# SAN DIEGO COUNTY FIRE
# FIRE CODE PLAN CHECK
## CORRECTION LIST FOR COMMERCIAL PROJECTS

| RECORD ID: | OWNER ON APPLICATION: |
|---|---|

Plan reviewer: Email: Date of Review:

**NOTE:** Revised plans must be resubmitted to the PDS Building Counter for plan intake. See Section H Additional Corrections and/or Summary of Required Corrections for any other specific plan reviewer comments and revision requirements.

### A. GENERAL REQUIREMENTS

1. **Each of the items on this list that have been circled or highlighted require correction before a permit will be issued**. The approval of plans and specifications does not permit the violation of any section of the fire code, county ordinances, or state law. The following list does not necessarily include all errors and omissions. Codes are paraphrased. Citation is the primary reference. For full text see the County and California Fire and Building Codes.

2. The following supplements are attached and considered part of this review:
   - ❑ Emergency Vehicle Turnaround (CFA #363)
   - ❑ Water Tank Standards for Fire Protection (CFA #600)
   - ❑ 100' Defensible Space Informational Document
   - ❑ Other:_____

3. If revised sets include **new plot plans**, County of San Diego zoning and accuracy stamps **must be transferred** by PDS **staff before resubmittal or recheck**. Stamps may not be copied.

4. The following set(s) **must** be returned with the new/revised sets at recheck:
   - ❑ Previously plan-checked and stamped set(s) dated _____.
   - ❑ Red-marked set(s) dated _____. Red marks on plans are part of this comments list.

5. **Revised Plans will not be accepted for resubmittal** unless you also submit this **original correction list** – copies not accepted – and a complete **Corrections Response List** per the following:
   - ❑ Provide Corrections Response List on a separate 8-1/2-inch by 11-inch sheet(s); do not use this original correction list
   - ❑ Clearly indicate where and how each correction item has been addressed on the revised plans. Please do not provide responses such as "Done" or "See plans" which do not specify where and how the correction item has been addressed
   - ❑ Clearly indicate any additional changes made to the project or project scope beyond the responses to correction items

### B. PLAN REQUIREMENTS (address those items that have been circled or highlighted)

1. Scope of work on plans does not match scope on permit application. See PDS permit technician to revise permit application.

2. Provide fully dimensioned plot plan drawn to scale and indicating the following:
   - ❑ Lot dimensions with property lines and any easements identified
   - ❑ Size and use of each structure on the lot
   - ❑ Dimensions from structures to property lines (measured at right angles to structures)
   - ❑ Dimensions between structures (measured at right angles to structures)

3. Plans are incomplete. Plan check will proceed with submittal of complete plans. Use this list as a guide in preparing plans.

### C. SITE REQUIREMENTS (address those items that have been circled or highlighted)

1. **WILDLAND-URBAN INTERFACE SETBACK**. In areas designated as a 'Fire Hazard Severity Zone' in the wildland-urban interface, structures shall be setback a minimum of 30 feet from property lines and biological open space easements unless the fire code official determines that terrain, parcel size or other constraints on the parcel make the required setback infeasible. When parcels are adjacent a national forest, state park or open space preserve, buildings and structures must be located a minimum of 100 feet from the property line adjacent the protected area. (County Fire Code § 4907.4.1)

2. **FUEL MODIFICATION. Include entire statement (everything within the box) as a note on the plot plan sheet.**

Maintain an effective fuel modification zone by removing, clearing or modifying combustible vegetation and other flammable materials from areas within 100 feet from buildings or structures. Fuel modification zones shall not extend beyond the property line (County Fire Code § 4907.5). The fuel modification zone is divided into three Home Ignition Zones (County Fire Code § 4907.9):

1. **Zone 0 "Immediate Zone" 0-5'** extends 5 feet on a horizontal plane from all exterior wall surfaces (and patios, decks or other attachments to buildings or structures). This zone shall be constructed of continuous hardscape or non-combustible materials (such as pavement, pavers, gravel, river rock, etc.). Combustible materials must be removed from this area (which includes but is not limited to removing combustible materials from roofs, gutters, decks, porches and stairways). Firewood and lumber are prohibited in this area. Dead branches that overhang roofs, are below or adjacent to windows, or which are adjacent to wall surfaces must be removed. All branches within ten (10) feet of any chimney or stovepipe outlet must be removed.
2. **Zone 1 "Intermediate Zone" from Zone 0 to 50'** extends from the immediate edge of Zone 0 for 45 feet on a horizontal plane. This zone shall consist of planting of low growth, drought tolerant and fire resistive plant species. The height of the plants in this zone starts at 6" adjacent to Zone 0 and extending in a linear fashion up to a maximum of 18" at intersection with Zone 2. Dead or dying grass, plants, shrubs, trees, branches, leaves, weeds, and pine needles must be removed from the area. Other combustible materials must not be adjacent to or under combustible decks, balconies, and stairs. Vegetation in this zone shall be irrigated and not exceed 6' in height and shall be moderate in nature as per Sec. 4907.6.4.1. Dead branches that overhang roofs, are below or adjacent to windows, or which are adjacent to wall surfaces must be removed. All branches within ten (10) feet of any chimney or stovepipe outlet must be removed.
3. **Zone 2 "Extended Zone" from Zone 1 to 100'** extends from the immediate edge of Zone 1 for 50 feet on a horizontal plane. This zone consists of planting of drought tolerant and fire resistive plant species of moderate height. This area would be considered selective clearing of natural vegetation and dense chaparral by removing a minimum 50% of the square footage of this area. Horizontal and vertical spacing among shrubs and trees must be created using fuel separation, as follows: Dead and dying woody surface fuel and trees shall be removed. Loose surface litter (consisting of fallen leaves or needles, twigs, bark, cones, and small branches) shall be permitted to a maximum depth of three (3) inches. Annual grasses and forbs must be cut down to a maximum height of four (4) inches.

Fuel modification is also required along fire access roadways and driveways at distances prescribed in the County Fire Code (County Fire Code § 4907.6).

***This Fire Code Section does NOT authorize clearing beyond property lines.***
***Fuel medication must be complete prior to bringing combustible construction materials on-site.***

3. **LOCATION OF ABOVE-GROUND LPG TANK**. Revise the Plot Plan to show the location of the LPG tank. The minimum separation between LPG containers and buildings, public ways, or lines of adjoining property that can be built upon is as follows: 10 feet for containers 125 gallons to 500 gallons, 25 feet for containers 501 gallons to 2,000 gallons. (2022 California Fire Code § 6104.3)
   - ❑ Note the gallon capacity for the propane tank.
   - ❑ Note the separation distance from the tank to the nearest building(s), public way(s), and/or property line(s).

**D. WATER SUPPLY (address those items that have been circled or highlighted)** An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises on which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction. (2022 California Fire Code § 507.1)

1. **FIRE HYDRANT.** Revise the Plot Plan to show the location of the nearest existing fire hydrant. Fire hydrants shall be installed in accordance with Sections 507.5.1 through 507.5.6 and Appendix C of the 2022 California Fire Code. In multi-family, commercial and industrial zones, fire hydrants shall also be installed at intersections, at the beginning radius of cul-de-sacs and every 400 feet along fire apparatus roadways and access roadways, regardless of parcel size.
   - ❑ All portions of a facility or building hereafter constructed or moved into the jurisdiction must be within 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.
   - ❑ For Group R-3 and Group U occupancies, equipped throughout with an approved automatic sprinkler system installed in accordance with NFPA 13, 13R or 13D Standard, all portions of a facility or building hereafter constructed or moved into the jurisdiction must be within 600 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building.
   - ❑ The parcel is served by a private water district/small water system. Contact the district to verify the location of the nearest existing hydrant. On the Plot Plan show the existing hydrant location and note the name of the district, district contact name, title and phone number. If there is no existing hydrant located within the required distance parameters listed above, provide the information listed below for a new fire hydrant.
   - ❑ There is no existing fire hydrant located within the required distance of the proposed structure, therefore a new fire hydrant is required. Please contact the water provider for information regarding the process to install a new fire hydrant. Revise the Plot Plan to show the location of the new fire hydrant.
   - ❑ There are no existing fire hydrants located within the required distance of the proposed structure(s), therefore new fire hydrants are required. The number of required new hydrants and the spacing between the hydrants must be proposed in accordance with Appendix C of the 2022 California Fire Code (Fire-Flow Requirement for Appendix C to be

determined by Appendix B of the 2022 California Fire Code). Please contact the water provider for information regarding the process to install new fire hydrants. Revise the Plot Plan to show the location of all new fire hydrants and the distances between those hydrants.

2. **WATER STORAGE TANK**. Water storage tank(s) and fire department connection(s) (FDC's) are required for fire protection and suppression purposes. The tank(s) and FDC(s) shall be installed per County of San Diego requirements and shall be filled and fully operational prior to the storage of combustible materials on site. **Tank materials shall be in accordance with NFPA 22 Standard; plans must specify galvanized steel or fiberglass-reinforced plastic** (County Fire Code § 507.2.2)
   - ❑ The water storage tank capacity shall be as required for a fire sprinkler system designed to NFPA 13 Standard. Revise the Plot Plan to note the gallon capacity required (**If using multiple tanks they must be interconnected**).
   - ❑ 5,000 gallon capacity for building area of less than 1500 sq. ft.
   - ❑ 10,000 gallon capacity for building area of 1500 sq. ft. and greater (A greater capacity may be required for substantially larger structures or multiple structures. **If using multiple tanks they must be interconnected**).
   - ❑ Revise the Plot Plan to show tank(s) size(s) (in gallon capacity), material, location(s) **and** elevation(s).
   - ❑ Revise the Plot Plan to show the fire department connection(s) (FDC's), location(s) **and** elevation(s).

**E. SITE IDENTIFICATION AND ACCESS (address those items that have been circled or highlighted)**

1. **PREMISES IDENTIFICATION.** Approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof (County Fire Code § 503.3). Where the fire code official determines that it is necessary to ensure adequate fire access, the fire code official may designate existing roadways as fire apparatus access roads as provided by Vehicle Code section 22500 (County Fire Code § 503.3.1). 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 (County Fire Code § 505.2).

2. **EASEMENT ADDRESS SIGN.** All easements which are not named differently from the roadway from which they originate shall have an address sign installed and maintained, listing all address numbers occurring on that easement, located where the easement intersects the named roadway. Address numbers shall be a minimum of 4 inches in height with a ½" stroke; and shall contrast with the background. (County Fire Code § 505.3)
   - ❑ Revise the Plot Plan to indicate installation of Easement Address Sign where the easement intersects the named road.
   - ❑ Revise the Plot Plan to add a notation which states: "Easement Address Numbers shall be a minimum of 4 inches in height with a ½" stroke; and shall contrast with the background."

3. **ADDRESS NUMBERS.** 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 from either direction of approach. Address numbers shall be a minimum of 8 inches in height with a 1" stroke for commercial and multi-family residential buildings, and 12" in height with a 1" stroke for industrial buildings; and shall contrast with the background. (County Fire Code § 505.1)
   - ❑ Revise the Plot Plan to indicate installation of Address Numbers at both the driveway entrance and the front elevation of the structure (Show a separate "Address Numbers" note for each location).
   - ❑ Revise the Plot Plan to add a notation which states: "Address numbers shall be a minimum of 8 inches in height with a 1" stroke for commercial and multi-family residential buildings; and shall contrast with the background."
   - ❑ Revise the Plot Plan to add a notation which states: "Address numbers shall be a minimum of 12" in height with a 1" stroke for industrial buildings; and shall contrast with the background."

4. **FIRE APPARATUS ACCESS ROADS.** Fire apparatus access roads, including private residential driveways, shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall extend to within 150 feet of all portions of the facility and all portions of the *exterior walls* of the first story of the building as measured by an *approved* route around the exterior of the building or facility. (County Fire Code § 503.1.1)
   - ❑ Revise the Plot Plan to show the road/access easement as it appears on the legal division of land.
   - ❑ Revise the Plot Plan to show driveway access to all proposed structures.

5. **DEAD ENDS**. All dead-end fire access roads, including private residential driveways, in excess of 150 feet in length shall be provided with an approved means for turning around emergency apparatus. In addition, for private residential driveways that are determined to be over length by the fire code official, turnouts are required. (County Fire Code § 503.2.5, 503.2.9 & 503.2.1)
   - ❑ Revise the Plot Plan to show the location of an emergency vehicle turnaround **(off-street parking as required by the County Zoning Ordinance shall not encroach into the turnaround area – see #12 below)**
   - ❑ Revise the Plot Plan to show the location of (a) driveway turnout(s). Turnouts shall be a minimum of 12 feet wide and 30 feet long with a minimum 25-foot taper on each end. See Plot Plan for required turnout locations indicated in red.

6. **DIMENSIONS.** Fire apparatus access roads shall have an unobstructed improved width of not less than 24 feet. Exception: single family residential driveways serving no more than two single-family dwellings shall have a minimum of 16 feet of unobstructed improved width. All fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. Standard cross-slope shall be 2%, minimum cross slope shall be 1%, maximum cross slope shall be 5%. (County Fire Code § 503.2.1)
   - ❑ Revise the Plot Plan to show dimensions for the improved width of the road/access easement.
   - ❑ Revise the Plot Plan to show dimensions for the improved width of the driveway as stated above.
   - ❑ Note the requirement for unobstructed vertical clearance as stated above.

7. **TURNING RADIUS.** The inside turning radius of a fire apparatus access road shall be a minimum of 28 feet, or as approved by the fire code official. (County Fire Code § 503.2.4)
   - ❑ Revise the Plot Plan to indicate the inside turning radius as it relates to driveway turns.
   - ❑ Revise the Plot Plan to indicate the inside turning radius as it relates to emergency vehicle turnaround.

8. **BRIDGES.** When a bridge is required to be used as part of a fire apparatus access road, it shall be constructed and maintained in accordance with standard AASHTO HB-17. (County Fire Code § 503.2.6)
   - ❑ Submit plans and calculations for the bridge design to the PDS Building Division for review and approval.

9. **GRADE**. The grade of a fire apparatus access roadway shall not exceed 20.0%. Standard cross-slope shall be 2%, minimum cross slope shall be 1%, maximum cross slope shall be 5%. The angle of departure and angle of approach shall not exceed 7 degrees (12%) (County Fire Code § 503.2.7, 503.2.7.1 & 503.2.8).
   - ❑ Revise the Plot Plan to show the grade of the road/access easement at the property frontage.
   - ❑ Revise the Plot Plan to show the grade of the driveway at representative locations along the complete path of travel.
   - ❑ Revise the Plot Plan to show the cross slope at the driveway and emergency vehicle turnaround (if applies).
   - ❑ Revise the Plot Plan to show the angle of departure and angle of approach.

10. **SURFACE.** Revise the Plot Plan to show the fire access road surface material. Fire apparatus access roadways shall be designed and maintained to support the imposed loads of fire apparatus (not less than 75,000 lbs., unless authorized by the fire code official) and shall be provided with an approved paved surface so as to provide all-weather driving capabilities. Paving and sub-base shall be installed to the standards specified in the County of San Diego Parking Design Manual. (County Fire Code § 503.2.3)
    - ❑ 0 – 14% Slope – Minimum Surface: 2" Asphaltic Concrete.
    - ❑ 15 – 20% Slope – Minimum Surface: 3" Asphaltic Concrete OR 3-1/2" Portland Cement Concrete with a deep broom finish perpendicular to the path of travel.
    - ❑ An exception allows for 6" of compacted Decomposed Granite on grades up to 10%. This exception is based upon parcel specific criteria, and is at the discretion of the fire code official (**allowed only if this box is checked**).
    - ❑ All pervious and semi-pervious paving materials must be designed to support the imposed loads of fire apparatus (not less than 75,000 lbs). **Provide specification for product to be installed, as well as proof of compliance with this requirement and installation detail(s). Installation detail(s) must also be shown on the plans. NOTE: PDS Building Division approval is required for these materials.**

11. **TRAFFIC CALMING DEVICES.** Traffic calming devices (speed bumps, speed humps, speed control dips, etc.) shall be prohibited unless approved by the fire code official. (County Fire Code § 503.4.1)

12. **OBSTRUCTIONS.** Parking or other obstruction of the full required width of a fire apparatus access roadway is prohibited. (County Fire Code § 503.4 and California Vehicle Code § 22500.1)

13. **GATES.** Revise the Plot Plan to show the location of all gated access points, including clear opening width and gate operation; i.e. rolling, swinging, etc. All gates or other structures or devices that could obstruct fire access roadways or otherwise hinder emergency operations are prohibited unless they meet standards and receive specific plan approval from the fire code official. (County Fire Code § 503.6)
    - ❑ Gates shall be located a minimum of 30 feet from the nearest edge of the roadway.
    - ❑ Gates shall be at least two (2) feet wider than the width of the traffic lane serving the gate.
    - ❑ Note whether the operation of the gate is manual or electrically powered.
    - ❑ Note whether manual gate will lock. If manual gate locks F.9 Key Box is required. If gate is electronically powered E.14 Gate Switch is required.

14. **GATE SWITCH.** Revise the Plot Plan to show the location of an emergency access gate switch. Approved gate switches are required when access to or within a structure or an area is unduly difficult because of secured openings, or where immediate access is necessary for life-saving or firefighting purposes. An Opticom opener shall be required on electronically powered gates. (2022 California Fire Code § 506.1)
    - ❑ For information regarding approved gate switches, go to www.knoxbox.com, and at the bottom of the home page select 'Buy Now' - then enter the name of the Fire Agency as noted: _____

**F. LIFE SAFETY REQUIREMENTS (address those items that have been circled or highlighted).** Fire Sprinkler Plans, Fire Alarm Plans, Alternative Fire Suppression System Plans, Emergency Responder Radio Coverage System Plans, Private Underground Fire Service Main Plans and Smoke Control System Plans shall be either prepared by, or submitted to, reviewed and approved by a licensed California Fire Protection Engineer prior to submitting to San Diego County Fire Protection District for review. Review the Fire Protection System Deferred Plan Submittal Process for complete plan submittal requirements.

1. **FIRE SPRINKLERS REQUIRED/SITE-BUILT STRUCTURES** (County Fire Code § 903.2)

   Structures shall have an automatic fire sprinkler system installed per NFPA 13__ standard and the County Fire Code. Fire sprinkler system plans shall be submitted to and approved by a CA licensed Fire Protection Engineer and the system shall be ready for hydrostatic testing prior to framing inspection.

2. **FIRE SPRINKLERS REQUIRED/COMMERCIAL MODULARS** (County Fire Code § 903.2)

   Commercial Modular Units shall have an automatic fire sprinkler system installed per NFPA 13___ standard and the County Fire Code. If not factory installed, fire sprinkler system plans shall be submitted to, and approved by, the State of California Department of Housing and Community Development. Factory installed systems shall be hydrostatically tested at building final inspection. On-site installed systems shall be hydrostatically tested before piping is concealed.

3. **FIRE SPRINKLER RISER & FDC.** Show the location of the fire sprinkler riser and the fire department connection (FDC). The riser shall be located in a dedicated room of sufficient size for installation of all necessary equipment, and shall allow for sufficient working space around the stationary equipment. Access to the fire sprinkler riser shall be from the exterior of the building. The FDC shall be located along the path of travel and within 50' of a fire hydrant. (2022 California Fire Code § 901.4.7 & 912.2)

4. **FIRE ALARM SYSTEM REQUIRED** (County Fire Code § 903.4)

   An automatic, electronically supervised fire alarm system per CFC Sections 903.4 & 907 shall be installed per NFPA 72 standard. Fire alarm system plans shall be submitted to and approved by a CA licensed Fire Protection Engineer.

5. **EMERGENCY RESPONDER RADIO COVERAGE SYSTEM (ERRCS)** (2022 California Fire Code § 510 & 2022 California Building Code § 918)

   ***New buildings and structures*** are required to have an ERRCS in accordance with CFA #505, except for the following:
   a) Group R-3 occupancies (single-family homes, duplexes, and townhomes) as defined by the CBC.
   b) Open parking garages with no subterranean portions. CBC 406.5
   c) Buildings or structures with a floor area not exceeding 50,000 sq. ft. and do not have subterranean levels.
   **Buildings or structures with a floor area greater than 25,000 sq. ft. and less than 50,000 sq. ft. shall be tested at final inspection / Occupancy for acceptable signal strength. Buildings not meeting the required minimum signal strength will be required to install an ERRCS system prior to final / Occupancy.
   d) Buildings or structures that are primarily constructed of wood and do not have subterranean storage or parking.

   ***Existing buildings*** must comply with this guideline's requirements if a previously required two-way wired fire department communication system is removed.

6. **FIRE EXTINGUISHERS.** Show fire extinguisher locations on floor plan(s) as noted below.
   - ❑ Revise plans; To show fire extinguishers in the vicinity of exits and distributed so that a person is not more than 75 feet from an extinguisher.
   - ❑ Note on plans; Fire extinguishers are to be multi-purpose dry chemical type with minimum U.L. rating of 2A:10B:C.
   - ❑ Revise plans; To show a Class K fire extinguisher located within 30' of commercial cooking equipment
   - ❑ Note on plans; Fire extinguishers shall be mounted on the wall or in an approved cabinet, between 3½ and 5 feet from floor level, and clearly visible. (2022 California Fire Code § 906)

7. **UL 300 SYSTEM.** Installation of a kitchen hood suppression system is required (these systems are required in conjunction with all cooking appliances that emit grease laden vapors as a by-product of the cooking process). Add the system specification to the Kitchen Equipment Schedule; and add a note on Sheet ___ as follows: **UL 300 system plans and design specifications shall be submitted to, and approved by, the San Diego County Fire Protection District under separate/deferred submittal.**

8. **SMOKE ALARMS & CARBON MONOXIDE ALARMS.** Smoke alarms are required in each sleeping room, in the hallway/area accessing each sleeping area and on each level. In addition, carbon monoxide alarms are required in the hallway/area accessing each sleeping area and on each level in dwelling units with fuel-burning appliances and/or an attached garage. For new construction, alarms shall be permanently wired with battery back-up. (2022 California Fire Code § 907.2.11 & 915.1)
   - ❑ Revise the Floor Plan(s)/Electrical plan(s) to show smoke alarms at _____
   - ❑ Revise the Floor Plan(s)/Electrical plan(s) to show carbon monoxide alarms at_____

9. **KEY BOXES.** Revise the Floor Plan to show the location of an emergency access key box. Approved key boxes are required when access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or firefighting purposes. (2022 California Fire Code § 506.1 and County Fire Code § 506.1.3)
   - ❑ For information regarding approved key boxes, go to www.knoxbox.com, and at the bottom of the home page select 'Buy Now' - then enter the name of the Fire Agency as noted:_____

10. **LPG APPLIANCES.** LPG appliances are not allowed in crawlspaces, pits, or basements unless installed within an enclosure that is sealed from adjacent spaces and having a louvered door enabling ventilation to exterior. (CMC 303.7.1)

11. **LPG PIPING.** Detail any LPG piping assemblies in or beneath slabs within the structure. (CMC 303.7.1)

**G. MEANS OF EGRESS (address those items that have been circled or highlighted)**

1. Indicate the following on the Floor Plan (CBC 1004):
   - ❑ Occupant load at individual spaces with CBC Table 1004.5 occupant load factor(s) and applicable gross/net floor area specified at each space.
     **Exception:** Occupant load for fixed seating areas shall be calculated per CBC 1004.6
   - ❑ Overall occupant load of building.

2. Assembly space labeled _____ must have occupant load posted in conspicuous place near main exit or exit-access doorway from space. (CBC 1004.9)

**H. ADDITIONAL CORRECTIONS AND/OR SUMMARY OF REQUIRED CORRECTIONS (see attached or below)**