



# North County Fire Protection District

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 Web Site: [www.ncfire.org](http://www.ncfire.org)

Fire Chief/CEO  
 Steve Abbott

## FIRE PLAN CHECK CORRECTION

LIST FOR SINGLE FAMILY RESIDENCES, DUPLEXES, AND GARAGES

Date: \_\_\_\_\_ County Plan ✓ # \_\_\_\_\_ NCFPD Plan ✓ # \_\_\_\_\_

Project Name: \_\_\_\_\_ Address: \_\_\_\_\_

Corrections circled are to be made on the plans before Fire Approval will be issued. The approval of plans and specifications does not permit the violation of any section of the North County Fire Protection District Fire Code, County Ordinances, or State law. The following list does not necessarily include all errors and omissions.

*To facilitate rechecking, please identify, next to each circled item, the sheet of the plans upon which the correction has been made.*

**RETURN THIS CORRECTION LIST WITH THE CORRECTED PLANS**

**Note: If new plans are provided when resubmitting, return at least one copy of the original stamped and checked set.**

### A. PLAN REQUIREMENTS:

1. **Two sets of County Red stamped original building plans** and a completed County mitigation form.
2. Due to the number and/or complexity of corrections, before Fire sign-off will be given, corrections should be made on the originals and run new prints.
3. Corrections cannot be made on stamped plans. **NO RED Ink** or clouding is allowed.
4. Identify rooms and specify use.
5. Define all symbols and shaded areas etc. used on the plans.
6. See notes/remarks made on one set of plans. Return marked set with new/revised sets after you have complied with the requirements on the marked set of plans. Red marks on plans are part of this comments list.
7. The Fire District will require the following conditions be placed on the project: Detailed information regarding Fire District Ordinances can be found on the District's web site at [www.ncfire.org](http://www.ncfire.org), under *Fire Prevention*.
8. Unless a specific code is given, all codes referenced by Section (§) are from the County of San Diego's 2017 Consolidated Fire Code.

### B. PLOT PLAN & SITE REQUIREMENTS:

1. **Site Inspection** may reveal conditions that have changed since plan review. When such discrepancies arise, field inspection shall take precedence. (NOTE ON PLOT PLAN) For NCFPD: If not noted, use our stamp.
2. **Show Fire Hydrant Locations on Plot Plan (California Fire Code §507.5)**. Fire Hydrants shall be installed as required by the California Fire Code, using the following criteria and taking into consideration departmental operational needs. Hydrants shall be located at intersections, at the beginning radius of cul-de-sacs and at intervals identified in the following table and criteria. Hydrants located across heavily traveled roadways shall be not considered as serving

**Plan Review Requirements**

the subject property. Where a portion of the facility of building hereafter constructed or moved into or within the jurisdiction is more than 400 feet 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.

**Exception:** For Group R-3 and Group U occupancies, equipped throughout with an approved automatic sprinkler system, the distance requirement shall be not more than 600 feet.

- 3. **Road Phasing Requirement for New Single-Family Dwellings. (Consolidated Fire Code §503.2.1.1)** The fire access roadway requirement for widening an existing, improved and paved fire apparatus roadway shall be as provided in Table §503.2.1.1 The Fire access roadway shall be constructed to extend from the property line to the nearest public road.

**TABLE §503.2.1.1 - PHASING POLICY- Fire Apparatus Access – Single-Family Dwellings**

NUMBER OF PARCELS	UNOBSTRUCTED ROAD WIDTH	ROADWAYS OVER 600 FOOT LONG	EXTEND TO NEAREST PUBLIC ROAD
1-2	16-foot, paved	Turnouts every 400-feet	Yes
3-8	20-foot, paved	Turn-outs every 400-feet	Yes
9 or more	24-foot, paved	Not required	Yes

The access roadway shall not be required to be improved for a non-habitable accessory structure or a residential addition or remodel less than 500 square feet if the access roadway has already been improved and paved to a minimum 20 feet. If the roadway is less than 20 feet, the roadway shall be widened to 20 feet. The preceding addition or remodel exception is limited to one permit addition or remodel per three-year period from the date of the last permit approval.

- 4. **Gates (NOTE THE FOLLOWING ON THE PLOT PLAN) (§503.6).** No person shall install a security gate or security device across a fire access roadway without the fire code official’s approval. An automatic gate across a fire access roadway or driveway shall be equipped with an approved emergency key-operated switch overriding all command functions and opening the gate. (Refer to the code for gates serving 4 or more residences and hazardous institutional, educational or assembly occupancies).
- 5. **Emergency Key Access (§506.1.2).** All central station–monitored fire detection systems and fire sprinkler systems shall have an approved emergency key access box on site in an approved location. The owner or occupant shall provide and maintain current keys for any structure for fire department placement in the box and shall notify the fire department in writing when the building is re-keyed.
- 6. **Turning Radius (§503.2.4).** The turning radius of a fire apparatus access road shall be 28 feet or as approved by the Fire Chief/CEO.
- 7. **Dead Ends. (§503.2.5)** All dead-end fire access roads in excess of 150 feet in length shall be provided with approved provisions for turning around emergency apparatus. A cul-de-sac shall be provided in residential areas where the access roadway serves more than two (2) structures. The minimum unobstructed paved radius width for a cul-de-sac in a residential area shall be 36 feet. The fire code official shall establish a policy identifying acceptable turnarounds for various project types.

## **Plan Review Requirements**

- 8. Grade (SHOW ON PLOT PLAN) (§503.2.7).** The gradient for a fire apparatus access roadway shall not exceed 20.0%. Grades exceeding 15.0% (incline or decline) shall not be permitted without mitigation measures. Minimal mitigation shall be the installation of a fire sprinkler system and a surface of Portland cement concrete (PCC), with an approved rough finish, perpendicular to the direction of travel to enhance traction. The Fire code official may require additional mitigation measures where he deems appropriate. The angle of departure and angle of approach of a fire access roadway shall not exceed seven degrees (12 %) or as approved by the fire code official.
- 9. Surface (NOTE THE FOLLOWING ON THE PLOT PLAN) (§503.2.3).** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus (not less than 75,000 lbs.) and shall be provided with an approved paved surface so as to provide all-weather driving capabilities.
- 10. Dimensions (NOTE THE DIMENSION ON THE PLOT PLAN) (§503.2.1).** Fire apparatus access roads shall have an unobstructed improved width of not less than 24 feet, except for single-family residential driveways serving no more than two single-family dwellings, which shall have a minimum of 16 feet of unobstructed improved width.
- 11. Street Numbers (NOTE THE FOLLOWING ON THE PLOT PLAN) (§505.1).** Approved numbers and/or addresses shall be placed on all new and existing buildings and at appropriate additional locations as to be plainly visible and legible from the street or roadway fronting the property when approaching from either direction. The numbers shall contrast with their background, and shall meet the following minimum size standards: 4" high with a 3/8" stroke for residential buildings, 6" high with a 1/2" stroke for commercial and multi-residential buildings and 12" high with a 1" stroke for industrial buildings
- 12. Structure Set Back from Slope (§4907.1.3).** Single-story structure shall be setback a minimum 15 feet horizontally from top of slope to the farthest projection from a roof. A single-story structure shall be less than 12 feet above grade. A two-story structure shall be setback a minimum of 30 feet measured horizontally from top of slope to the farthest projection from a roof. Structures greater than two stories may require greater setback when the slope is greater than 2-to-1.
- 13. Fire Apparatus Access Roads (§503.1), General.** Fire apparatus access roads, including private residential driveways, shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from the closest point of fire department vehicle access.
- 14. Fuel Modification (§4907.2).** When a building or structure in a hazardous fire area is located 100 feet or more from the property line the person owning or occupying the building or structure shall maintain a fuel modification zone within 100 feet of the building or structure. The area within 50 feet of a building or structure shall be cleared of vegetation that is not fire resistant and re-planted with fire-resistant plants. In the area between 50 to 100 feet from a building all dead and dying vegetation shall be removed. Native vegetation may remain in this area provided that the vegetation is modified so that combustible vegetation does not occupy more than 50% of the square footage of this area. Trees may remain in both areas provided that the horizontal distance between crowns of adjacent trees and crowns of trees and structures is not less than 10 feet. **There is no guarantee or assurance that compliance with these standards will prevent damage or destruction of structures by fire.**
- 15. Roadway Design Features (§503.4.1).** Roadway design features (speed bumps, speed humps, speed control dips, etc.), which may interfere with emergency apparatus responses, shall not be installed on fire access roadways, unless they meet design criteria approved by the Fire Chief/CEO.
- 16. Bridges (NOTE THE FOLLOWING ON THE PLOT PLAN) (§503.2.6).** When a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with (AASHTO HB 17). Vehicle load limits shall be posted at both entrances to bridges when required by the Fire Chief/CEO.

- 17. **Marking, Fire Apparatus Roads (§503.3).** When required by the Fire Chief/CEO, approved signs or other approved notices shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Signs or notices shall be maintained in a clean and legible condition at all times and shall be replaced or repaired when necessary to provide adequate visibility. All new public roads, all private roads within major subdivisions, and all private road easements serving four or more parcels shall be named. Road name signs shall comply with County of San Diego Department of Public Works Design Standard DS-13.
- 18. **Response Map Updates (§505.5).** Any new development, which necessitates updating emergency response maps due to new structures, hydrants, roadways or similar features shall be required to provide map updates in a format compatible with current department mapping services and shall be charged a reasonable fee for updating all response maps. See department digital submissions standards.
- 19. **Location of LPG Tank, Above Ground Storage (NOTE THE FOLLOWING ON THE PLOT PLAN) (Fire Code Table 3804.3).** Minimum separation between containers and buildings, public ways, or lines of adjoining property that can be built upon is: 10 feet for containers 125 gallons to 500 gallons; 25 feet for containers 501 to 2,000 gallons.

**C. BUILDING CONSTRUCTION AND FEATURES:**

- 1. **Fire Sprinklers (§903.2) (NOTE THE FOLLOWING ON THE PLOT PLAN).** “Structures shall have an automatic fire sprinkler system installed per NFPA 13-D standards and Fire Protection District Standards. Fire Sprinkler plans shall be submitted and approved by the Fire Protection District prior to framing inspection.”

**Section 903.2 – Summary of Fire Sprinkler Requirements:**

COMMERCIAL	RESIDENTIAL (R1)(R3)	ADDITIONS	REMODELS
Buildings where the required fire flow exceeds 1500gpm.	All.	50% increase or exceeding fire flow or response time > 5min.	See Exception #4 below.

**Section 903.2.7 - Automatic fire sprinkler requirements-Groups R and U:** An automatic fire sprinkler system installed in accordance with section 903.3 shall be provided throughout all new: dwellings, attached garages, carports, workshops, storage rooms, auxiliary use rooms and other similar structures.

**Exceptions:**

- 1. A Group U occupancy not greater than 500 sq. ft. when the building is more than 20 feet from an adjacent structure or property line.
  - 2. Response time exceeds 5 minutes.
  - 3. An accessory building or barn not greater than 1000 sq. ft which is not considered an enclosed building or structure and is of ignition-resistant construction or which is determined by the code official not to present a significant fire hazard.
  - 4. An agricultural building constructed of wood or metal frames over which fabric or similar material is stretched which is used as a green house unless it is connected to another structure.
  - 5. A remodel when the scope of work does not include additional square footage or significant modification to the interior or roof of the existing portions of the structure or when the cost of installing an automatic fire sprinkler system in the existing portion of the structure is greater than 15% of the construction costs of the remodel. The Fire Chief/CEO may require other protective measures be taken based on existing conditions or potential hazards.
- 2. **Roofing Covering (NOTE ON PLAN) (CA. Fire Code Ch 7A §704 A.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 72-pound mineral-surfaced nonperforated cap sheet complying with ASTM D3909 installed over the combustible decking.
    - a. **Attic Ventilation (CA. Fire Code CH. 7A §704 A.2.1).** When required by Chapter 7A, 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 openings a minimum of 1/8 inch and shall not exceed ¼ inch or its equivalent.

## **Plan Review Requirements**

- b. **Eave or Cornice Vents (CA. Fire Code CH. 7A §704.2.2).** Vents shall not be installed in eaves or 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.

3. **Spark Arresters (§603.6.6) (NOTE ON PLANS).** All structures having a chimney, flue or stovepipe attached to a fireplace, stove or barbecue or other solid or liquid fuel burning equipment or device shall have the chimney, flue or stovepipe equipped with an approved spark arrester. An approved spark arrester is a device intended to prevent sparks from escaping into the atmosphere, constructed of welded or woven wire mesh, 12-gauge thickness or larger, with openings not greater than ½ inch, or other alternative material the FAHJ determines provides equal or better protection.
4. **Glazing Materials (§704A.3.2.2).** Exterior Windows, window walls, glazed doors and glazed openings within exterior doors shall be insulating-glass units with a minimum of one tempered pane, or glass block units, or have a fire –resistance rating of not less than 20 minutes when tested according to NFPA 257, or in accordance with Section 715 or conform to the performance requirement of SFM 12-7A-2.
5. **Vinyl Windows** must meet the following characteristics:
- a. Frame and sash are comprised of vinyl material with welded corners
  - b. Metal reinforcement in the interlock area
  - c. Glazed with insulating glass, annealed or tempered
6. **Skylights (WUI §504.8.).** Skylights **SHALL BE** tempered glass, multilayered glazed panels, glass block or have a fire protection rating of not less than 20 minutes.
7. **Exterior Wall Surfacing Materials (WUI §505.5).** 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.
8. **Exterior Doors (WUI §505.9).** Exterior Doors shall be approved non-combustible construction, solid core wood not less than 1-3/4 inches thick (45mm) or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall be in accordance with §505.8.
9. **Smoke Detectors (NOTE THE FOLLOWING ON THE PLAN) (§907.2.10.2).** In new construction and in newly classified Group R-3.1 occupancies, required smoke alarms shall receive their primary power from the building wiring when the wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms may be solely battery operated when installed in existing buildings, in buildings without commercial power or in buildings, which undergo alterations, repairs or additions, regulated by §907.2.10.6
10. **Additions, Alterations or Repairs to Group R Occupancies (§907.2.10.6) (Single-Family Dwelling).** When the valuation of an addition, alteration or repair to a Group R Occupancy exceeds \$1,000 and a permit is required, or when one or more sleeping rooms are added or created in existing Group R Occupancies smoke detectors shall be installed in accordance with §907.2.10.
11. **Construction Methods for Exterior Wildfire Exposure (§4710).** The construction methods for exterior wildfire exposure in a wildland-urban interface fire area shall be as provided in Chapter 7A of the County Building Code.

**Plan Review Requirements**

Plan checked by: \_\_\_\_\_ Date: \_\_\_\_\_ Phone: (760) 723-2042

Comments: \_\_\_\_\_  
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For additional information regarding the above information, please refer to the following websites:

- North County Fire Protection District  
[www.ncfire.org](http://www.ncfire.org)
- Fallbrook Fire Safe Council  
<http://www.fallbrookfiresafecouncil.org>
- San Diego County Fire Code  
<http://www.sdcounty.ca.gov/dplu/docs/firecode.pdf>
- Recommended Landscaping  
[http://www.ncfireprotectiondistrict.org/pdf/bureau/Recomended\\_Landscaping.pdf](http://www.ncfireprotectiondistrict.org/pdf/bureau/Recomended_Landscaping.pdf)
- Suggested Plant List for a Defensible Space  
<http://www.ncfireprotectiondistrict.org/pdf/bureau/SuggestedPlants.pdf>
- Undesirable Plant List  
[http://www.ncfireprotectiondistrict.org/pdf/bureau/Undesirable\\_Plant\\_List.pdf](http://www.ncfireprotectiondistrict.org/pdf/bureau/Undesirable_Plant_List.pdf)
- Wildland/Urban Interface Hazard Reduction  
[http://www.ncfireprotectiondistrict.org/pdf/bureau/LE\\_38\\_Resident\\_Info\\_Sheet.pdf](http://www.ncfireprotectiondistrict.org/pdf/bureau/LE_38_Resident_Info_Sheet.pdf)