



THE CITY OF SAN DIEGO

**FPB POLICY
B-08-1**

**CLARIFICATION OF BRUSH MANAGEMENT
REGULATIONS AND LANDSCAPE STANDARDS**

I. PURPOSE

This policy is intended to clarify existing Code requirements and standards for creating and managing defensible space / brush management zone(s) between development and wildland-urban interface areas.

II. SCOPE

The provisions of this Policy shall apply to the construction, alteration, movement, repair, maintenance and use of any building, structure or premises within the wildland-urban interface areas in this jurisdiction.

Buildings or conditions in existence at the time of the adoption of this policy (including habitable structures, accessory buildings, and other structures such as fences, gazebos, and decks) are allowed to have their use or occupancy continued. However, such use or occupancy must have been legal at the time of the adoption of this policy and must not constitute a distinct danger to life or property.

Properties that have historically been granted Right-of-Entry Permits on adjoining City-owned land for brush management purposes may continue to obtain such permits at the discretion of the Department issuing the permit. However, any new construction on such properties shall comply with the provisions of this policy for new buildings or structures.

Buildings or structures moved into or within wildland-urban interface areas shall comply with the provisions of this policy for new buildings or structures.

This policy does not apply to the removal of illegally planted trees or to the removal of vegetation for non-fire safety hazard abatement.

III. PERMITS

No permits are required for performing brush management in accordance with this policy and underlying regulations except as noted below. However, to assure proper implementation of these regulations, a Brush Management Plan and Program shall be processed in conjunction with any development that is required to obtain entitlement (discretionary), grading, and/or building permits.

Community Risk Reduction Division

Fire-Rescue Department • 600 B Street, Suite 1300 • San Diego, CA 92101-4903 Tel
(619) 533-4400 Fax 544-6806

Use of goats for performing brush management on private property requires a permit issued by San Diego Fire-Rescue Department. Use of goats for performing brush management on City-owned Open Space requires a permit from the Park and Recreation Department Open Space Division.

Brush management extending onto City-owned property shall require a Right-of-Entry Permit issued by either the Park and Recreation Department Open Space Division, the Water Department, Street Division, or Real Estate Assets, depending upon the jurisdiction of the property. (See section VI.E.2 for further discussion.)

IV. DEFINITIONS

Dead Tree ~ For the purposes of this Policy, a canopy tree is deemed to be “dead” when the bark is lost or peeling away (exfoliating) so that bare wood is exposed over 75% of the trunk circumference and the foliage is either brown and dead or missing completely. Small branches will be brittle and brown with no green, moist, or live tissue showing when broken. A palm tree is deemed to be “dead” if the majority of fronds are brown or missing and there is no green, live tissue at the growing tip of the crown.

Defensible Space / Brush Management Zone(s) ~ Areas either natural or man-made, where material capable of allowing a fire to spread unchecked has been thinned, removed, and/or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur.

Eucalyptus Woodland ~ Eucalyptus dominated habitat ranging from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. Usually forms a dense stand with closed canopy. For the purposes of this policy, shall constitute an area of 4,356 s.f. (1/10 acre) or more.

Native/Naturalized ~ Vegetation able to survive without supplemental irrigation

Tree Canopy ~ Secondary branches growing out from the trunk and main stem of a tree, together with twigs and foliage.

Wildland-Urban Interface Area ~ That geographical area where structures and other human development meets or intermingles with wildland or vegetative fuels.

Other definitions can be found under Chapter 11, Article 3, Division 1, Definitions, of the San Diego Municipal Code [113.0103]

V. REFERENCE DOCUMENTS*

- Chapter 7A of the 2007 California Building Code as adopted and amended by the City of San Diego [SDMC 145.0701 through 145.0706]
- Chapter 47, Requirements For Wildland-Urban Interface Fire Area, 2007 California Fire Code
- Chapter 14, Article 2, Division 4, Brush Management, of the San Diego Municipal Code [142.0412]
- Section III, Brush Management, of the Land Development Manual – Landscape Standards

- General Guidelines for Creating Defensible Space, California Department of Forestry and Fire Protection, 2006
- International Wildland-Urban Interface Code, 2006 ed.
- Vegetation Communities of San Diego County; Oberbauer, Thomas and Kelley based on Robert Holland, 2008

*Note that [Brackets] at the beginning of a section heading refer to sections of the San Diego Municipal Code and/or Standards that are being clarified by this policy.

VI. BRUSH MANAGEMENT – VEGETATION

A. Thinning and Pruning, Native/Naturalized Vegetation [SDMC §142.0412(d), (g) & (h), Landscape Standards §3.2-2.04, 3.2-3.01] – Two key factors in creating a fire safe landscape are providing fuel discontinuity by the separation of the flammable plant cover (thinning) and reduction in fuel load by cutting out dead and excess growth of the native/naturalized vegetation (pruning). Plants to be retained should be consistent with the allowable coverage, massing and spacing required in the Brush Management Regulations and the Landscape Standards. Whenever possible, a person knowledgeable about the use and maintenance of native plants should be consulted to oversee the selection, thinning, and pruning of these plants. The progression of work should proceed as follows: 1) remove dead plants, 2) thin out brush management areas to the required coverage, 3) prune remaining plants, 4) dispose or mulch debris and trimmings, and 5) maintain Zone One on a year-round basis, Zone Two on a seasonal basis. Note that brush management activities are prohibited within coastal sage scrub, maritime succulent scrub, and coastal sage-chaparral habitats from March 1 through August 15, except where documented to the satisfaction of the City Mayor’s Designee that the thinning would be consistent with conditions of species coverage described in the City of San Diego’s MSCP Subarea Plan.

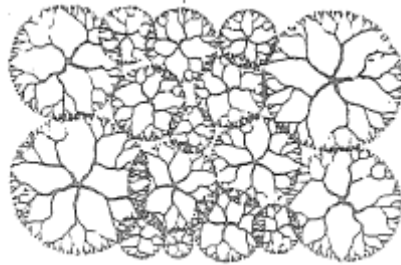
1) Thinning – This first step requires identification of the native/naturalized species and a familiarity with their various characteristics such as rooting depth, fuel loads, flammability, as well as habitat and aesthetic value. Thinning should be prioritized as follows: 1) invasive non-native species with the exception of eucalyptus trees in Eucalyptus Woodland areas, 2) non-native species, 3) flammable native species, 4) native species, and 5) regionally sensitive species. All vegetation that is not to be removed during the initial thinning should be noted or flagged. The remaining plants which are not to be saved should be cut six inches above the ground without pulling out the roots.

For Eucalyptus Woodland areas that fall within Zone Two Brush Management, all trees 3 inches or less in diameter at breast height (dbh) shall be removed with the exception of indigenous, native species. The removal of live (includes “diseased”) eucalyptus trees over 3 inches dbh, should only occur:

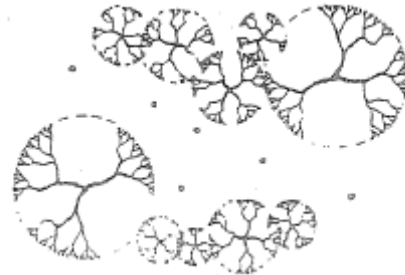
- a) when needed to remove adjacent dead trees;
- b) to achieve tree/shrub vertical requirements;
- c) where deemed a specific liability or fire safety hazard by the Fire Chief; or
- d) on private property when adhering to the horizontal spacing criteria shown in the Tree & Shrub Spacing Chart under Section VI.B.

Certain native plants, such as those found in coastal sage scrub, should be cut back to within 12 inches of the root crown. As sprouting and re-growth occur, these plants can be maintained as low, succulent mounds. Examples include *Artemisia californica* (California Sagebrush), *Salvia mellifera* (Black Sage), *Adenostoma fasciculatum* (Chamise) and *Eriogonum fasciculatum* (Buckwheat).

PLAN VIEW



100% Canopy Coverage, Solid Foliage Mass with no Spaces between Plants



Reduced to 50% by Combination of Thinning and Removal of Canopy Coverage

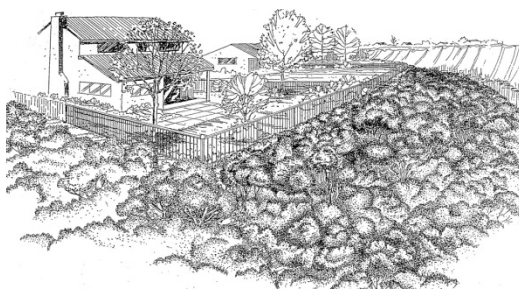
- 2) Pruning – After thinning of the native/naturalized vegetation, the fuel load should be further reduced by pruning the plants that have not been removed. While pruning individual plants is not feasible in coastal sage scrub, it is very effective for many hard chaparral species, such as *Ceanothus* (Wild Lilac), *Heteromeles* (Toyon), *Rhus* (Lemonade Berry, Sugarbush), and *Rhamnus* (Coffeeberry, Redberry). These plants can be shaped into attractive, fire safe specimens by pruning dead and excessively twiggy growth. The figure below illustrates pruning of native shrubs. Note that the limbs touching the ground have been removed, and that a large volume of material has been taken from the canopy. The limbs that remain should be those with young, vigorous shoots.



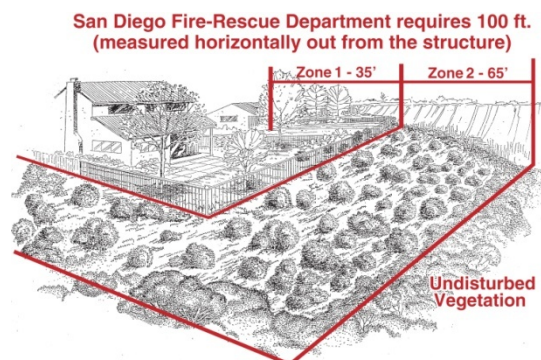
Chaparral Plant Before Pruning



Chaparral Plant After Pruning



Before Brush Management

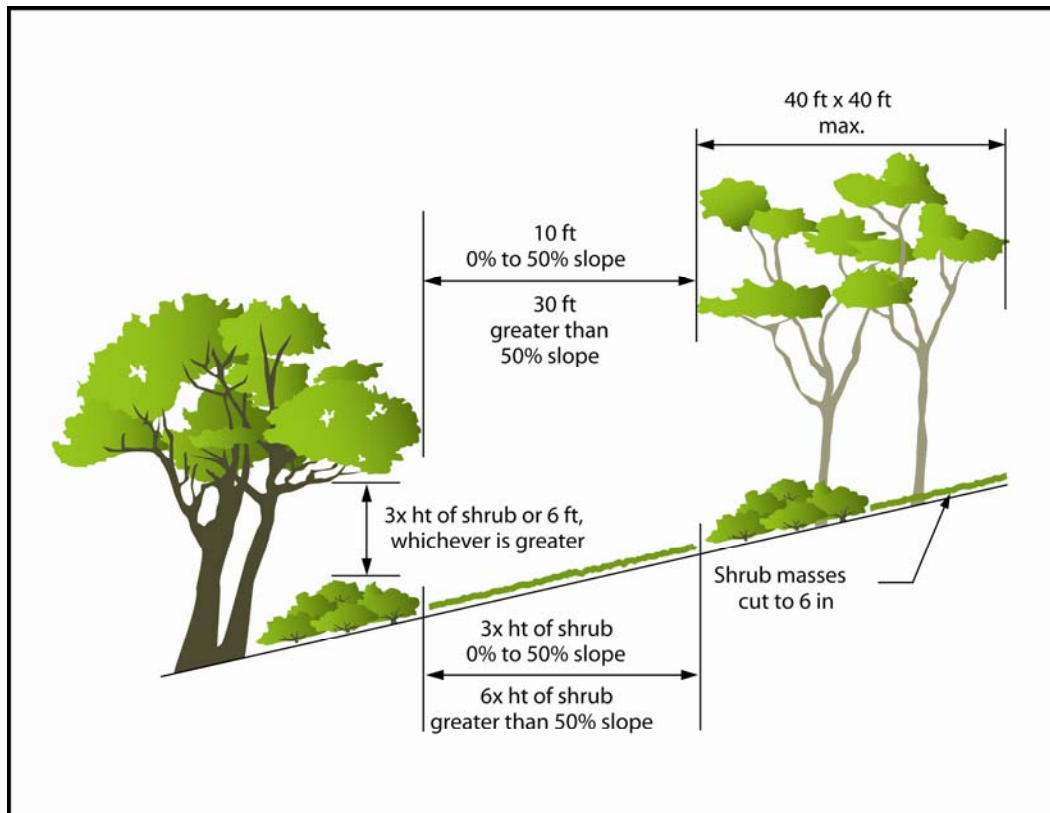


After Thinning and Pruning

B. Thinning and Pruning, Trees [Landscape Standards §3.2-1.03, 1.05] – Trees are allowed within the defensible space, provided the horizontal and vertical distance between trees and shrubs masses complies with required spacing for the slope gradient shown in the following Tree and Shrub Spacing Chart:

Tree & Shrub Spacing Chart		
Trees^{a, b}	Minimum horizontal space <i>From edge of one tree canopy spread (max. 40-ft x 40-ft) to the edge of the next</i>	
	<i>Slope</i>	<i>Spacing</i>
	<i>0% to 50% (2:1)</i>	<i>10 feet</i>
	<i>Greater than 50% (2:1)</i>	<i>30 feet</i>
Shrubs	Minimum horizontal space between edges of shrub	
	<i>Slope</i>	<i>Spacing</i>
	<i>0% to 50% (2:1)</i>	<i>3 times the height of the shrub mass</i>
	<i>Greater than 50% (2:1)</i>	<i>6 times the height of the shrub mass</i>
Vertical Space	Minimum vertical space between top of shrub and bottom of lower tree branches: <i>3 times the height of the shrub mass or 6 feet, whichever is greater</i>	

- a. Trees greater than 3 inches dbh located in Eucalyptus Woodland areas are exempt from the minimum horizontal tree spacing requirement.
- b. Indigenous, native trees in all areas are exempt from the minimum horizontal tree spacing requirement.



TREE & SHRUB SPACING

Vertical clearance between trees and shrubs can be created by pruning up the tree canopy, reducing height of the shrubs, or a combination thereof. Canopies of existing trees that extend to within 10 feet of any structure shall be pruned to maintain a minimum horizontal and vertical clearance of 10 feet. Portions of tree canopies that extend within 10 feet of the

outlet of a chimney shall be pruned to maintain a minimum horizontal and vertical clearance of 10 feet.

- C. Grassland [Landscape Standards §3.2-2.04, 3.01] – Expanses of native/naturalized grasses should generally be cut to within 2 inches in height prior to the end of the growing season in April or May. However, where such grasses occur in conjunction with coastal sage scrub, maritime succulent scrub, and coastal sage-chaparral habitats, they should be cut prior to March 1 and again as necessary after August 15 should re-growth exceed 24 inches in height. Note that individual clumps of grass and other broad-leafed herbs may be maintained year-round up to 24 inches in height when they are isolated from other fuels or where necessary to stabilize the soil and prevent erosion.
- D. Fuel Load Model Report [SDMC §142.0412(i)1] – The Fuel Load Model Report referenced in the Brush Management Regulations is required only in situations where there is a request to exceed the standard brush management requirements. It shall not be mandated for modifications or alternative measures that shall achieve an equivalent level of fire-protection as the standard requirements.
- E. Limits of Brush Management Responsibility [SDMC §142.0412(b)2(c)] – In most cases, responsibility for the required brush management shall be confined to the respective owner’s property. Adjacent properties that are not being properly maintained shall be subject to a notice of violation issued by the Fire-Rescue Department through the Fire Hazard Advisor at (619) 533-4444. (For situations where adjacent property is privately owned but primarily undeveloped or adjacent property is City-owned, see subsections E1 and E2 below.) Diagrams VI.E-1 & E-2 illustrate typical limits of brush management responsibility and when a notice of violation would be warranted on adjacent property.

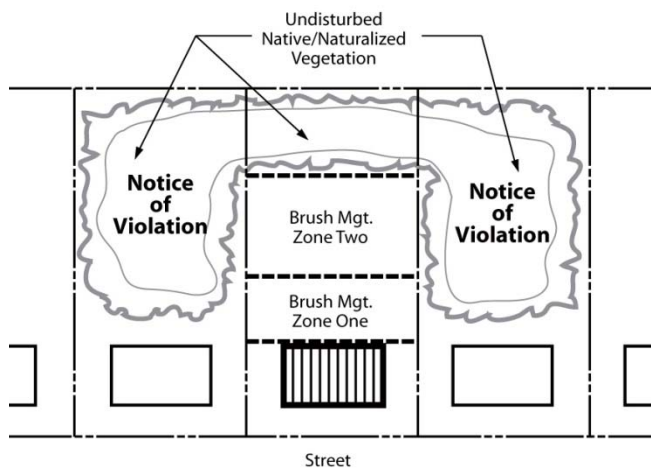


Diagram VI.E-1

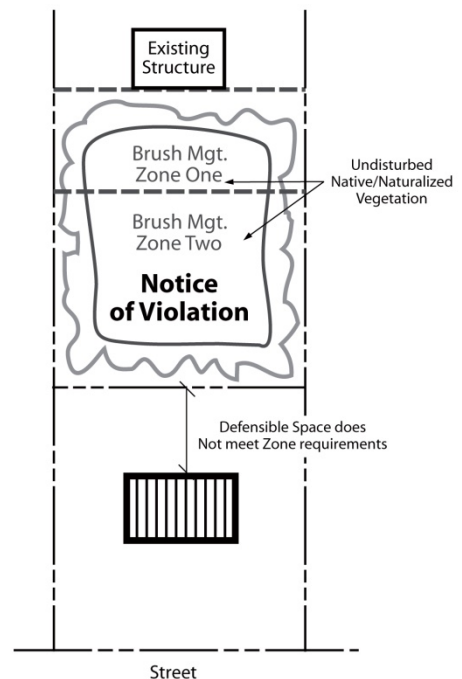


Diagram VI.E-2

- 1) Easements for Off-site Brush Management – Adjacent properties that are primarily undeveloped may require a recorded easement for performing off-site brush management unless the structure requiring brush management is to be fire-rated to compensate for a lack of full brush management zone(s). Diagrams VI.E-3 & E-4 illustrate situations where obtaining an easement for off-site brush management would be warranted.

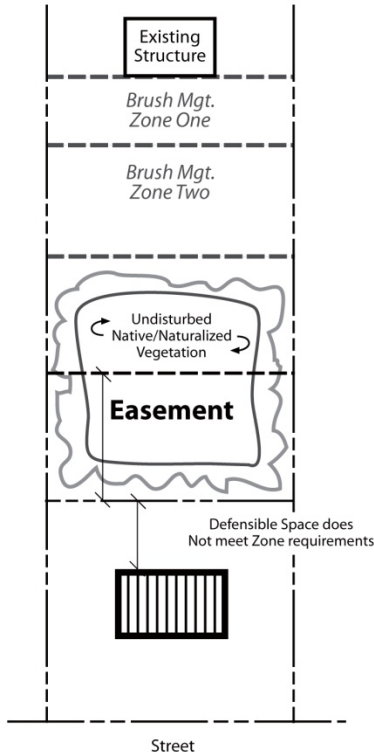


Diagram VI.E-3

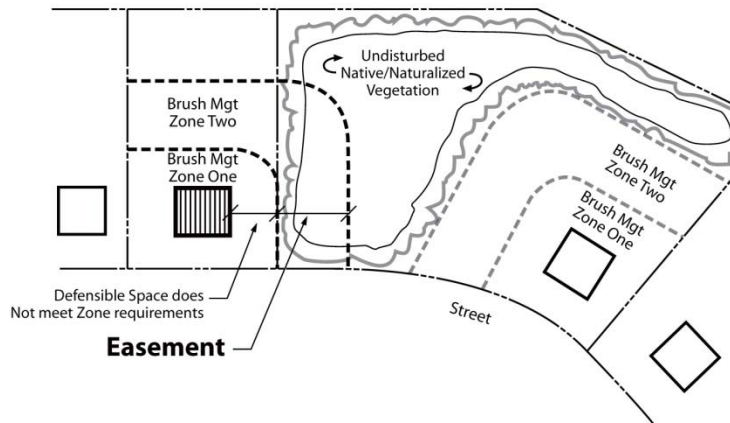


Diagram VI.E-4

- 2) Right-of-Entry Permits – In situations where the adjacent, undeveloped property is City-owned, a Right-of-Entry Permit may be obtained for existing, previously conforming structures only. No brush management easements shall be granted on City-owned property. Right-of-Entry Permits are issued as follows:
 - Open Space ~ Park & Recreation Department / (619) 685-1350
 - Paper Streets ~ Street Division / (619) 527-7500
 - Water Department Land ~ Real Estate Assets / (619) 236-6231
 - Other City-owned Properties ~ Real Estate Assets / (619) 236-6231

- F. Long-term Maintenance [SDMC §142.0412, Landscape Standards Section III] – Ongoing, long-term maintenance of the brush management zone(s) shall be the responsibility of the respective property owner unless another approved entity, such as a home owners’ association, has been designated to provide said maintenance.

VII. FIRE PROTECTION REQUIREMENTS – STRUCTURES

- A. Fire-resistive Construction [SDMC §142.0412(i) thru (j)] – When the full brush management zone(s) cannot be provided, alternative means of obtaining equivalent fire protection shall be required. (See subsection B below for exemptions.) The Fire-Rescue Department will identify the required fire protection based upon the structure’s proximity to native or naturalized vegetation and extent of the fuel load. Fire-rated construction shall include:

- 1) Roofs – All roofs shall have non-combustible roof covering material. Tile, if used, shall be flat or be grouted such that burning brands cannot penetrate the space in between the tiles.
- 2) Walls and Openings – Depending on the adjacent fuel load, the fire resistance of walls shall be one hour with 45 minute protected openings or two hour walls with 60 minute protected openings. Operable windows and doors shall be protected with an automatic closing mechanism, such as fusible-link shutters, and self-closing doors. Fire resistance shall extend horizontally and vertically along the face of the building adjacent to the native/naturalized vegetation with a minimum 10-ft perpendicular return along adjacent wall faces. In no instance shall parapets be required for brush management.

Note that the above criteria are for brush management purposes only and are separate from the structural requirements set forth under Chapter 7A of the 2007 California Building Code for structures located in the “Very High Fire Hazard Severity Zone.”

B. Pre-existing Structures and Additions, Exemptions [SDMC §142.0402] – This policy and underlying regulations are intended primarily for application with new construction and not for retrofits to existing, previously conforming structures that encroach into the defensible space. However, it is strongly recommended that whenever possible, upgrades to existing structures be incorporated into the project so as to create a more fire-safe condition. Note that additions to existing, previously conforming structures shall likewise be exempt from the fire-resistive construction set forth in this Policy if the additions will not be located any closer to the native/naturalized vegetation than the foot-print of the existing, previously conforming structure. Upper-story additions over existing, previously conforming structures, however, must observe a setback equivalent to the required brush management zone(s) to avoid fire-rating. Diagrams VII.B-1 and B-2 show examples of additions that would not require fire-rating. Diagrams VII.B-3 and B-4 show examples of additions that would require fire-rating.

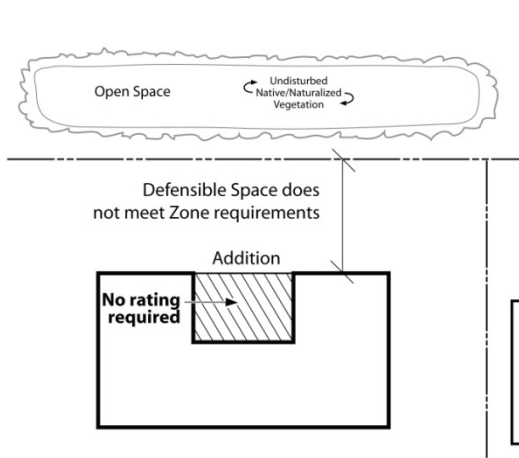


Diagram VII.B-1

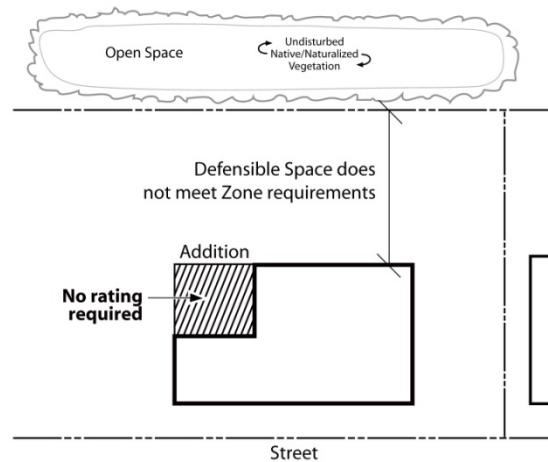


Diagram VII.B-2

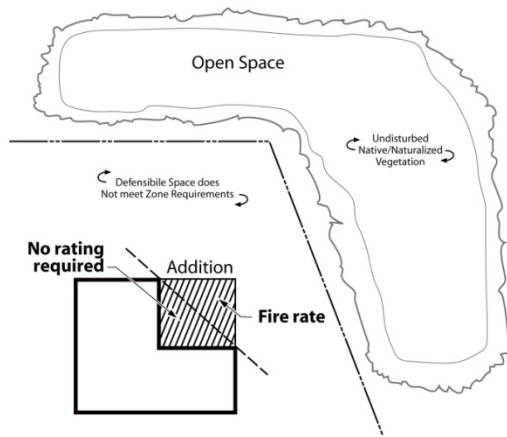


Diagram VII.B-3

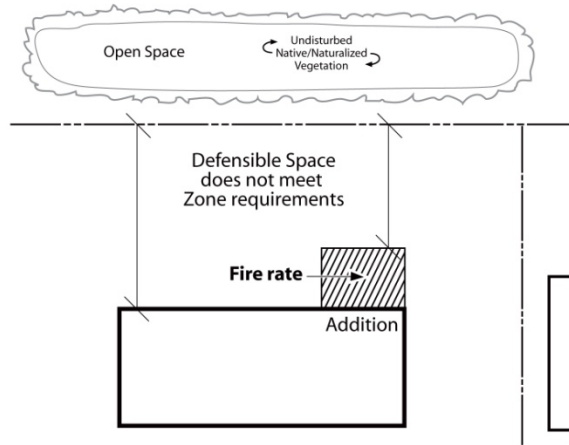


Diagram VII.B-4

C. Accessory Structures within Brush Management Zone One [SDMC §142.0412(g)2] – In addition to the allowance of noncombustible construction within Zone One, one-hour fire-rated and heavy-timber construction shall be permitted. Previously conforming, legal structures (such as wooden fences, gazebos, decks) within Zone One shall be allowed to remain. However, they must meet above mentioned fire-rating criteria upon repair and/or replacement as determined by the Fire-Rescue Department.

Promulgated by: *Frankie Murphy*
Frankie Murphy, Fire Marshall

Revised Date: May 4, 2010
Originally issued: 4/23/08