

SANTA ROSA FIRE DEPARTMENT

FIRE PREVENTION BUREAU

INSPECTION CHECKLIST

July 1, 2010



SINGLE FAMILY DWELLING REMODEL/ALTERATION

Address:		Permit #:
Inspector:	Date Inspected:	Status:
Inspector:	Date Inspected:	Status:
A-Approved, R-Re-inspection Required		

This Checklist outlines general requirements. Information contained herein applies to typical instances and may not address all circumstances.

CODE REFERENCES

The California Fire Code, as adopted by the City of Santa Rosa (Santa Rosa City Code - SRCC), is the primary Code used as the authority for the inspections and the corrective actions that are necessary. These Codes are listed as "SRCC 18-44", followed by the particular code section. Other commonly used code references are the California Building Code (SRCC 18-16), the California Electrical Code (SRCC 18-32), the California Vehicle Code (CVC), the California Business and Professions Code (B&P) and Title 19 and 24 of the California Code of Regulations (CCR).

FILE REVIEW

1. **Y** **N**
 REVIEW FILE – Is there an alternate method application approved and are the conditions incorporated?
2. **REVIEW PLANS, PLAN NOTES AND FD APPROVAL LETTER** - Are fire sprinklers or a fire hydrant conditioned? If so, are they installed and approved?

REQUIRED INSPECTIONS

3. **WATER SUPPLY** – SRCC 18-44.508.1 – Verify the conditioned water supply is in place for this project - 1,500 GPM required for homes; however, 2,500 GPM required for homes within a WUIFA.

FIRE HYDRANTS

4. SRCC 18-44508.1 – Verify fire hydrants are spaced along City streets at 500 ft intervals (300 ft intervals for homes within the WUIFA) and along both sides of divided streets.
5. Fire hydrant must be located within 150ft of all points of the first story of the home as measured by an approved unobstructed route.
6. Verify hydrant is of approved type.
7. Painted white for public or safety chrome yellow for private.
8. Verify blue reflective street marker is provided for hydrant identification.

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9. **Y** **N**
 Fire hydrant caps shall be painted to indicate area flow capability.

FIRE SPRINKLERS

10. SRCC 18-44.903.2.18.1 – Verify all aspects of the fire sprinkler installation have been inspected:
11. Using Permits Plus verify that the rough-in hydro test was approved.
12. The fire sprinkler final has been approved.
13. Verify all valves are secured and signed.

BUILDING ADDRESSING (SRCC 18-44.505.1)

14. Verify that the address is installed in compliance with the address standard.
15. A minimum of 4 inches in height with a ½ inch stroke, shall be affixed to the structure, be illuminated during hours of darkness, have a contrasting background, and be plainly visible and legible from the road.
16. If the address cannot be seen from the street an additional address sign may be required at the driveway entrance for homes.

FIRE DEPARTMENT ACCESS ROADWAY (SRCC 18-44.503.1.1, 18-44.503.2.1)

17. Verify an approved fire apparatus access roadway is provided at a minimum clearance of 20 feet in width and 13'-6" in height.
18. For buildings more than three stories in height the roadway shall have a minimum clearance of 35 feet in width and 13'-6" in height.
19. Verify the roadway extends to within 150 feet of all portions of the exterior of the first floor of the building as measured by an approved route around the exterior of the building.
20. Verify the roadway was constructed to meet or exceed City Street Design Standards (SRCC 18-44.503.2.3).
21. **SURFACE** - Fire Department Access Roads shall be designed to support the imposed loads of fire apparatus, shall be paved, and shall meet City Street Design Standards (CFC 503.2).
22. **TURNING RADIUS** – SRCC 18-44.503.2.4 - Access roads require a minimum 20' inside turning radius and a minimum 40' outside turning radius.
23. **VERTICAL CLEARANCE** – SRCC 503.2.1 - Unobstructed vertical clearance of 13' 6" feet.
24. **GRADE** – SRCC 18-44.503.2.7, City Street Design Standards – A maximum grade of 15 percent.
25. **TURNAROUNDS** – SRCC 18-44.503.2.5 – An approved turnaround must be provided where the driveway or access road exceeds 150 feet in length and is a dead end.
26. **FIRE LANES** – SRCC 18-44.503.3 – Required fire apparatus access roads shall be marked in accordance with California Vehicle Code Section 22500.1. The required markings shall be maintained by the property owner.

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- | | Y | N | |
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| 27. | <input type="checkbox"/> | <input type="checkbox"/> | BRIDGES – SRCC 18-44.503.2.6 – Vehicle load limits shall be posted with approved permanent all weather signs at both entrances of bridges. |
| 28. | <input type="checkbox"/> | <input type="checkbox"/> | TURNOUTS – SRCC 18-44.503.2.2 - One-way fire access roads or driveways in excess of 500 feet in length shall be equipped with approved turnouts when required by site-specific conditions. Required turnouts shall comply with City Street Design Standard 205. |
| 29. | <input type="checkbox"/> | <input type="checkbox"/> | SECONDARY ACCESS – City Street Design Standards. Access roads greater than 500 ft in length or serving more than 50 residential units shall have an additional approved access/egress roadway installed. |
| 30. | <input type="checkbox"/> | <input type="checkbox"/> | GATES – SRCC 18-44.503.6 – Gates across a fire apparatus access road must be approved by the Fire Department prior to installation. Approved gates must be installed a minimum of 20 feet from the roadway to allow a vehicle to stop at the gate without obstructing traffic on the primary roadway. Manually operated gates shall be equipped with an approved Knox company key lock; the lock shall be provided and maintained by the property owner. Powered gates shall be equipped with an approved Knox company access override system. All gates shall open inward and shall be no less in width as the access way. |

WILDLAND URBAN INTERFACE FIRE AREA (WUIFA) BUILDING CONSTRUCTION REQUIREMENTS – SRCC 18-44.4701, SRCC 18-16.701A (2007 California Building Code, Chapter 7A).

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| 31. | <input type="checkbox"/> | <input type="checkbox"/> | Roof and Attic Construction (WUIFA) – SRCC 18-44.4710, Information Bulletin 051 |
| 32. | <input type="checkbox"/> | <input type="checkbox"/> | <u>VERIFY PLAN COMPLIANCE</u> |
| 33. | <input type="checkbox"/> | <input type="checkbox"/> | Roof Construction – SRCC 18-44.4710.1.1 – Must conform to 2007 California Building Code, Chapter 15. |
| 34. | <input type="checkbox"/> | <input type="checkbox"/> | Roof Covering – SRCC 18-44.4710.1.2 – Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers, be fire-stopped with approved materials or have one layer of No. 72 ASTM cap sheet installed over the combustible decking |
| 35. | <input type="checkbox"/> | <input type="checkbox"/> | Roof Valleys – SRCC 18-44.4710.1.3 - When provided, valley flashings shall be not less than 0.019-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36 inch wide (914 mm) underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley. |
| 36. | <input type="checkbox"/> | <input type="checkbox"/> | Roof Gutters – SRCC 18-44.4710.1.4 – Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. |
| 37. | <input type="checkbox"/> | <input type="checkbox"/> | Attic Ventilation – SRCC 18-44.4710.2 – When required by the California Building Code, Chapter 15, roof and attic vents shall resist the intrusion of flame and embers into the attic area of the structure, or shall be protected by corrosion-resistant, noncombustible wire mesh with ¼ inch (6 mm) openings or its equivalent. |
| 38. | <input type="checkbox"/> | <input type="checkbox"/> | Eave or Cornice Vents – SRCC 18-44.4710.2.2 – Vents shall not be installed in eaves and cornices. Exception: Eave and cornice vents may be used provided they resist the intrusion of flame and burning embers into the attic area of the structure. |
| 39. | <input type="checkbox"/> | <input type="checkbox"/> | Spark Arrestors – SRCC 18-16.2113.9.1 – All chimneys attached to any appliance or fireplace that burns solid fuel shall be equipped with an approved spark arrestor. The spark arrestor shall meet all of the following requirements: |

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- The net free area of the spark arrestor shall not be less than 4 times the net free area of the outlet of the chimney.
- The spark arrestor shall have heat and corrosion resistance equivalent to 12-gage wire, 19-gage galvanized wire or 24-gage stainless steel.
- Openings shall not permit the passage of spheres having a diameter larger than ½ inch (12.7 mm) and shall not block the passage of spheres having a diameter of less than 3/8 inch (9.5 mm).
- The spark arrestor shall be accessible for cleaning and the screen or chimney cap shall be removable to allow for cleaning of the chimney flue.

Y N

40. **Phase 1 and 2 Requirements** – SRCC 18-44.47-8.1.3 – Building Code requirements for Phase 1 and 2 apply to new construction only; alteration or additions to existing buildings are exempt.
41. **30' -100' Firebreak Zone (Reduced Fuel Zone)** – Remove all flammable vegetation and any dead or dying plants within 30 to 100 feet of each side of the structure or to the property line, whichever is closer, in accordance with the Santa Rosa Fire Department “Vegetation Management Guide”. Single trees or other vegetation that are trimmed of all dead and dying foliage and are well pruned and maintained to not form a means of rapidly transmitting fire from other nearby vegetation to any dwelling or structure may remain.
42. **DEFENSIBLE SPACE STANDARDS** - California Government Code, Section 51182
- Recent changes to Government Code (GC) 51182 expanded the defensible space clearance requirement maintained around buildings and structures from 30 feet to a distance of 100 feet or to the property line.
 - These requirements are intended to provide property owners with examples of fuel modification measures that can be used to create a defensible space area around buildings or structures. A defensible space perimeter around buildings and structures provides firefighters a working environment that allows them to protect buildings and structures from encroaching wildfires as well as minimizing the chance that a structure fire will escape to the surrounding wildland.
 - The requirements apply to any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, which area or land is located within a designated Wildland Urban Interface Fire Area (WUIFA).
 - The vegetation surrounding a building or structure is fuel for a fire. A building or structure itself is considered fuel. Research and experience have shown that fuel reduction around a building or structure increases the probability of it surviving a wildfire.
 - Good defensible space allows firefighters to protect and save buildings or structures safely without facing unacceptable risk to their lives. Fuel reduction through vegetation management is the key to creating good defensible space. Terrain, climate conditions and vegetation interact to affect fire behavior and fuel reduction standards. The diversity of California’s geography also influences fire behavior and fuel reduction standards as well. While fuel reduction standards will vary throughout the State, there are some common practices that guide fuel modification treatments to ensure creation of adequate defensible space:
 - Properties with greater fire hazards will require more clearing. Clearing requirements will be greater for those lands with steeper terrain, larger and denser fuels, fuels that are highly volatile, and in locations subject to frequent fires.

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- Creation of defensible space through vegetation management usually means reducing the amount of fuel around the building or structure, providing separation between fuels, and or reshaping retained fuels by trimming. Defensible space can be created removing dead vegetation, separating fuels, and pruning lower limbs.
- In all cases, fuel reduction means arranging the tree, shrubs and other fuels sources in a way that makes it difficult for fire to transfer from one fuel source to another. It does not mean cutting down all trees and shrubs, or creating a bare ring of earth across the property.
- A homeowner's clearing responsibility is limited to 100 feet away from his or her building or structure or to the property line, which ever is less, and limited to their land. While individual property owners are not required to clear beyond 100 feet, groups of property owners are encouraged to extend clearances beyond the 100 foot requirement in order to create communitywide defensible spaces.
- Homeowners who do fuel reduction activities that remove or dispose of vegetation are required to comply with all federal, state or local environmental protection laws and obtain permits when necessary. Environmental protection laws include, but are not limited to, threatened and endangered species, water quality, air quality, and cultural/archeological resources.
- A tree removal permit may be required from the Community Development Department when cutting trees over a specified size. The methods used to manage fuel can be important in the safe creation of defensible space. Care should be taken with the use of equipment when creating your defensible space zone. Internal combustion engines must have an approved spark arresters and metal cutting blades (lawn mowers or weed trimmers) should be used with caution to prevent starting fires during periods of high fire danger. A metal blade striking a rock can create a spark and start a fire, a common cause of fires during summertime.
- Vegetation removal can also cause soil disturbance, soil erosion, re-growth of new vegetation, and introduce non-native invasive plants. Always keep soil disturbance to a minimum, especially on steep slopes. Erosion control techniques such as minimizing use of heavy equipment, avoiding stream or gully crossings, using mobile equipment during dry conditions, and covering exposed disturbed soil areas will help reduce soil erosion and plant re-growth. Areas near water (riparian areas), such as streams or ponds, are a particular concern for protection of water quality. To help protect water quality in riparian areas, avoid removing vegetation associated with water, avoid using heavy equipment, and do not clear vegetation to bare mineral soil.

43. **Y** **N**

Defensible Space Definitions - California Government Code, Section 51182

- Defensible space:** The area within the perimeter of a parcel where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.
- Aerial fuels:** All live and dead vegetation in the forest canopy or above surface fuels, including tree branches, twigs and cones, snags, moss, and high brush. Examples include trees and large bushes.
- Building or structure:** Any structure used for support or shelter of any use or occupancy.

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- **Flammable and combustible vegetation:** Fuel Vegetative material, live or dead, which is combustible during normal summer weather. For the purposes of these guidelines, it does not include fences, decks, woodpiles, trash, etc.
- **Homeowner:** Any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and located within a Very High Fire Severity Zone.
- **Ladder Fuels:** Fuels that can carry a fire vertically between or within a fuel type.
- **Reduced Fuel Zone:** The area that extends out from 30 to 100 feet away from the building or structure (or to the property line, whichever is nearer to the building or structure).
- **Surface fuels:** Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branches and downed logs.