unless approved by the Fire Code Official. **[IFC 503.2.7]**

Access Road Identification: Approved signs must be provided and maintained for fire apparatus access roads to identify the road and prohibit the obstruction thereof or both. **[IFC 503.3]**

> All road identification signs and supports shall be of noncombustible materials. Signs shall have minimum 4-inch-high (102 mm) reflective letters with 1/2 inch (12.7 mm) stroke on a contrasting 6-inch-high (152 mm) sign. Road identification signage shall be mounted at a height of 7 feet (2134 mm) from the road surface to the bottom of the sign. **[UWUIC 403.4]**

Water Supply Requirements:

Required water supply. An *approved* water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction. **[IFC 507.1]**

Required fire flow will be based upon building construction type as defined in the IBC as well as gross square footage of the proposed structure. For the purpose of determining fire flow the gross square footage shall include all areas within the exterior walls, beneath the roof line, finished and unfinished habitable space.

Fire hydrant systems. [IFC 507.5]
Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an *approved* route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the *fire code official*.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).
2. For buildings equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

Code Modification:

Practical difficulties. When there are practical difficulties involved in carrying out the provisions of this code, the code official is authorized to grant modifications for individual cases on application in writing by the owner or a duly authorized representative. The code official shall first find that a special individual reason makes enforcement of the strict letter of this code impractical, the modification is in conformance to the intent and purpose of this code, and the modification does not lessen any fire protection requirements or any degree of structural integrity. The details of any action granting modifications shall be recorded and entered into the files of the code enforcement agency.
If the code official determines that difficult terrain, danger of erosion or other unusual circumstances make strict compliance with the vegetation control provisions of the code detrimental to safety or impractical, enforcement thereof may be suspended, provided that reasonable alternative measures are taken. **[UWUIC 105.1]**

Definitions:

ACCESSORY STRUCTURE. A building or structure used to shelter or support any material, equipment, chattel or occupancy other than a habitable building.

DEFENSIBLE SPACE. An area either natural or man-made, where material capable of allowing a fire to spread unchecked has been treated, cleared or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur.

FIRE PROTECTION PLAN. A document prepared for a specific project or development proposed for the *wildland-urban interface area*. It describes ways to minimize and mitigate the fire problems created by the project or development, with the purpose of reducing impact on the community's fire protection delivery system.

FIRE-RESISTANCE-RATED CONSTRUCTION. The use of materials and systems in the design and construction of a building or structure to safeguard against the spread of fire within a building or structure and the spread of fire to or from buildings or structures to the *wildland-urban interface area*.

FLAME SPREAD INDEX. A comparative measure, expressed as a dimensionless number, derived from visual measurements of the spread of flame versus time for a material tested in accordance with ASTM E 84.

FUEL BREAK. An area, strategically located for fighting anticipated fires, where the native vegetation has been permanently modified or replaced so that fires burning into it can be more easily controlled. Fuel breaks divide fire-prone areas into smaller areas for easier fire control and to provide access for fire fighting.

FUEL MODIFICATION. A method of modifying fuel load by reducing the amount of nonfire-resistive vegetation or altering the type of vegetation to reduce the fuel load.

IGNITION-RESISTANT BUILDING MATERIAL. A type of building material that resists ignition or sustained flaming combustion sufficiently so as to reduce losses from wildland-urban interface conflagrations under worst-case weather and fuel conditions with wildfire exposure of burning embers and small flames, as prescribed in Section 503.

IGNITION-RESISTANT CONSTRUCTION, CLASS 1. A schedule of additional requirements for construction in wildland-urban interface areas based on extreme fire hazard.

IGNITION-RESISTANT CONSTRUCTION, CLASS 2. A schedule of additional requirements for construction in wildland-urban interface areas based on high fire hazard.

IGNITION-RESISTANT CONSTRUCTION, CLASS 3. A schedule of additional requirements for construction in wildland-urban interface areas based on moderate fire hazard.

LOG WALL CONSTRUCTION. A type of construction in which exterior walls are constructed of solid wood members and where the smallest horizontal dimension of each solid wood member is at least 6 inches (152 mm).

NONCOMBUSTIBLE. As applied to building construction material means a material that, in the form in which it is used, is either one of the following:

1. Material of which no part will ignite and burn when subjected to fire. Any material conforming to ASTM E 136 shall be considered noncombustible within the meaning of this section.
2. Material having a structural base of *noncombustible* material as defined in Item 1 above, with a surfacing material not over 1/8 inch (3.2 mm) thick, which has a flame

spread index of 50 or less. Flame spread index as used herein refers to a flame spread index obtained according to tests conducted as specified in ASTM E 84 or UL 723.

"Noncombustible" does not apply to surface finish materials. Material required to be noncombustible for reduced clearances to flues, heating appliances or other sources of high temperature shall refer to material conforming to Item 1. No material shall be classified as noncombustible that is subject to increase in combustibility or flame spread index, beyond the limits herein established, through the effects of age, moisture or other atmospheric condition.

NONCOMBUSTIBLE ROOF COVERING. One of the following:

1. Cement shingles or sheets.
2. Exposed concrete slab roof.
3. Ferrous or copper shingles or sheets.
4. Slate shingles.
5. Clay or concrete roofing tile.
6. *Approved* roof covering of *noncombustible* material.

TREE CROWN. The primary and secondary branches growing out from the main stem, together with twigs and foliage.

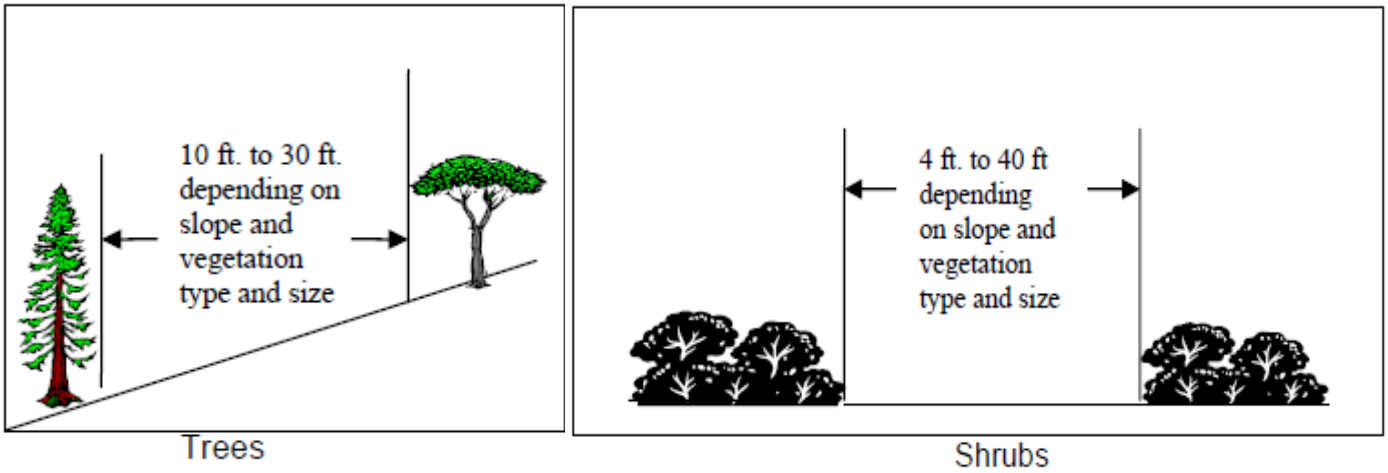
UNENCLOSED ACCESSORY STRUCTURE. An accessory structure without a complete exterior wall system enclosing the area under roof or floor above.

WILDLAND-URBAN INTERFACE AREA. The line, area or zone where structures or other human development (including critical infrastructure that if destroyed would result in hardship to communities) meet or intermingle with undeveloped wildland or vegetative fuel.

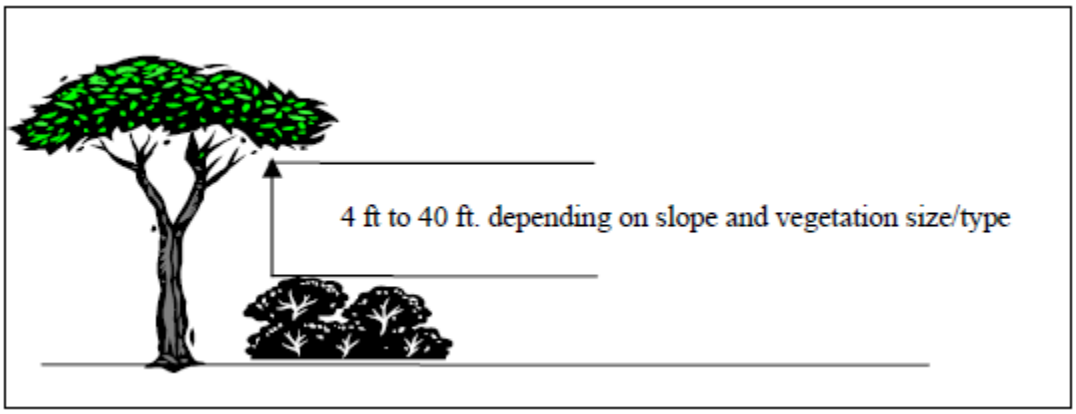
Supplemental Information:

Vegetation Clearance Guidelines:

Plant Spacing Guidelines		
Guidelines are designed to break the continuity of fuels and be used as a "rule of thumb"		
Trees	**Minimum horizontal space from edge of one tree canopy to the edge of the next**	
	Slope	Spacing
	0% to 20 %	10 feet
	20% to 40%	20 feet
	Greater than 40%	30 feet
Shrubs	**Minimum horizontal space between edges of shrub**	
	Slope	Spacing
	0% to 20 %	2 times the height of the shrub
	20% to 40%	4 times the height of the shrub
	Greater than 40%	6 times the height of the shrub
Vertical Space	**Minimum vertical space between top of shrub and bottom of lower tree branches:** 3 times the height of the shrub	



Horizontal Clearance Between Aerial Fuels



Vertical Clearance Between Aerial Fuels

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SECTION 405

Fire Protection Plan:

405.1 Purpose. The plan is to provide a basis to determine overall compliance with this code, for determination of Ignition Resistant Construction (IRC) (See Table 503.1) and for determining the need for alternative materials and methods.

405.2 General. When required by the code official, a fire protection plan shall be prepared.

405.3 Content. The plan shall be based upon a site-specific wildfire risk assessment that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions and fire history. The plan shall address water supply, access, building ignition and fire-resistance factors, fire protection systems and equipment, *defensible space* and vegetation management.

405.4 Cost. The cost of fire protection plan preparation and review shall be the responsibility of the applicant.

405.5 Plan retention. The fire protection plan shall be retained by the code official.

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SECTION 504

Class 1- Ignition-resistant Construction:

504.1 General. Class 1 ignition-resistant construction shall be in accordance with Sections 504.2 through 504.11

504.2 Roof covering. Roofs shall have a Class A roof covering or a Class A roof assembly. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire-stopped to preclude entry of flames or embers.

504.3 Protection of eaves. Eaves and soffits shall be protected on the exposed underside by materials approved for a minimum of 1-hour fire-resistance-rated construction, 2-inch (51 mm) nominal dimension lumber, or 1-inch (25.4 mm) nominal fire-retardant-treated lumber or ¾-inch (19 mm) nominal fire-retardant-treated plywood, identified for exterior use and meeting the requirements of Section 2303.2 of the International Building Code. Fascias are required and shall be protected on the backside by materials approved for a minimum of 1-hour fire-resistance-rated construction or 2-inch (51 mm) nominal dimension lumber.

504.4 Gutters and downspouts. Gutters and downspouts shall be constructed of noncombustible material.

504.5 Exterior walls. Exterior walls of buildings or structures shall be constructed with materials approved for a minimum of 1-hour fire-resistance-rated construction on the exterior side or constructed with approved noncombustible materials.

> **Exception:** Heavy timber or log wall construction. Such material shall extend from the top of the foundation to the underside of the roof sheathing.

504.6 Unenclosed under-floor protection. Buildings or structures shall have all under-floor areas enclosed to the ground with exterior walls in accordance with Section 504.5.

> **Exception:** Complete enclosure may be omitted where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction or heavy timber construction.

504.7 Appendages and projections. Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, shall be a minimum of 1-hour fire-resistance-rated construction, heavy timber construction or constructed of approved noncombustible materials or fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the International Building Code.

When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the

structure shall have all under-floor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 504.5.

504.8 Exterior glazing. Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall be tempered glass, multilayered glazed panels, glass block or have a fire protection rating of not less than 20 minutes.

504.9 Exterior doors. Exterior doors shall be approved noncombustible construction, solid core wood not less than 1¾ inches thick (45 mm), or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall be in accordance with Section 504.8.

> **Exception:** Vehicle access doors.

504.10 Vents. Attic ventilation openings, foundation or under-floor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m2) each. Such vents shall be covered with noncombustible corrosion-resistant mesh with openings not to exceed ¼ inch (6.4 mm), or shall be designed and approved to prevent flame or ember penetration into the structure.

Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from property lines. Under-floor ventilation openings shall be located as close to grade as practical.

504.11 Detached accessory structures. Detached accessory structures located less than 50 feet (15 240 mm) from a building containing habitable space shall have exterior walls constructed with materials approved for a minimum of 1-hour fire-resistance-rated construction, heavy timber, log wall construction or constructed with approved noncombustible materials on the exterior side.

When the detached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have all under-floor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 504.5 or under-floor protection in accordance with Section 504.6.

> **Exception:** The enclosure may be omitted where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction or heavy-timber construction.

See Section 504.2 for roof requirements.

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SECTION 505

Class 2 - Ignition-resistant Construction:

505.1 General. Class 2 ignition-resistant construction shall be in accordance with Section 505.

505.2 Roof covering. Roofs shall have at least a Class A roof covering, Class B roof assembly or an *approved noncombustible* roof covering. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire-stopped to preclude entry of flames or embers.

505.3 Protection of eaves. Combustible eaves, fascias and soffits shall be enclosed with solid materials with a minimum thickness of 3/4 inch (19 mm). No exposed rafter tails shall be permitted unless constructed of heavy timber materials.

505.4 Gutters and downspouts. Gutters and downspouts shall be constructed of *noncombustible* material.

505.5 Exterior walls. Exterior walls of buildings or structures shall be constructed with materials approved for a minimum of 1-hour fire-resistance-rated construction on the exterior side or constructed with noncombustible materials.

Exception: Heavy timber or log wall construction. Such material shall extend from the top of the foundation to the underside of the roof sheathing.

505.6 Unenclosed under floor protection. Buildings or structures shall have all under floor areas enclosed to the ground, with exterior walls in accordance with Section 505.5.

> **Exception:** Complete enclosure shall not be required where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction or heavy timber construction.

505.7 Appendages and projections. *Unenclosed accessory structures* attached to buildings with habitable spaces and projections, such as decks, shall be a minimum of 1-hour fire resistance-rated construction, heavy timber construction or constructed of non- combustible materials.

When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have all under floor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 505.5.

505.8 Exterior glazing. Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall be tempered glass, multilayered glazed panels, glass block or have a fire-protection rating of not less than 20 minutes.

505.9 Exterior doors. Exterior doors shall be *approved noncombustible* construction, solid core wood not less than 13/4-inches thick (45 mm), or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall be in accordance with Section 505.8.

Exception: Vehicle access doors.

505.10 Vents. Attic ventilation openings, foundation or under-floor vents or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m2) each. Such vents shall be covered with *noncombustible* corrosion-resistant mesh with openings not to exceed 1/4 inch (6.4 mm) or shall be designed and *approved* to prevent flame or ember penetration into the structure.

Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from property lines. Under floor ventilation openings shall be located as close to grade as practical.

505.11 Detached accessory structures. Detached accessory structures located less than 50 feet (15 240 mm) from a building containing habitable space shall have exterior walls constructed with materials *approved* for a minimum of 1-hour fire resistance-rated construction, heavy timber, log wall construction, or constructed with *approved noncombustible* materials.

When the detached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have all under floor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 505.5 or under floor protection in accordance with Section 505.6.

Exception: The enclosure shall not be required where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction or heavy-timber construction or fire-retardant treated wood on the exterior side. The fire-retardant treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.

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SECTION 506

Class 3 - Ignition-resistant Construction:

506.1 General. Class 3 ignition-resistant construction shall be in accordance with Sections 506.

506.2 Roof covering. Roofs shall have at least a Class A covering, Class C roof assembly or an *approved noncombustible* roof covering. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire-stopped to preclude entry of flames or embers.

506.3 Unenclosed under-floor protection. Buildings or structures shall have all under-floor areas enclosed to the ground with exterior walls.

> **Exception:** Complete enclosure may be omitted where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction or heavy timber construction.

506.4 Vents. Attic ventilation openings, soffit vents, foundation or under-floor vents or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches each. Such vents shall be covered with noncombustible corrosion resistant mesh with openings not to exceed ¼ inch.

SECTION 507

Replacement or Repair of Roof Coverings:

The roof covering on buildings or structures in existence prior to the adoption of this code that are replaced or have 25 percent or more replaced in a 12-month period shall be replaced with a roof covering required for new construction based on the type of ignition-resistant construction specified in accordance with Section 503.

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SECTION 603

Defensible Space:

603.1 Objective. Provisions of this section are intended to modify the fuel load in areas adjacent to structures to create a *defensible space*.

603.2 Fuel modification. In order to qualify as a conforming defensible space for individual buildings or structures on a property, fuel modification shall be provided within a distance from buildings or structures as specified in Table 603.2. For all other purposes the *fuel modification* distance shall not be less than 30 feet (9144 mm) or to the property line, whichever is less. Distances specified in Table 603.2 shall be measured on a horizontal plane from the perimeter or projection of the building or structure as shown in Figure 603.2. Distances specified in Table 603.2 are allowed to be increased by the code official because of a site-specific analysis based on local conditions and the fire protection plan.

Persons owning, leasing, controlling, operating or maintaining buildings or structures requiring defensible spaces are responsible for modifying or removing non fire-resistive vegetation on the property owned, leased or controlled by said person.

Trees are allowed within the *defensible space*, provided the horizontal distance between crowns of adjacent trees and crowns of trees and structures, overhead electrical facilities or unmodified fuel is not less than 10 feet (3048 mm). Deadwood and litter shall be regularly removed from trees.

Where ornamental vegetative fuels or cultivated ground cover, such as green grass, ivy, succulents or similar plants are used as ground cover, they are allowed to be within the designated *defensible space*, provided they do not form a means of transmitting fire from the native growth to any structure.

TABLE 603.2

REQUIRED DEFENSIBLE SPACE

Wildland-Urban Interface Area	Fuel Modification Distance (feet)
Moderate Hazard	30
High Hazard	50
Extreme Hazard	100

SECTION 604

Maintenance of Defensible Space:

604.1 General. Defensible spaces required by Section 603 shall be maintained in accordance with Section 604.

604.2 Modified area. Non fire-resistive vegetation or growth shall be kept clear of buildings or structures, in accordance with Section 603, in such a manner as to provide a clear area for fire suppression operations.

604.3 Responsibility. Persons owning, leasing, controlling, operating or maintaining buildings or structures are responsible for maintenance of *defensible spaces*. Maintenance of the *defensible space* shall include modifying or removing non fire-resistive vegetation and keeping leaves, needles and other dead vegetative material regularly removed from roofs of buildings and structures.

604.4 Trees. Tree crowns extending to within 10 feet (3048mm) of any structure shall be pruned to maintain a minimum horizontal clearance of 10 feet (3048 mm). Tree crowns within the *defensible space* shall be pruned to remove limbs located less than 6 feet (1829 mm) above the ground surface adjacent to the trees.

Portions of tree crowns that extend within 10 feet of the outlet of a chimney shall be pruned to maintain a minimum horizontal clearance of 10 feet.

Deadwood and litter shall be regularly removed from trees.

SECTION 605

Spark Arrestors:

Chimneys serving fireplaces, barbecues, incinerators or decorative heating appliances in which solid or liquid fuel is used, shall be provided with a spark arrester. Spark arresters shall be constructed of woven or welded wire screening of 12 USA standard gage wire (0.1046 inch) (2.66 mm) having openings not exceeding 1/2 inch (12.7 mm).

The net free area of the spark arrester shall not be less than four times the net free area of the outlet of the chimney.

SECTION 606

Liquefied Petroleum Gas Installations:

606.1 General. The storage of liquefied petroleum gas (LP gas) and the installation and maintenance of pertinent equipment shall be in accordance with the *International Fire Code* or, in the absence thereof, recognized standards.

606.2 Location of containers or tanks. LP-gas containers or tanks shall be located within the *defensible space* in accordance with the *International Fire Code*.

(See Figures 1 and 2 on Page 20)

SECTION 607

Storage of Firewood and Combustible Materials:

607.1 General. Firewood and combustible material shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs. When required by the code official, storage of firewood and combustible material stored in the *defensible space* shall be located a minimum of 20 feet (6096 mm) from structures and separated from the crown of trees by a minimum horizontal distance of 15 feet (4572 mm).

607.2 Storage for off-site use. Firewood and combustible materials not for consumption on the premises shall be stored so as to not pose a hazard.

Utah Fire Resistive Species

Adapted from "Utah Forest Facts: Firewise Plants for Utah Landscapes"
Utah State University Extension, 2002

Grasses:

Agropyron cristatum (Crested Wheatgrass)
Agropyron smithii (Western Wheatgrass)
Huchloe dactyloides (Buffalograss)
Dactylis glomerata (Orchardgrass)
Festuea cinerea and other species (Blue Fescue)
Lolium species (Rye Grass)
Poa pratensis (Kentucky Bluegrass)
Poa secunda (Sandberg Bluegrass)

Herbaceous Perennials

Achillea clavennae (Silvery Yarrow)
Achillea jilipendulina (FemleafYarrow)
Achillea - other species & hybrids (Yarrow)*
Aquilegia - species & hybrids (Columbine)
Armeria maritime (Sea Pink, Sea Thrift)
Artemisia stelleriana (Beach Wonnwood, Dusty Miller)
Artemisia - other species & hybrids (Various names)*
Bergenia ..... species & hybrids (Bergenia)
Geranium species (Geranium)
Hemerocallis species (Daylily)
Heuchera sanguinea (Coral Bells, Alum Root)
Iberis sempervirens (Evergreen Candy tuft)
Iris species & hybrids (Iris)
Kniphofia species & hybrids (Red-hot Poker)
Lavandula species (Lavender)
Leucanthemum X superbum (Shasta Daisy)
Limonium latijolium (Sea-lavender, Statice)
Linum species (Flax)
Liriope spicata (Lily-turf)
Lupinus species & hybrids (Lupine)*
Medicago sativus (Alfillfa)
Oenothera species (Primrose)
Papaver species (Poppy)
Penstemon species & hybrids (Penstemon)
Perovskia atriplici/olia (Russian Sage, Azure Sage)
Potentilla nepalensis (Nepal Cinquefoil)
Potentilla tridentata (Wineleaf Cinquefoil)
Centranthus rubber (Red Valerian, Jupiter's Beard)
Cerastium tomentosum (Snow-in-summer)
Potentilla verna (tabernaemontani) (Spring Cinquefoil; Creeping Potentilla)
Coreopsis auriculata var. *Nana* (Dwarf Mouse Ear Coreopsis)
(Qreopsis .. ~ other perennial species (Coreopsis)
Potentilla .. other non-shrubby species & hybrids (Cinquefoil, Potentilla)*
Delosperma nubigenum (Hardy Ice Plant)
Dianthus plumarius & others (Pinks)
Erigeron hybrids (Fleabane)*
Gaillardia X grandi/lora (Blanket Flower)
Geranium cinereum (Hardy Geranium)
Geranium sanguineum (Bloody Cranesbill, Bloodred Geranium)
Salvia species & hybrids (Salvia, Sage)*
Sedum species (Stonecrop, Sedum)
Sempervivum tectorum (Hen and Chicks)
Stachys byzantina (Lamb's Ear)
Yuccafilamentosa (Yucca)

Shrubs and Woody Vines

Atriplex species (Saltbush)
Ceanothus americanus (New Jersey Tea)
Ceanothus ovatus & others (Ceanothus)
Cistus species (Rock-rose)
Cotoneaster dammeri (Bearberry Cotoneaster)
Cotoneaster horizontalis (Rockspray or Rock Cotoneaster)
Cotoneaster - other compact species (Cotoneaster)
Hedera helix (English Ivy)
Lonicera species & hybrids (Honeysuckle)
Mahonia repens (Creeping Oregon Grape)
Parthenocissus quinquefalia (Virginia Creeper)
Prunus besseyi (Sand Cherry)
Purshia tridentata (Bitterbrush, Antelope Bitterbrush)
Pyracantha species (Firethorn, Pyracantha)
Rhamnus species (Buckthorn)
Rhus trilobata (Skunkbush Sumac)
Rhus -- other species (Sumac)
Ribes species (Currant, Gooseberry)
Rosa rugosa & other hedge roses (Rugosa Rose)
Shepherdia canadensis (Russet Buffaloberry)
Syringa vulgare (Lilac)
Vinca major (Large Periwinkle)
Vinca minor (Dwarf Periwinkle, Common Periwinkle)

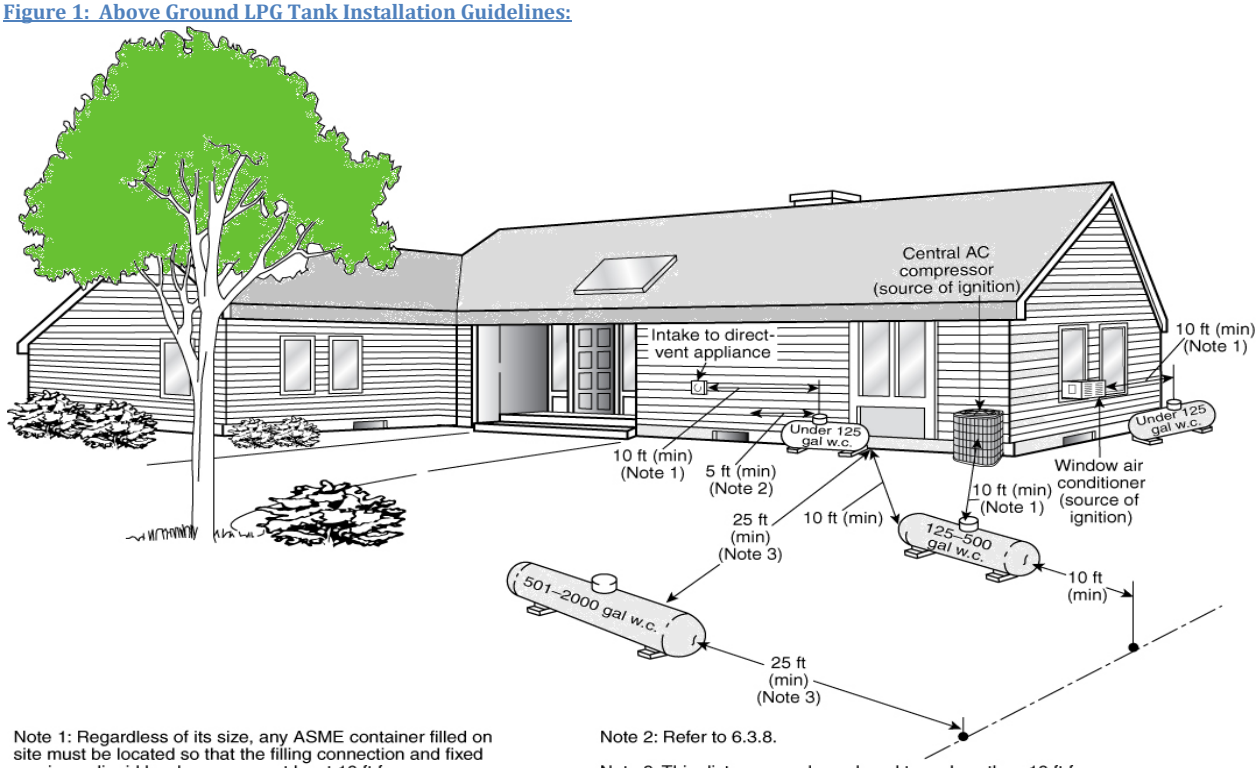
Trees

Acer species (Maple)
Betula species (Birch)
Cercis canadensis (Eastern Redbud)
Populus tremuloides (Quaking Aspen)
Populus - other species (Poplar, Cottonwood)
Salix species (Willow)

**** Plants or groups of plants marked with an asterisk (*) can become weedy in certain circumstances, and may even be noxious weeds with legal restrictions against their planting and cultivation. Check with your local Extension office or State Department of Agriculture for information on noxious weeds in your area.***

Note: Some of the listed plants may not be considered "water-wise" or drought-tolerant for arid climate

Figure 1: Above Ground LPG Tank Installation Guidelines:

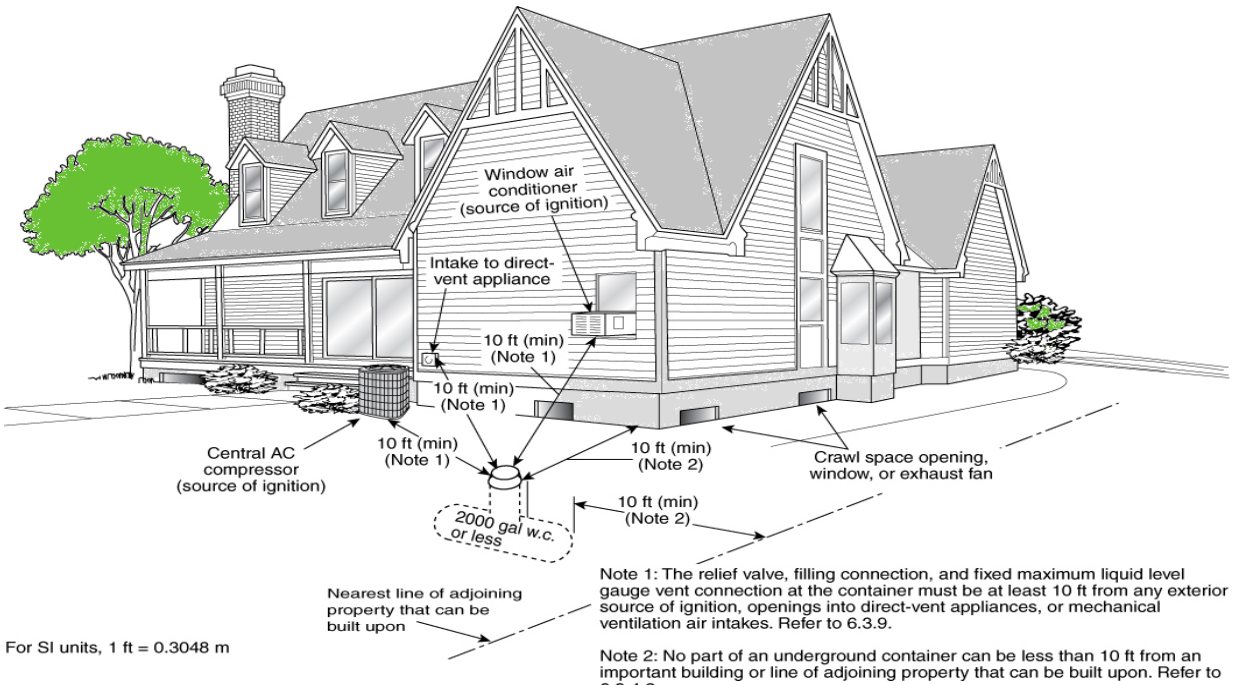


Note 1: Regardless of its size, any ASME container filled on site must be located so that the filling connection and fixed maximum liquid level gauge are at least 10 ft from any external source of ignition (e.g., open flame, window AC, compressor), intake to direct-vented gas appliance, or intake to a mechanical ventilation system. Refer to 6.3.9.

Note 2: Refer to 6.3.8.

Note 3: This distance can be reduced to no less than 10 ft for a single container of 1200 gal (4.5 m^3) water capacity or less, provided such container is at least 25 ft from any other LP-Gas container of more than 125 gal (0.5 m^3) water capacity. Refer to 6.3.3.

Figure 2: Underground LPG Tank Installation Guidelines:



For SI units, 1 ft = 0.3048 m

Note 1: The relief valve, filling connection, and fixed maximum liquid level gauge vent connection at the container must be at least 10 ft from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes. Refer to 6.3.9.

Note 2: No part of an underground container can be less than 10 ft from an important building or line of adjoining property that can be built upon. Refer to 6.3.4.2.

Fire Hazard Severity Assessment Form:

APPENDIX C

FIRE HAZARD SEVERITY FORM

A. Subdivision Design	Points
1. Ingress/Egress	
Two or more primary roads	1___
One road	10___
One-lane road in, one-lane road out	15___
2. Width of Primary Road	
20 feet or more	1___
Less than 20 feet	5___
3. Accessibility	
Road grade 5% or less	1___
Road grade 5-10%	5___
Road grade greater than 10%	10___
4. Secondary Road Terminus	
Loop roads, cul-de-sacs with an outside turning radius of 45 feet or greater	1___
Cul-de-sac turnaround	5___
Dead-end roads 200 feet or less in length	8___
Dead-end roads greater than 200 feet in length	10___
5. Street Signs	
Present but unapproved	3___
Not present	5___

B. Vegetation (IUWIC Definitions)	
1. Fuel Types	
Surface	
Lawn/noncombustible	1___
Grass/short brush	5___
Scattered dead/down woody material	10___
Abundant dead/down woody material	15___
Overstory	
Deciduous trees (except tall brush)	3___
Mixed deciduous trees and tall brush	10___
Clumped/scattered conifers and/or tall brush	15___
Contiguous conifer and/or tall brush	20___
2. Defensible space	
70% or more of lots completed	1___
30% to 70% of lots completed	10___
Less than 30% of lots completed	20___

	Points
C. Topography	
Located on flat, base of hill, or setback at crest of hill	1___
On slope with 0-20% grade	5___
On slope with 21-30% grade	10___
On slope with 31% grade or greater	15___
At crest of hill with unmitigated vegetation below	20___
D. Roofing Material	
Class A Fire Rated	1___
Class B Fire Rated	5___
Class C Fire Rated	10___
Nonrated	20___
E. Fire Protection—Water Source	
500 GPM hydrant within 1,000 feet	1___
Hydrant farther than 1,000 feet or draft site	5___
Water source 20 min. or less, round trip	10___
Water source farther than 20 min., and 45 min. or less round trip.	15___
Water source farther than 45 min., round trip	20___
F. Siding and Decking	
Noncombustible siding/deck	1___
Combustible siding/no deck	5___
Noncombustible siding/combustible deck	10___
Combustible siding and deck	15___
G. Utilities (gas and/or electric)	
All underground utilities	1___
One underground, one aboveground	3___
All aboveground	5___

TOTAL FOR SUBDIVISION: _____

FIRE HAZARD SEVERITY	
MODERATE HAZARD	50-75
HIGH HAZARD	76-100
EXTREME HAZARD	101 +

2006 UTAH WILDLAND-URBAN INTERFACE CODE

Project Information:
Project Number:_____
Project Address:_____
Applicant:_____

Please complete and return to:
Stewart Gray
Salt Lake County Area Fire Inspector
Fax: (801) 743-7121 Email: sgray@ufa-slco.org