Los Angeles County Department of Public Works
Building and Safety Division

Eaton & Palisades Fire Rebuild Minimum Submittal Requirements

Building and Safety Division (BSD) is committed to streamline the permitting process for those affected with Eaton and Palisades Fire. The following items listed are the conditions and requirements of this expedited fire rebuild permit process.

Submittal Requirements

Fire rebuild permit application submittals shall clearly indicate the **scope of work**. A complete permit building application package shall include the following:

1. **Architectural Plans –**
    a. Site Plan – Location and dimensions of property lines and/or other structures within the lot, adjacent streets, setbacks and easements, north arrow, scale, contours/drainage pattern, utility connections and electrical panel amperage, and general notes such as applicable codes, occupancy classification, type of construction, areas, detailed scope of work, and/or other material specification.

    b. Floor Plans(s) – Floor plan shall specify new window/door schedule, each room usage, smoke detectors and carbon monoxides, location of mechanical/electrical/plumbing heating and/or cooling equipment and receptacles and other material finishes

    c. Roof Plan - proposed roof plan showing roofing materials and slopes, hips/valleys/ridges, eave overhang dimensions, attic vents, or attic spaces. Specify new materials.

    d. Exterior Elevations –proposed elevations with the wall covering material, plate and building heights, window/doors, roofing material and slopes, attic vents, finish grade lines, veneers, and set back distances from the property line boundaries.

    e. Cross Sections - full height and width cuts of the building in both transverse and longitudinal indicating framing, foundation, roof barrier, and new insulation.

2. **Structural Plans**
    a. Roof and/or Floor Framing Plans – size, spacing, and span of all floor and ceiling joists, roof rafters, roof trusses, valleys, hips, beams, girders, and headers. All lateral force resisting elements, including shear wall locations and schedule, diaphragms, and other construction specifications, shall be indicated on the framing plans.

b. Foundation Plan - locations of all new footings, anchor bolt and hold-down schedules, complete foundation details. For re-using existing foundation, investigative photos and/or stamped report from a registered architect/engineer shall be provided to verify structural integrity of the existing foundation. If the foundation would need to be completely reconstructed, then a grading permit may be necessary.

c. Details - Complete framing and foundation details for all structural element, including foundation underpinning or other retrofit details.

3. **Title 24 Energy Calculations** - CF-1R Compliance signed by the responsible person in charge of the calculations

4. **Engineering Calculations** - Structural analysis shall be provided to substantiate the structural plans if deviating from the conventional construction provisions of the Residential Code. Structural engineering calculations shall address both vertical and lateral forces and shall be wet stamped and signed by CA state licensed engineer or architect.

   Note: A geotechnical soil report stamped by licensed engineer, topographic surveys done by licensed surveyors, shoring plans, or methane mitigation requirements may be necessary for grading permit and/or hillside projects.

Standard Note Attachment

Attach is the Standard Construction Notes and Very High Severity Hazard Zone Requirements. If the property is within the very high fire hazard severity zone (VHFHSZ), then circle or highlight the requirements applicable on the sheet.

Reusing Existing Foundation, Slab, and Chimneys

The CHECKLIST FOR REUSE OF EXISTING FOUNDATION SYSTEMS IN A FIRE DAMAGED STRUCTURE shall be included in the engineering calculations and shall be signed and stamped by a registered architect/engineer if existing undamaged portions (foundation or slab) will be re-used as part of the new construction.

Remnants of unreinforced masonry chimneys shall be removed and replaced with reinforced masonry or prefabricated fireplace. Wood fire burning chimney are not permitted per South Coast Air Quality Management (SCAQMD) Rule 445. See more information at this link: rule-445.pdf. If you have any questions, please contact SCAQMD helpdesk at (909) 396-2000 or visit their website at www.aqmd.gov.

Hillside Areas (33% Slope, 1H:3V)

Hillside structures are defined as structures resting on 33% slope, or 1:3 (horizontal: vertical). They are required to follow the special provision of 2023 CBC Section 1609. As part of the engineering calculations, the following items are required to be submitted in addition to the required items above. Review of Drainage and Grading section may be required.

- Geotechnical/Soil Report
- Topographic Survey (if privately obtained)
- Civil/Grading Plans

Photovoltaic System, EV- Ready Charging Stations, & Fire Sprinklers

Photovoltaic system, EV-ready charging stations, and fire sprinklers are required for all fire rebuild projects. Check with the Fire Department on the requirements for fire flow suppression form (FORM 195/6).

Prefabricated/Manufactured Homes, Modular Buildings, or Temporary Structures

All prefabricated, manufactured homes, modular construction or other temporary structures shall be approved by Regional Planning and shall have the California Department of Housing Urban Development (HUD) approved plans.

For temporary structures expected to last no more than five years, building and mechanical/electrical/plumbing (MEP) permit connections will be issued by Building and Safety.

For prefabricated, manufactured homes, modular buildings, or others that are expected to be permanently installed, then both a “foundation only” permit and MEP permit connections are required. The ”foundation only” permit requires a site plan and foundation detail for the attachment of the prefabricated building to the existing on-site grounds. A geotechnical report may be necessary for those on hillsides and fault zones.

Open/Unexpired Permits & *Projects-in-Construction*

For open/unexpired permits of structures, or *projects-in-construction* approved under LA CBC 2020 code affected by this fire disaster, the permit will be re-issued if the exact same approved plans are re-used for reconstruction.

Open/Unexpired Remodel & Addition Permits

For remodels and additions with existing portions that burned due to the fire, reconstruction of these existing sections can be submitted as a “revision” under the existing permit(s) if revised plans following the previously approved plans are resubmitted. However, previously approved Regional Planning plans shall be amended by Department of Regional Planning.

For additions that were in construction, and the main home was undamaged, refer to section *Open/Unexpired Permits & Projects-in-Construction*. If the addition and the existing structure were burned, submit a fire rebuild application and include a reference to the previously approved addition permit number.

Recently Constructed Structures (from 2020 to Present)

For structures that received Certificate of Compliance from 2020 to present and at locations affected by Eaton & Palisades fire, the permit will be re-issued and extended if the exact same approved plans are re-used and approved under LACBC 2020. Any altered portions or additions, however, to the previously approved Building and Safety plans shall require a new permit.

Building Permit Applications-In-Review for Secondary Dwellings

Some properties have secondary dwellings such as detached ADUs, or JADUs, with building permit applications "in review" with BSD prior to the fire disaster on these affected property lots. A new application is not required for these secondary dwelling building permit *applications-in-review*. Updated plans with the corrections may be submitted, especially if these structures are intended to be used as primary dwellings while the main dwelling is in the planning stage.

Streamlined Agency Referral Process for Palisades Fire

The following chart details other Agencies required for the type of rebuild structure being proposed:

Agency Approval	Prefab/Modular/Manfactured	"Like-for-Like[1]" No Addition	"Like-for-Like*" with Addition	New Residential Construction	Commercial & Nonresidential Repair / Tenant Improvement	New Commercial/Nonresidential Construction
Regional Planning Required?	YES	YES	YES	YES	YES	YES
Fire Department Required?- Fire Sprinklers[2], Form 195/196, Fire Prevention Review	YES	YES	YES	YES	YES	YES
Will Serve Letter[3] (from Water Purveyor) Required?	YES	YES	YES	YES	YES	YES
School District Developer Fee Required?	NO	NO	YES, for additions ≥ 500 sq.ft.	YES, for additions ≥ 500 sq.ft.	NO	YES, for additions ≥ 500 sq.ft.
Sanitation District Fee Receipt Required ?	NO	NO	NO	YES	YES	YES
Public Health Required?	YES, for private sewage only	YES, for private sewage only	YES, for private sewage only	YES, for private sewage only	YES, for private sewage and food consumption	YES, for private sewage, food consumption, or public swimming pool
Geotechnical/Soil Report Required?	YES	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones
Land Development (Landscape > 500 sq. ft or Public Right-of-Way) Required	YES, for those affecting Public Right-of-Way	YES, for those affecting Public Right-of-Way	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft
Drainage[4] (including LID) & Grading[5] Review and Permit Required?	YES	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets
Mechanical, Plumbing, Electrical (simple or complex)[6] Required?	YES, simple	YES, simple	YES, simple	YES, simple	YES, complex	YES, complex
County Library Fees Required?	NO	NO	NO	YES	NO	YES
Construction Debris Removal Form (Environmental Programs Division) Required?	NO	NO	NO	Yes, required	Yes, required	Yes, required

Rev. 03/25 JE/FB

FOOTNOTES:

1) "Like -for-Like": Consult with Regional Planning Requirements for the 10% existing footprint variance.

2) Fire spinklers, EV-ready charging stations, and solar panels are required.

3) Will Serve Letter will be required until water purveyors confirm that they have restored potable water and lifted all restrictions.

4) Low Impact Development (LID) requirements are not suspended.

5) Over-excavation and re-compaction are exempt from a separate grading permit when performed with benefit of a valid building permit for the support of associated foundation elements and when the post-phase II cleanup line and grade of the site are maintained. It should be noted that any additional earthwork required to restore the site from its post-phase II debris removal line and pre-fire condition grade is subject to the grading permit exemption criteria of J103.2 of County Code. Any earthwork associated with required Fire Department access improvements is also subject to J103.2 grading exemptions. Provide 90% compaction report and soil engineer observation during construction.

6) Simple mechanical, electrical, and plumbing permit do not require plancheck. Complex permits require plancheck.

Streamlined Agency Referral Process for Eaton Fire

The following chart details other Agencies required for the type of rebuild structure being proposed:

Agency Approval	Prefab/Modular/Manfactured	"Like-for-Like[1]" No Addition	"Like-for-Like*" with Addition	New Residential Construction	Commercial & Nonresidential Repair / Tenant Improvement	New Commercial/Nonresidential Construction
Regional Planning Required?	YES	YES	YES	YES	YES	YES
Fire Department Required?- Fire Sprinklers[2], Form 195/196, Fire Prevention Review	YES	YES	YES	YES	YES	YES
Will Serve Letter[3] (from Water Purveyor) Required?	YES	YES	YES	YES	YES	YES
School District Developer Fee Required?	NO	NO	YES, for additions ≥ 500 sq.ft.	YES, for additions ≥ 500 sq.ft.	NO	YES, for additions ≥ 500 sq.ft.
Sanitation District Fee Receipt Required ?	NO	NO	NO	YES	YES	YES
Public Health Required?	YES, for private sewage only	YES, for private sewage only	YES, for private sewage only	YES, for private sewage only	YES, for private sewage and food consumption	YES, for private sewage, food consumption, or public swimming pool
Geotechnical/Soil Report Required?	YES	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones	YES, for hillside (3:1) and fault zones
Land Development (Landscape > 500 sq. ft or Public Right-of-Way) Required	YES, for those affecting Public Right-of-Way	YES, for those affecting Public Right-of-Way	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft	YES, for those affecting Public Right-of-Way and/or Landscape ≥ 500 sq.ft
Drainage[4] (including LID) & Grading[5] Review and Permit Required?	YES	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets	YES, For hillside (3:1) & Drainage not towards the streets
Mechanical, Plumbing, Electrical (simple or complex)[6] Required?	YES, simple	YES, simple	YES, simple	YES, simple	YES, complex	YES, complex
County Library Fees Required?	NO	NO	NO	YES	NO	YES
Construction Debris Removal Form (Environmental Programs Division) Required?	NO	NO	NO	Yes, required	Yes, required	Yes, required

FOOTNOTES:

Rev. 03/25 JE/FB

1) "Like -for-Like": Consult with Regional Planning Requirements for the 10% existing footprint variance.

2) Fire spinklers and solar panels are required. EV-ready or EV-charging stations requirements are suspended.

3) Will Serve Letter will be required until water purveyors confirm that they have restored potable water and lifted all restrictions.

4) Low Impact Development (LID) requirements are suspended for buildings prior to 2009 and small residentials, except for additions/alterations done after 2009 when LID is required.

5) Over-excavation and re-compaction are exempt from a separate grading permit when performed with benefit of a valid building permit for the support of associated foundation elements and when the post-phase II cleanup line and grade of the site are maintained. It should be noted that any additional earthwork required to restore the site from its post-phase II debris removal line and pre-fire condition grade is subject to the grading permit exemption criteria of J103.2 of County Code. Any earthwork associated with required Fire Department access improvements is also subject to J103.2 grading exemptions. Provide 90% compaction report and soil engineer observation during construction.

6) Simple mechanical, electrical, and plumbing permit do not require plancheck. Complex permits require plancheck. Greywater requirement is suspended.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
www.ladpw.org

ENERGY, MECHANICAL AND PLUMBING CODES CHECKLIST

The following list shall be checked/marked by the applicant in order to determine if a plan check is required for energy, Mechanical code and/or Plumbing Code by the Mechanical Section.

It is the responsibility of the applicant, engineer, architect, and/or contractor to mark the appropriate/applicable item(s) below:

Property Address:
Property Title:
Applicant Name:
Applicant Phone Number:

I. Plumbing Code

1. The following plumbing systems require a complete Plumbing Code Plan Check:

   - ☐ Any new potable water service or new water branch of 2" or larger.
   - ☐ Any new gas service or new gas branch of 2" or larger.
   - ☐ New drainage system with more than 216 fixture units.

2. The following individual plumbing systems shall be reviewed independently:

   - ☐ Any medium or high-pressure gas system.
   - ☐ Any seismic gas shut off valve.
   - ☐ Any combination waste and vent system.
   - ☐ Roof drainage system within the building with a roof area greater than 6,000 Sq ft.
   - ☐ Chemical waste system.
   - ☐ Plumbing installations in State licensed health care facilities (i.e.: Dialysis Centers, Clinics.)

Cooler → 145,000 BTU/per hr.
Freezer → 52,000 BTU/per hr.

II. Mechanical Code

1. The following mechanical systems require a complete mechanical Code Plan Check:

   - ☐ New systems with aggregate comfort heating or comfort cooling input capacity of greater than 500,000 BTU/hr.

2. The following individual mechanical systems shall be reviewed independently:

   - ☐ Ventilation for enclosed automobile parking and repair garages.
   - ☐ Stairway pressurization systems.
   - ☐ Smoke control systems.
   - ☐ Food processing establishments with Type I or II hood(s).
   - ☐ Product conveying systems (i.e., dust collection system, fume hoods, etc.)
   - ☐ Ventilation for State licensed health care facilities (i.e.: Dialysis centers, Clinics.)
   - ☐ Installation of refrigeration systems requiring a refrigeration machinery room (i.e.: aggregate combined compressor horse power of 100 or more, or other than group A1 refrigeration, etc.)

III. Energy Standards

The following conditions would require energy plan review.

- ☐ All new buildings, additions heated and/or cooled
- ☐ All new tenant improvements (addition of heating and/or cooling systems to existing conditioned space or to buildings in which the envelope was previously approved for compliance with the Energy Standards.)
- ☐ All alterations to the envelope of any building.
- ☐ All newly installed or altered ductwork.
- ☐ All shell buildings

For projects with a total conditioned area of less than 1,000 Sq. ft , and an occupant load less than 49, the applicant may choose to submit the plans for plan review or file an Attachment - 4.

Replacement of heating and/or cooling systems without any new or modified ductwork is exempt from plan check provided that the applicant files an Attachment - 4.

KR:df/cc

10/28/14

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION
ELECTRICAL SECTION

900 SOUTH FREMONT AVENUE, ALHAMBRA CALIFORNIA 91803-1331
Telephone (626) 458-3180

ELECTRICAL PLAN CHECK SUBMITTAL CHECKLIST

The following list shall be checked / marked by the applicant in order to determine if a plan check is required for code or energy by Electrical Section.

It is the responsibility of the applicant, engineer, architect, and /or contractor to make the appropriate / applicable item(s) below

Electrical Code:

☐ High Voltage (Over 600 Volts) classified system

☐ Areas classified as a hazardous location? Gas Station, Auto Repair garage, Woodshop and Spray Booth are examples of hazardous locations

☐ Installation or alteration of electrical equipment rated at 400 A or greater. (Exception: 400A, 120/240V, Single Phase, 3 W electrical systems for single residential dwellings do not require plan check)

☐ Photovoltaic (PV) system greater thanr 400 Amps

☐ Health care facility with surgical operating rooms, nursing homes, clinics, dental office or any other similar area / work scope under Article 517

☐ Performance theaters or motion picture theaters

☐ First tenant improvements of the shell building

Energy Standards:

☐ Installation of new lighting fixrtures in areas that are conditioned or nonconditioned, and are greater than 1,000 sq ft

☐ Alteration to existing indoor lighting systems that increases the connected lighting load or replaces more than 50% of the luminaires.

☐ Outdroor lighting installation that is 30,000 sq ft or greater, or addition / modification of 3,200 watts or greater

NOTE:

1. **Both Code and Lightning Energy Plan Check can be required by the inspector or the plan checker at any time.**
2. **For projects with a total conditioned area of less than 1000 sq ft and an occupant load less than 49, the applicant may choose to submit the plans for plan review or file an attachment-4**
3. **Replacing of fluorescent lighting fixture ballasts does not require plan check**

LACRC SECTION R327 (Effective January 1st, 2023)

AGING-IN-PLACE DESIGN AND FALL PREVENTION

R327.1 Aging-in-place design and fall prevention. Newly constructed dwellings subject to the requirements of this code shall be designed and constructed in accordance with Sections R327.1.1 through R327.1.4.

Exceptions:

1. Covered multifamily dwellings designed and constructed in accordance with Chapter 11A of the California Building Code.

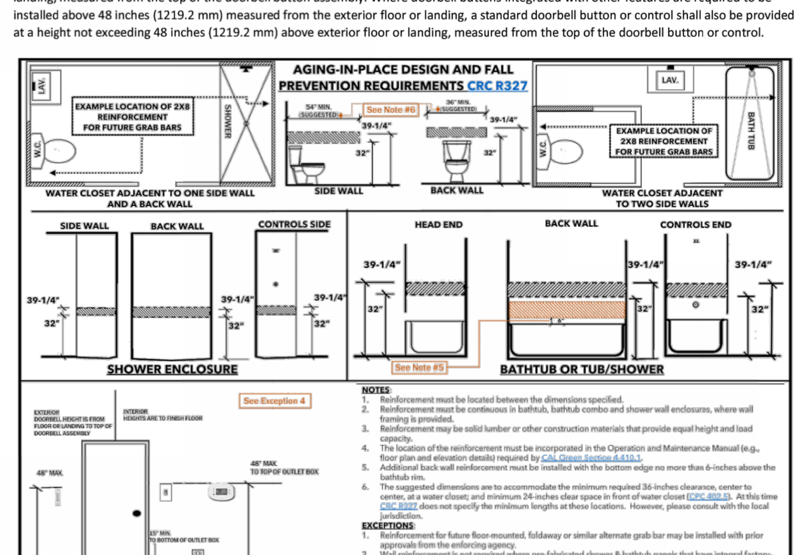
2. Public housing and places of public accommodation required to comply with Chapter 11B of the California Building Code.

R327.1.1 Reinforcement for grab bars. At least one bathroom on the entry level shall be provided with reinforcement installed in accordance with this section. Where there is no bathroom on the entry level, at least one bathroom on the second or third floor of the dwelling shall comply with this section.

R327.1.2 Electrical receptacle outlet, switch and control heights. Electrical receptacle outlets, switches and controls (including controls for heating, ventilation and air conditioning) intended to be used by occupants shall be located no more than 48 inches (1219.2 mm) measured from the top of the outlet box and not less than 15 inches (381 mm) measured from the bottom of the outlet box above the finish floor.

R327.1.3 Interior doors. Effective July 1, 2024, at least one bathroom and one bedroom on the entry level shall provide a doorway with a net clear opening of not less than 32 inches (812.8 mm), measured with the door positioned at an angle of 90 degrees from the closed position; or, in the case of a two- or three-story single family dwelling, on the second or third floor of the dwelling if a bathroom or bedroom is not located on the entry level

R327.1.4 Doorbell buttons. Doorbell buttons or controls, when installed, shall not exceed 48 inches (1219.2 mm) above exterior floor or landing, measured from the top of the doorbell button assembly. Where doorbell buttons integrated with other features are required to be installed above 48 inches (1219.2 mm) measured from the exterior floor or landing, a standard doorbell button or control shall also be provided at a height not exceeding 48 inches (1219.2 mm) above exterior floor or landing, measured from the top of the doorbell button or control.



BEST MANAGEMENT PRACTICES
FOR CONSTRUCTION ACTIVITIES*

Storm Water Pollution Control Requirements for Construction Activities
Minimum Water Quality Protection Requirements for All Development Construction Projects/Certification Statement

The following is intended as minimum notes or as an attachment for building and grading plans and represent the minimum standards of good housekeeping that must be implemented on all construction sites regardless of size. (Applies to all permits)

- Every effort should be made to eliminate the discharge of non-stormwater from the project site at all times.
- Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses or wind.
- Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
- Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
- Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
- Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
- Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/or inaccurate information, failing to update the ESCP to reflect current conditions, or failing to properly and/or adequately implement the ESCP may result in revocation of grading and/or other permits or other sanctions provided by law."

Print Name ______________________________
(Owner or authorized agent of the owner)

Signature ______________________________ Date ________________
(Owner or authorized agent of the owner)

*The above Best Management Practices are detailed in the latest edition of the California BMP Handbook or Caltrans Stormwater Quality Handbooks.

LOS ANGELES COUNTY/BUILDING &SAFETY DIVISION
Standard Construction Notes
VERY HIGH FIRE HAZARD SEVERITY ZONE
2023 LA County Residential Code – Section R337
2023 LA County Building Code – Chapter 7A

Notes: **1)** Additional State Fire Marshal approved materials and methods may be found in California Referenced Standards Code, Part 12. **2)** Prior to permitting final approval, the property shall follow the **vegetation management requirements**. **3)** The use of paints, coating, stains or other surface treatments are not an approved method of protection [R337.3.5.3/701A.5, 703A.5.3].

APPLICATION – [R337.1.3/701A]

1. New buildings.
2. Additions, alterations or repairs made to existing buildings within Wildland-Urban Interface (WUI) Fire Area or Fire Hazard Severity Zone
3. Detached Accessory Building Exceptions:

   Any structures located at least 50 ft from an applicable building.

ROOFING - [R337.5/705A]:

4. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions. Wood shingles and wood shakes are prohibited in any Fire Hazard Severity Zone regardless of classification.
5. Roof covering shall be Class A [R902.1.1]:
   a. The entire roof covering of every existing structure where more than 50% of the total roof area is **replaced** within any one-year period,
   b. The entire roof covering of every **new structure**, or
   c. And any roof covering applied in the alteration, repair or replacement of the roof of every **existing** structure.
6. Where the roof profile allows space **between the roof covering** and roof decking: [R337.5.2]
   a. The spaces shall be constructed to prevent the intrusion of flames and embers,
   b. Be fire stopped with approved materials, or
   c. Have one layer of minimum 72-pound mineral-surfaced nonperforated cap sheet complying with ASTM D 3909 installed over the combustible decking.
7. Where **roof valley flashing** is installed [R337.5.3]:
   a. The flashing shall be not less than 0.019-inch No. 26 gage galvanized sheet installed over not less than on layer of minimum 72-pound mineral-surfaced non-perforated cap sheet complying with ASTM D 3909, at least 36-inch-wide running the full length of the valley.
8. **Roof gutters** shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. [R337.5.4]

VENTS – [R337.6/706A]:

General – Sec. R337.6.1/706A.1

Where provided, ventilation openings enclosed attics, gable ends, ridge ends, under eaves and cornices, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation shall be in accordance with CBC Sec. 1202 and R337.6.2.

Requirements R337.6.2/706A.2

9. Ventilation openings shall be fully covered with Wildland Flame and Ember Resistant (WUI) vents approved and listed by the California State Fire Marshal, or WUI vents listed to ASTM E2886.

Off Ridge and Ridge Vents – R337.6.2.1/706A.2.1:

10. Vents that are installed on a sloped roof, such as dormer vents, shall comply with all the following:
    a. Openings shall be between 1/16th and 1/8th inch.
    b. The materials shall be noncombustible except vents located under the roof covering, along the ridge, with noncombustible wire mesh.
    c. The materials shall be corrosion resistant.

EXTERIOR COVERING – Sec. R337.7/707A

Note: The following **exterior covering materials** shall conform to this section: Exterior wall covering or assembly, underside of roof eave overhangs or soffits, underside of exterior porch ceilings, underside of floor projections, and underfloor areas. **The following are exempt:** architectural trim, fascia and gutters; roof or wall corner projections or similar, and deck walking surfaces complying with Section 337.9.

Exterior walls – R337.7.3/707A.3

11. Exterior wall covering or wall assembly shall be one of the following:
    a. Noncombustible material,
    b. Ignition resistant material.*
    c. Heavy Timber Construction
    d. Log Wall Construction
    e. Complies with ASTM E2707 and SFM Standard 12-7A-1
    f. Exterior fire exposure with a 1-hour fire-resistance rating, rated from the exterior side, as tested in accordance with ASTM E119 or UL 263.
    g. Exterior fire exposure containing one layer of 5/8-inch (15.9 mm) Type X gypsum sheathing applied behind the exterior wall covering or cladding on the exterior side of the framing.
    h. Factory fire-retardant treated wood

Extent of Exterior Wall Coverings - R337.7.3.1/707A.3.1

13. Exterior wall coverings shall extend from the top of the foundation to
    a. the roof and terminate at 2-inch nominal solid wood blocking between rafters at all roof overhangs,
    b. or in the enclosed eaves, terminate at the enclosure.

Open (Exposed) Roof Eaves – R337.7.5/707A.5

14. The **exposed roof deck** on the underside of unenclosed roof eaves shall consist of one of the following:
    a. Noncombustible material.
    b. Ignition-resistant material.*
    c. Factory fire-retardant treated wood
    d. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside exterior of the roof deck.
    e. Exterior portion of a 1-hour fire-resistance-rated exterior assembly applied to the underside of the roof deck designed for fire exposure per Gypsum Association Fire Resistance Design Manual and tested in accordance with ASTM E119 or UL263

    Exceptions: Fascia and architectural trim boards.

Enclosed Roof Eaves and Roof Eave Soffits - R337.7.6/707A.6

15. The **exposed underside of enclosed roof eaves** having either a boxed-in roof eave soffit with a horizontal underside, or sloping rafter tails with an exterior covering applied to the underside of the rafter tails, shall be protected by one of the following:
    a. Noncombustible material
    b. Ignition-resistant material*
    c. Factory fire-retardant treated wood
    d. Materials approved for not less than 1-hour fire resistance-rated construction on the exterior side as tested by ASTM E119 or UL 263.
    e. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the rafter tails or soffit.
    f. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
    g. Boxed-in roof eave soffits per Section 337.7.11, when tested in accordance with ASTM E2957.
    h. Boxed-in roof eave soffits per SFM Standard 12-7A-3.

    Exceptions: Fascia and other architectural trim boards.

Exterior Porch Ceilings - R337.7.7/707A.7

16. The exposed underside of exterior porch ceilings shall be protected by one of the following:
    a. Noncombustible material.
    b. Ignition-resistant material.*
    c. Factory Fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
    d. Materials approved for not less than 1-hour fire resistance-rated construction on the exterior side as tested by ASTM E119 or UL 263.
    e. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering on the underside of the ceiling.
    f. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
    g. Porch ceiling assemblies with a horizontal underside that meets Section R337.7.11, when tested in accordance with ASTM E2957.
    h. Porch ceiling assemblies with a horizontal underside that meets SFM Standard 12-7A-3.

    Exception: Architectural trim boards.

Floor Projections - R337.7.8/707A.8

17. The exposed underside of a cantilevered floor projection where a floor assembly extends over an exterior wall shall be protected by one of the following:
    a. Noncombustible construction.
    b. Ignition-resistant material.*
    c. Factory fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
    d. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
    e. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
    f. The underside of a floor assembly that meets the performance criteria in Section R337.7.11
    g. The underside of a floor assembly that meets SFM Standard 12-7A-3.

    Exception: Architectural trim boards.

Underfloor Protection - R337.7.9/707A.9

18. The under-floor area of elevated or overhanging buildings shall be enclosed (and fire-protected) to grade or the underside of the exposed under-floor shall be protected by one of the following:
    a. Noncombustible construction.
    b. Ignition-resistant material.*
    c. Factory fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
    d. Materials approved for not less than 1-hour fire resistance-rated construction on the exterior side as tested in accordance with ASTM E119 or UL 263.
    e. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
    f. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
    g. The underside of a floor projection assembly that meets Section R337.7.11.
    h. The underside of a floor projection assembly that meets SFM Standard 12-7A-3.

    Exception: Heavy Timber Construction

Underside of Appendages - R337.7.10/707A.10

19. The underside of overhanging appendages shall be enclosed to grade in accordance with the requirements similar to the exposed underfloor.
    a. Noncombustible construction.
    b. Ignition-resistant material*
    c. Factory fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
    d. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
    e. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
    f. The underside of an appendage assembly that meets Section R337.7.11.
    g. The underside of an appendage assembly that meets SFM Standard 12-7A-3.

    Exception: Heavy Timber Construction

EXTERIOR WINDOWS AND DOORS – R337.8/708A

Exterior Glazing – R337.8.2/708A.2

The following exterior glazing materials and/or assemblies shall comply with exterior windows, exterior glazed doors, glazed openings within exterior doors, glazed openings within exterior garage doors, exterior structural glass veneer, skylights, and vents.

Exterior Windows and Exterior Glazed Door Assembly Requirements – R337.8.2.1/708A.2.1

20. Exterior windows and exterior glazed door assemblies shall comply with one of the following:
    a. Multi-pane glazing with a minimum of one tempered pane meeting the Safety Glazing requirements of CBC Sec. 2406 and R308.
    b. Glass block units.
    c. 20-minute fire-resistance rating.
    d. Meet SFM Standard 12-7A-2

Operable Skylights

21. Protected by a noncombustible mesh screen where the dimensions of the openings in the screen do not exceed 1/8 inch

Structural Glass Veneer – R337.8.2.3/708.A.2.3

22. The wall assembly behind the structural glass veneer shall comply with the wall requirement of Sec. R337.7.3/707A.3.

Exterior Doors – R337.8.3/708A.3

23. Exterior doors shall comply with the following:
    a. The exterior surface or cladding shall be of noncombustible or ignition-resistant material, or
    b. Constructed of solid core wood that complies with the following:
       i. Stiles and rails shall not be less than 1-3/8 inches thick.
       ii. Raised panels shall not be less than 1-1/4 inch thick, except for perimeter of the raised panel that may taper to a tongue not less than 3/8-inch think.
    c. Fire-resistance rating of not less than 20 minutes.
    d. The exterior surface or cladding shall be tested to meet the performance requirements to Section 707.A.3.1 when tested in accordance with ASTM E2707.
    e. Meet SFM Standard 12-7A-1.

Exterior Door Glazing – R337.8.3.1/708A.3.1

24. Shall meet the requirements of R337.8.2.1/708A.2.1 above.

Garage Door Perimeter Gap

25. Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by one of the following methods:
    a. Weather stripping hazards
    b. Door overlaps onto jambs and headers
    c. Garage door jambs and headers covered with metal flashing

DECKING – R337.9/709A

26. The **walking surface material** of decks, porches, balconies and stairs when any portion of such surface is within 10 ft of the building shall comply with the following:
    a. Material that complies with conditions of acceptance in Sections R337.9.4 when tested in accordance with both ASTM E2632 and ASTM E2726.
    b. Ignition-resistant material shall comply with performance requirements of Section R337.9.4.
    c. Material that complies with the performance requirements of both SFM Standard 12-7A-4 and Section R337.4.3.

       Exception: Wall material shall be permitted to be of any material that otherwise complies with this chapter when the decking surface complies with ASTM E84 with Class B flame spread index.
    d. Any material that complies with Section R337.9.5 when tested with ASTM E2635 and when the attached exterior wall covering is also composed of only noncombustible or ignition-resistant materials.

       Exception: Wall material shall be permitted to be of any material that otherwise complies with this chapter when the decking surface complies with ASTM E84 with Class B flame spread index.

ACCESSORY STRUCTURES – R337.10/710A

27. Group U occupancy accessory buildings and miscellaneous structures that have potential to pose a significant exterior fire exposure hazard during wildfires shall be constructed with ignition resistance.

    Note: Applicable to accessory dwellings on the same lot including attached and detached miscellaneous structures that require permit such as trellises, arbors, patio covers, gazebos, and similar structures.
28. Miscellaneous structures and accessory dwellings separated from applicable buildings on the same lot by less than 3 feet but less 50 feet shall be constructed or noncombustible or ignition resistant materials.
29. Roofs of accessory buildings required to be noncombustible, or ignition resistant materials shall be Class A rating and comply with ASTM E108 and UL790 following roofing requirements of Section 337 and Chapter 9.

* Ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.4.2, following requirements of R337.4.3 or alternative methods of R337.4.4. Materials shall comply with conditions Items 1 and 2 below or with the conditions of acceptance of ASTM E2768.

1. The material shall exhibit a listed frame spread index of not exceeding 25 when tested in accordance with ASTM E84 or UL 723.
2. ASTM E or UL723 testing shall be continued for an additional 20-minute-period, and the material shall exhibit a flame front that does not progress more than 10 ½ feet (3200 mm) beyond the centerline of the burner at any time during the test period.

Public Works LOS ANGELES COUNTY

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION

GREEN BUILDING STANDARDS CODE
GENERAL NOTES

GENERAL PROJECT INFORMATION

PLAN CHECK NO. ____________________ DISTRICT NO ________
JOB ADDRESS ______________________________ CITY ____________________ ZIP __________

NOTE: Numbers in the parenthesis ( ) refer to sections of the 2023 edition of the County of Los Angeles Green Building Standards Code, Table (T).

INSTRUCTIONS

- The following notes must be included on the plans.

GENERAL REQUIREMENTS

1. Plumbing fixtures and fixture fittings on the plans shall comply with the following flow rates:
   a. Water Closets – 1.28 GPF
   b. Urinals – 0.5 GPF
   c. Wall-mounted urinal – 0.125 GPF
   d. Single showerhead – 1.8 GPM at 80psi
   e. Multiple showerheads – 1.8 GPM at 80psi for all combined showerheads
   f. Lavatory faucets – 1.2 GPM at 60psi
   g. Lavatory faucets in public use areas – 0.5 GPM at 60psi
   h. Metering faucets - .20 gallons per cycle
   i. Kitchen faucets – 1.8 GPM at 60psi (4.303.1)
2. Annular spaces around pipes, electrical cables, conduits, or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry, or a similar method acceptable to the enforcing agency. (4.406.1)
3. Fireplaces shall be direct vent sealed combustion type. Indicate on the plans the manufacturer name and model number. (4.503.1)
4. At the time of rough installation, during storage on the construction site, and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal, or other acceptable methods to reduce the amount of water, dust and debris which may enter the system. (4.504.1)
5. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19% moisture content. Insulation products which are visibly wet or have high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. (4.505.3)
6. All mechanical exhaust fans in rooms with a bathtub or shower shall comply with the following:
   a. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
   b. Fans must be controlled by a readily accessible humidistat unless functioning as a component of a whole house ventilation system. Humidity control shall be capable of adjustment between a relative humidity range of 50% and 80%. (4.506.1)
7. Adhesives, sealants and caulks shall meet or exceed the standards outlined in Section 4.504.2.1 and comply with the VOC limits in Tables 4.504.1 and 4.504.2 as applicable. (4.504.2.1)
8. Paints and coatings shall meet or exceed the standards outlined in Section 4.504.2.2 and comply with the VOC limits in Table 4.504.3. (4.504.2.2)
9. Aerosol paints and coatings shall meet or exceed the standards outlined in Section 4.504.2.3. (4.504.2.3)
10. All carpet installed in the building interior shall meet all the testing and product requirements of one of the following:
    a. Carpet and Rug Institute's Green Label Plus Program OR
    b. California Department of Public Health Standard Method for the testing of VOC Emissions (Specification 01350) OR
    c. NSF/ANSI 140 at the Gold Level OR
    d. Scientific Certifications Systems Indoor Advantage Gold (4.504.3)
11. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label Program. Carpet adhesives shall not exceed a VOC limit of 50 g/L. (4.504.3.1, 4.504.3.2)
12. A minimum of 80% of floor area receiving resilient flooring shall comply with one of the following:
    a. Products certified as a Low-Emitting Material in the CHPS High Performance Products Database, OR
    b. Products certified under UL GREENGUARD Gold (Formerly the Greenguard Children & Schools program), OR
    c. RFCI FloorScore program, OR
    d. Meet the California Department of Public Health Standard Method for the testing of VOC Emissions (Specification 01350) (4.504.4)
13. Composite wood products (hardwood plywood, particle board, and MDF) installed on the interior or exterior of the building shall meet or exceed the standards outlined in Table 4.504.5. Verification of compliance with these sections must be provided at the time of inspection. (4.504.5)

TABLE 4.504.3/TABLE 5.504.4.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATING[2,3]
Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	VOC LIMIT	COATING CATEGORY	VOC LIMIT
Flat coatings	50	Magnesite cement coatings	450
Nonflat coatings	100	Mastic texture coatings	100
Nonflat high-gloss coatings	150	Metallic pigmented coatings	500
SPECIALTY COATINGS		Multi-color coatings	250
Aluminum roof coating	400	Pretreatment wash primers	420
Basement specialty coatings	400	Primers, sealers, and undercoaters	100
Bituminous roof coatings	50	Reactive penetrating sealers	350
Bituminous roof primers	350	Recycled coatings	250
Bond breakers	350	Roof coatings	50
Concrete curing compounds	350	Rust preventative coatings	250
Concrete/masonry sealers	100	Shellacs: Clear / Opaque	730 / 550
Driveway sealers	50	Specialty primers, sealers and undercoaters	100
Dry fog coatings	150	Stains	250
Faux finishing coatings	350	Stone consolidants	450
Fire resistive coatings	350	Swimming pool coatings	340
Floor coatings	100	Traffic marking coatings	100
Form-release compounds	250	Tub and tile refinish coatings	420
Graphic arts coatings (sign paints)	500	Waterproofing membranes	250
High-temperature coatings	420	Wood coatings	275
Industrial maintenance coatings	250	Wood preservatives	350
Low solids coatings[1]	120	Zinc-rich primer	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

TABLE 4.504.5/TABLE 5.504.4.5
FORMALDEHYDE LIMITS[1]
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard[2]	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333. For additional information, see California Code of Regulations, Title 17, Section 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness 5/16 inch (8mm).

TABLE 4.504.2/TABLE 5.504.4.2
SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams Per Liter

SEALANTS	VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

Note: For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168.

TABLE 4.504.1/TABLE 5.504.4.1
ADHESIVE VOC LIMIT[1,2]
Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds

ARCHITECTURAL APPLICATIONS	VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet pad adhesives	150
Wood flooring adhesives	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives	50
SPECIALITY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168

Standard Notes for "Electric Ready" Requirements
per the 2022 California Building Energy Efficiency Standards

NOTE: These requirements apply to new construction for single family residential buildings and new detached ADU buildings.

Water Heating System (*Option 1*) - Section 150.0(n)
- Provide a designated space (2.5' by 2.5' wide and 7.5' tall) within 3 feet of gas water heater.
- Provide a 20A/1P circuit to a receptacle outlet near the gas water heater.
- Reserve the space next to this circuit breaker and label both as "for future 240V use".
- Provide the receptacle circuit with 3#10 conductors + #10 ground.
- Mark both ends of the unused conductor as "spare".

Water Heating System (*Option 2*) - Section 150.0(n)
- Provide designated space (2.5' by 2.5' wide and 7.5' tall) more than 3 feet from gas water heater.
- Reserve a 2 pole breaker space and label as "for future 240V use".
- Provide a junction box at this designated space with a minimum 30A rated branch circuit (3 #10 conductors + #10 ground).
- Mark the junction box cover as "240V ready".
- Cold and hot water supply lines pass through the designated space as described in 150.0(n)(1)(B)(iii)-(v).

Energy Storage Ready - Section 150.0(s)
- Provide main service panel with a minimum 225A busbar rating.
- Provide a minimum 60A rated subpanel.
- Provide a minimum 60A breaker and feeder to the subpanel.
- Provide at least the following four circuits in the subpanel:
  - Refrigerator receptacle outlet
  - Bedroom receptacle outlet
  - Lighting circuit near primary egress
  - Any circuit chosen by the installer/designer.
- Provide sufficient space between the main panel and subpanel for future transfer equipment.

Heat Pump Space Heater Ready - Section 150.0(t)
- Provide a junction box within 3 feet of the gas furnace with a minimum 30A rated branch circuit wiring (3 #10 conductors + #10 ground).
- Mark the junction box cover as "240V ready".
- Reserve a 2 pole breaker space and label as "for future 240V use".

Electric Cooktop Ready - Section 150.0(u)
- Provide a junction box within 3 feet of the gas cooktop with no obstructions and with a minimum of 50A rated branch circuit conductors (3 #6 conductors + #10 ground).
- Mark the junction box cover as "240V ready".
- Reserve a 2 pole breaker space and label as "for future 240V use".

Electric Clothes Dryer Ready - Section 150.0(v)
- Provide a junction box within 3 feet of the gas dryer with no obstruction with a minimum 30A rated branch circuit conductor (3 #10 conductors + #10 ground).
- Mark the junction box cover as "240V ready".
- Reserve a 2 pole breaker space and label as "for future 240V use".

Public Works LOS ANGELES COUNTY

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION

RESIDENTIAL PLAN
GENERAL NOTES

GENERAL PROJECT INFORMATION

PLAN CHECK NO. ____________________ DISTRICT NO ________
JOB ADDRESS ______________________________ CITY ____________________ ZIP __________

NOTE: Numbers in the parenthesis ( ) refer to sections of the 2023 edition of the County of Los Angeles Building Code (BC), Residential Code (R), Plumbing Code (PC), Mechanical Code (MC), Electrical Code (EC), and Green Building Standards Code (GC).

INSTRUCTIONS

- The following notes must be included on the plans.

SECURITY REQUIREMENTS

1. Exterior doors, doors between house and garage, windows and their hardware shall conform to the Security Provisions of Chapter 67 of the Los Angeles County Building Code (LACBC):
   a. Single swinging doors, active leaf of a pair of doors, and the bottom leaf of Dutch doors shall be equipped with a latch and a deadbolt key operated from the outside. Deadbolts shall have a hardened insert with 1" minimum throw and 5/8" minimum embedment into the jamb. If a latch has a key locking feature, it shall be dead latch type. (BC6709.2)
   b. Inactive leaf of a pair of doors and the upper leaf of Dutch doors shall have a deadbolt as per paragraph "a", unless it is not key operated from the exterior, or has a hardened deadbolt at top and bottom with ½" embedment. (BC6709.3)
   c. Swinging wood door(s) shall be solid core not less than 1-3/8" thick. (BC6709.1.1)
   d. Panels of wood doors shall be 9/16" thick and not more than 300 sq. inches. Stiles and rails to be 1-3/8" thick and 3" minimum width. (BC6709.1.2)
   e. Door hinge pins accessible from the outside shall be non-removable. (BC6709.5)
   f. Door stops of wood jambs of in-swinging doors shall be one piece construction or joined by a rabbet. (BC 6709.4)
   g. Windows and door lights within 40" of the locking device of the door shall be fully tempered/approved burglary resistant/protected by bars, screens or grills. (BC6714)
   h. Overhead and sliding garage doors shall be secured with a cylinder lock, a padlock with a hardened steel shackle, or equivalent when not otherwise locked by electric power operation. Jamb locks shall be on both jambs for doors exceeding 9 feet in width (BC6711)
   i. Sliding glass doors and sliding glass windows shall be capable of withstanding the tests set forth in Section 6706 and 6707 of the Los Angeles County Building Code and shall bear a label indicating compliance with these tests. (BC 6710, 6715)

CONSTRUCTION REQUIREMENTS

2. Notching of exterior and bearing/nonbearing walls shall not exceed 25% / 40% of its width, respectively. Bored holes in bearing/nonbearing walls shall not exceed 40% / 60% of its width, respectively. (R602.6)
3. Interior finishes in Group R-3 shall have a flame spread index of not greater than 200, and a smoke-developed index not greater than 450. (R302.9)
4. Provide fire blocking in concealed spaces of stud walls, partitions, including furred spaces, at the ceiling and floor level, and at 10-foot intervals both vertical and horizontal. (R302.11)
5. Ducts installed under a floor in a crawl space shall not prevent access to an area of the crawl space. Where it is required to move under ducts for access to areas of the crawl space, a vertical clearance of 18" minimum shall be provided. (MC 603.1)
6. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than .019 inch (No. 26 galvanized sheet). (R903.2.1)
7. Note on the plans: "Roof diaphragm nailing to be inspected before covering. Face grain of plywood shall be perpendicular to supports."
8. Subfloors shall have end-matched lumber, have blocked panel edges, or occur over supports. Floor sheathing shall comply with Section R503.
9. Provide a note: "SMOKE ALARM shall be interconnected hard-wired with battery backup and shall be installed in accordance with NFPA 72." (R314)
10. Provide a note: "CARBON MONOXIDE ALARM shall be interconnected hard-wired with battery backup." (R315)
11. Finish materials including adhesives, sealants, caulk, paints & coatings, carpet systems, etc. shall meet the (VOC) emission limits per LACGBSC Chapter 4.
12. In newly constructed dwelling units, electrical receptacle outlets, switches and controls shall be located no more than 48-in. measured from the top of the outlet box and not less than 15-in. from the bottom of the outlet box above the finish floor. (R327.1.2)
13. In newly constructed dwelling units, doorbell button or controls, shall not exceed 48-in. above exterior floor or landing, measured from the top of the doorbell button assembly. (R327.1.4)
14. Provide a note on the plans "Fasteners for preservative-treated or fire-retardant-treated wood shall be of hot dipped zinc-coated galvanized steel in accordance with ASTM A 153." (R317.3)

GLAZING REQUIREMENTS

15. The following shall be considered specific hazardous locations requiring safety glazing per Section R308:
    a. Glazing in fixed and operable panels of swinging, sliding, and bifold doors.
    b. Glazing in fixed or operable panels adjacent to a door where the nearest vertical edge of the glazing is within a 24-inch arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches above the walking surface.
    c. Window glazing in an individual fixed or operable panel, that meets all of the following conditions:
       1. The exposed area of an individual pane is larger than 9 square feet.
       2. The bottom edge is less than 18 inches above the floor.
       3. The top edge is more than 36 inches above the floor.
       4. One or more walking surfaces are within 36 inches, measured horizontally and in a straight line, of the glazing
    d. Glazing in guards, railings, structural baluster panels, and nonstructural in-fill panels, regardless of area or height above a walking surface.
    e. Glazing in walls, enclosures or fences containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, and indoor or outdoor swimming pools, where all of the following conditions are present:
       1. The bottom edge of the glazing is less than 60 inches above any standing or walking surface.
       2. The glazing is within 60 inches, measured horizontally and in a straight line, from a hot tub, spa, whirlpool, bathtub, or swimming pool.
    f. Glazing adjacent to stairs and ramps where the bottom exposed edge is less than 36 inches above the plane of the adjacent walking surface of stairways, landings between flights of stairs, and ramps, unless the glazing is more than 36 inches measured horizontally from the walking surface, or a rail is designed per Section R308.4.6.
    g. Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within 60 inches horizontally of the bottom tread, unless the glazing is more than 18 inches from a protective guard per Section R312.

MECHANICAL/PLUMBING/ELECTRICAL CODE REQUIREMENTS

16. Dwelling shall be provided with comfort heating facilities capable of maintaining a room temperature of 68 degrees F at 3 feet above the floor and 2 feet from exterior walls. (R303.10)
17. The following are required for central heating furnaces and low-pressure boilers in a compartment:
    a. Listed appliances shall be installed with clearances in accordance with the terms of their listings and the manufacturer's installation instructions. (MC 904.2(1))
    b. Unlisted appliances shall meet both the clearances in Table 904.2, and the clearances allowed by the manufacturer's installation instructions. (MC 904.2(2))
    c. When combustion air is taken from inside, the area of combustion air openings shall be 1 sq. inch per 1,000 BTU (100 sq. inch minimum) per opening. One Opening shall be within 12 inches of the ceiling and the second shall be within 12 inches of the bottom of the enclosure. The dimension shall not be less than 3 inches. (MC 701.5(1))
    d. 1/4-inch screens are required at openings where combustion air is taken from the outside. (MC 701.10(2))
    e. Separate ducts shall be used for upper and lower combustion air openings and maintained to the source of combustion air. (MC 701.11(4))
18. The following are required for appliances installed in an attic:
    a. An opening and passageway shall not be less than 22 inches by 30 inches, or less than the size of the largest piece of equipment. (MC 904.10)
    b. Where the passageway height is less than 6 feet, the distance from access to the appliance shall not exceed 20 feet, as measured along the centerline. (MC 904.10.1)
    c. Passageway shall be unobstructed and shall have solid flooring not less than 24 inches wide from entrance to appliance. (MC 904.10.2)
    d. A level working platform not less than 30 inches by 30 inches is required in front of the service side of the appliance. (MC 904.10.3)
    e. A permanent 120V receptacle outlet and a lighting fixture shall be installed near the appliance. Light switch shall be located at the entrance to the passageway. (MC 904.10.4)
    f. A type B or L gas vent shall terminate not less than 5 feet above the highest connected appliance flue collar or draft hood. (MC 802.6.2.1)
    g. Appliance installation shall meet all listed clearances. (MC 303.2)
19. Clothes dryer moisture exhaust duct shall terminate on the outside of the building and shall be equipped with a back-draft damper. Screens shall not be used, and the exhaust duct may not extend into or through ducts and plenums. (MC 504.3)
20. Clothes dryer moisture exhaust duct shall be 4 inches in diameter and length is limited to 14 feet with two elbows from the clothes dryer to point of termination. Duct length shall be reduced by 2 feet for every elbow in excess of two. (MC 504.3.1 & 504.3.1.2)
21. Heating appliances (water heater, furnace, etc.) located in the garage, which create a glow, spark or flame, shall be installed at least 18 inches above the floor. (MC 308.1)
22. Ducts shall be sized per Chapter 6 of the Mechanical Code.
23. The effective flush volume of all water closets shall not exceed 1.28gpf. Urinals shall be 0.5gpf maximum. (GC 4.303.1.1)
24. Single shower heads shall have a maximum flow rate or 2.0gpm at 80psi. Multiple shower heads serving one shower shall have a combined flow rate of 2.0gpm at 80psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. (GC 4.303.1.3)
25. Lavatory faucets shall not exceed 1.5gpm at 60psi. The minimum flow rate shall not be less than 0.8gpm at 20psi. (GC 4.303.1.4)
26. Kitchen faucets shall not exceed 1.8gpm at 60psi. The faucet may temporarily increase to above this rate, but not to exceed 2.2gpm at 60psi, and must default to the maximum flow rate of 1.8gpm at 60psi. (GC 4.303.1.4)
27. ABS and PVC DWV piping installations are limited to not more than two stories of areas. (PC 701.1(2))
28. All showers and tub-showers shall have a pressure balance, thermostatic mixing valve, or a combination pressure balance/thermostatic mixing type valve. (PC 418)
29. All new, replacement and existing water heaters shall be strapped to the wall in two places. One on the upper 1/3 of the tank, and one on the lower 1/3 of the tank. The lower point shall be a minimum of 4 inches above the controls. (PC 508.2)
30. Plumbing plan check and approval are required for 2 inch or larger gas lines and/or water lines.
31. Ground-fault circuit-interruption (GFCI) for personnel shall be provided per EC section 210.8(A) and installed in a readily accessible location.
32. Arc-fault circuit-interruption shall be installed to provide protection of the branch circuit. (EC 210.12)
33. Tamper-resistant receptacles shall be installed in all areas specified in 210.52, all nonlocking-type 12-volt, 15- and 20-ampere receptacles shall be listed tamper-resistant receptacles. (EC 406.12)
34. Where NM Cable (Romex) is run across the top of ceiling joists and/or where the attic is not accessible by permanent stairs or ladders, protection within 6 feet of the nearest edge of the scuttle or attic entrance shall be provided. (EC 334.23, 320.23(A))
35. **Sewer.** ADU/JADU sewage can be connected to the existing sewer system at a minimum of 24-inches outside the existing building foundation. It must be approximately 12-inches below grade with no less than 2% to the final connection point. Cleanouts must be installed at intervals as required by the Plumbing Code with locations and size specified on the site plan. Cleanouts shall be installed for each pipe size and within ½" inch of the diameter pipe which the cleanout serves. Other items include vent location and size (combination venting must be calculated based on the pipe size and fixtures); proper use of materials and fittings; under floor or under slab-ABS 12" below grade; underfloor strap with proper straps with rodent protection; or rodent protected straps with adequate pipe protection for dissimilar straps. Fasteners must be approved galvanized, zinc, hot dip, and no "Drywall Screws". *A minimum 10-foot head water test is required during underground drain waste inspection.*

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped. *
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. *
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. *
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses .** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment. *
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

§ 150.0(s)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, *or* a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

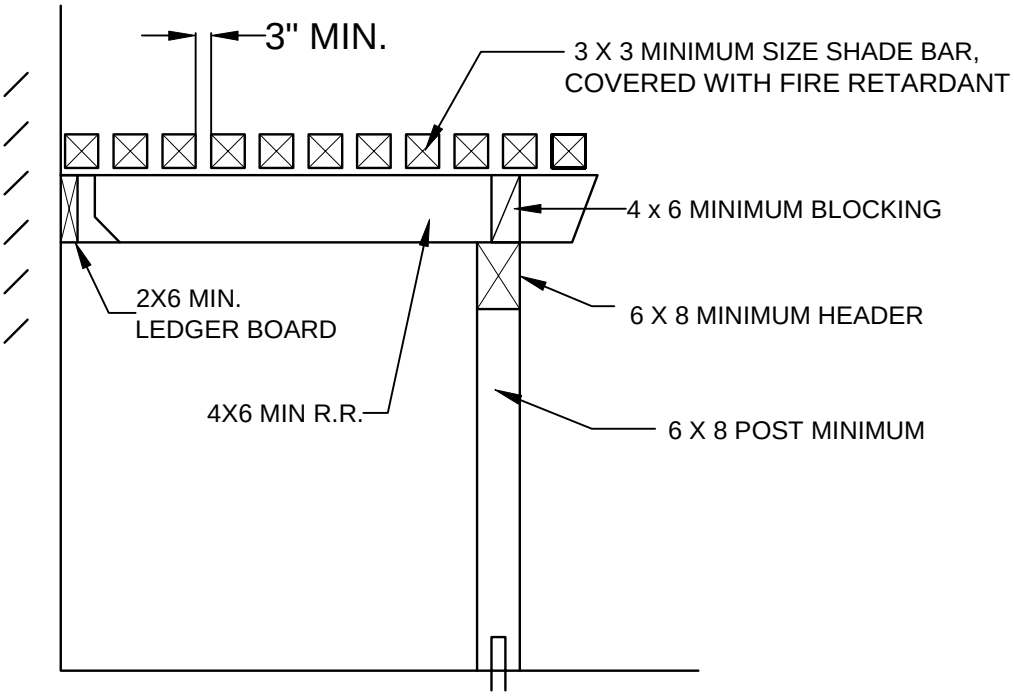
Standard Construction Notes
& VERY HIGH FIRE HAZARD
SEVERITY ZONE REQUIREMENTS

Sheet Number

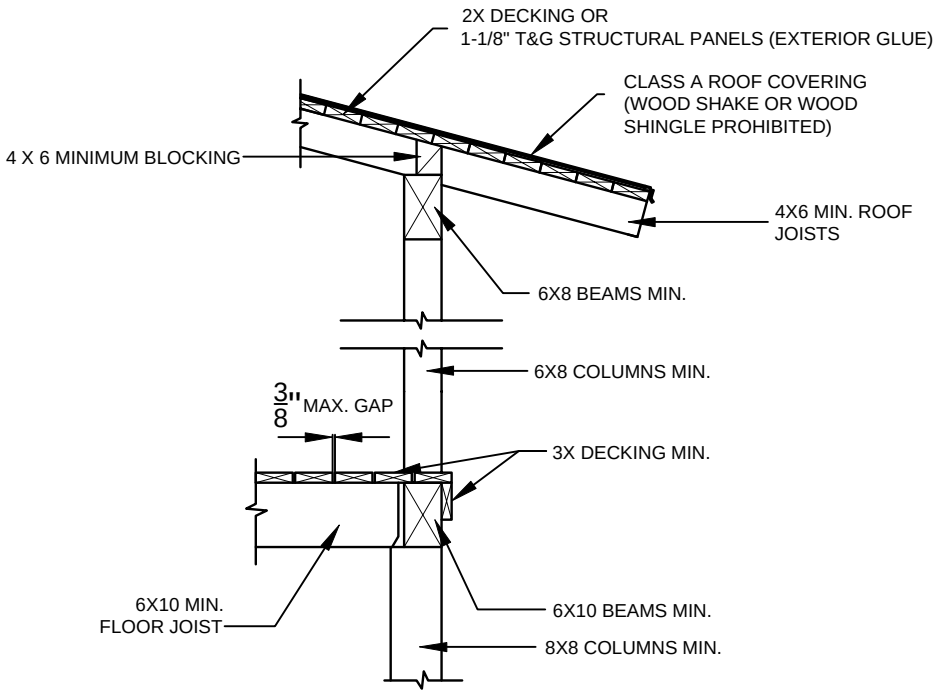
GN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION

VERY HIGH FIRE HAZARD
SEVERITY ZONE
PATIO & DECK DETAILS



SHADE BAR PATIO

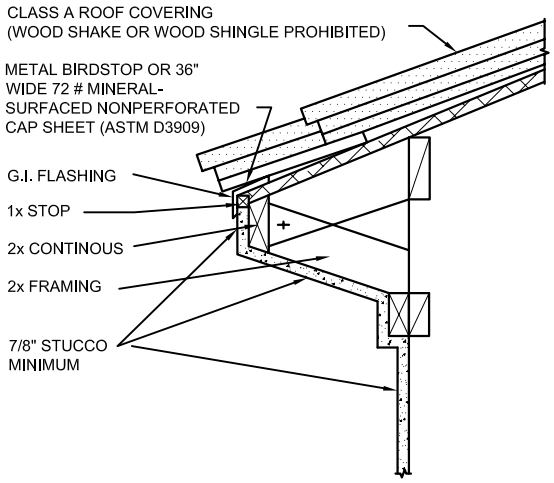


HEAVY TIMBER FOR DECKING

VHFHSZ Patio & Deck.dwg 02/26/2025

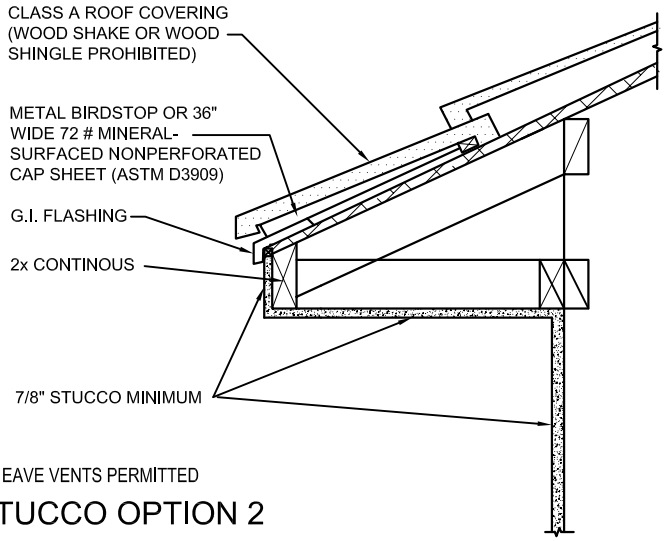
COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION

VERY HIGH FIRE HAZARD SEVERITY ZONE
EAVE DETAILS



NO EAVE VENTS PERMITTED

STUCCO OPTION 1



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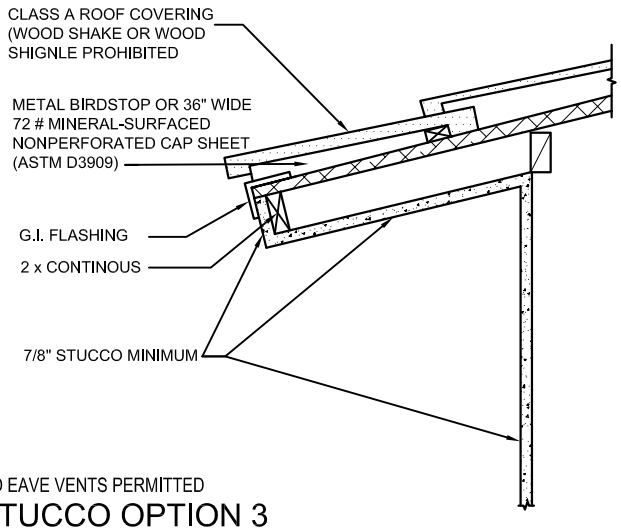
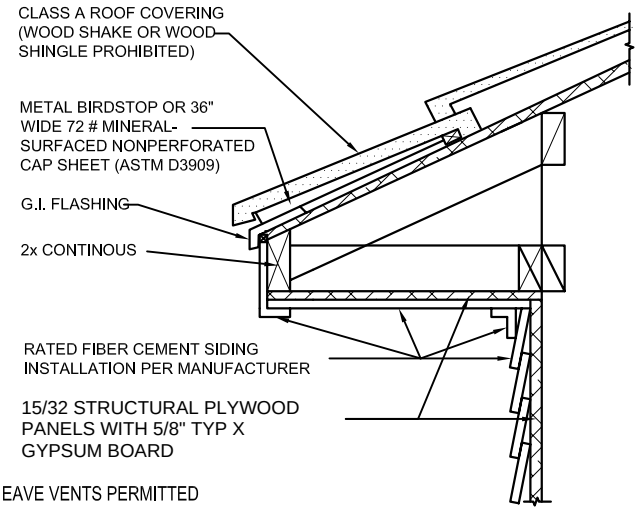
STUCCO OPTION 2



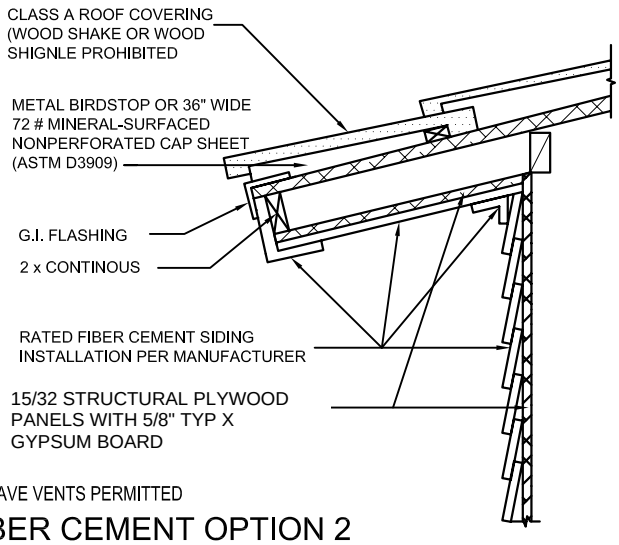
NO EAVE VENTS PERMITTED

STUCCO OPTION 3



NO EAVE VENTS PERMITTED

FIBER CEMENT OPTION 1



NO EAVE VENTS PERMITTED

FIBER CEMENT OPTION 2

LOS ANGELES COUNTY PUBLIC WORKS
BUILDING AND SAFETY DIVISION

CHECKLIST FOR REUSE OF EXISTING FOUNDATION SYSTEMS IN A FIRE DAMAGED STRUCTURE

The reuse of existing foundation system and slab after a major fire is not recommended. However, if a homeowner or contractor proposes to reuse the existing foundation, an engineering report/plan including but not limited to the following checklist shall be prepared by a licensed engineer/architect who is knowledgeable in fire damaged concrete investigation and submitted to Building & Safety Division for review and approval certifying the reuse of the existing foundation and slab system. Foundation shall include footings, piers, grade beams, retaining walls and any other concrete elements that support the structure.

This checklist serves as a roadmap for the engineer/architect to investigate the suitability of reusing the existing concrete foundation and slab. This checklist does not limit the scope of the testing and evaluation to be performed by the responsible licensed engineer or architect to produce a complete and comprehensive report of the existing foundation and slab.

1. Property Address: _____

2. APN _____

3. Property Owner Name _____

5. Foundation and Slab Inspection Results
(Visual observation)

a.) Conditions of concrete (color) indicate which of the following exist

☐ Normal concrete color
Location _____

☐ Pink or Red
Location _____

☐ Light/Whitish Grey
Location _____

REV. 02/2025, MB

□ Buff (Yellowish Brown)
Location _____

Further evaluation performed?

□ No
□ Yes. Non-destructive Test performed (attach test results):
Audible/Sound Observations ASTM D4580
□ Schmidt Hammer ASTM C805
□ Ultrasonic measurements
□ Other(s): _____

□ Yes. Destructive Test performed (attach test results):
□ Compressive core test C42 AND C39 OR C496
□ Petrography

Core sampling and testing should be performed by a certified testing laboratory. At least three core samples should be taken from the existing foundation, including at least two core samples taken from locations where visual inspection indicates that fire damage, if any, is most severe

b.) No. of stories of existing structure:
□ 1 Story
□ 2 Story
□ 3 Story

c.) Type of Footing
□ Isolated spread footing
□ Continuous wall (spread "T")
□ Piers & Grade Beams
□ Retaining wall
___ Concrete
___CMU

d.) Depth of Footing (Spread or "T" Footing) _____ ft.
e.) Width of Footing (Spread or "T" Footing) _____ ft.

At least one location along the perimeter footings at each side of the structure and one location along an interior footing should be exposed and documented.

f.) Condition of Footing and Slab
□ Plumb □ Out of Plumb
□ Level □ Rotated

Comments: _____

g.) □ Deep Foundations: Grade Beam and Caisson Verification (If Applicable)

Though deep foundations are typically well-protected from damaging heat, delamination and/or spalling depth for shallower portions of deep foundations should be evaluated for potential partial removal and replacement. Reused deep foundation elements are subject to the load testing requirements of Section 1810.1.2 of the 2022 CBC.

Comments: _____

h.) □ The condition of Existing CMU

□ Good condition:

Masonry found to have mortar and units intact with no visible cracking, deterioration, or deformation.

□ Fair condition

Masonry found to have mortar and units intact but with minor cracking (i.e. cracks under 1/16” in size), deterioration, or deformation.

□ Poor condition

Masonry found to have significant cracking, degraded mortar, degraded masonry units, and/or significant deformation

If tested using prism method ASTM C1314, at least one sample should be taken for every 1,500 sf of wall area, and a minimum of two total tests should be performed. At least 50% of the samples tested should be taken from locations where visual inspection indicates fire damage, if any, is most severe

Comments: _____

6. Conditions of Existing Anchor Bolts & Hold-down Anchor Bolt

□ Reuse existing anchor bolts?

□ No. New anchor bolts will be provided (pull test will be required for new anchor bolts) ASTM E3121

□ Yes. Pull test performed (attach test results): Min. 2 tests for each wall required. ASTM E3121

The tension test load should be a minimum of 1,000 pounds of force, applied using a hydraulic ram. The anchors should maintain the test load for a minimum of 15 seconds and should exhibit no discernable movement during the tension test. For more than five bolts to be reused, five anchor bolts plus a minimum of 25 percent of

the remaining anchor bolts should be tested.

7. Conditions of Existing Reinforcing Steel

How was the condition of the existing reinforcing steel evaluated?

If re-bar scanning is performed, scan at least two footings along the perimeter and one footing at the interior. For walls re-bar scanning, scan at least one four-foot square area at each wall segment.

Comments: _____

8. Conditions of Existing plumbing pipes, Mechanical ducts and Electrical Conduits if could be reused.

Comments: _____

9. Determine if Existing Vapor Barrier can be reused or provide alternative measures to prevent moisture intrusion.

Comments: _____

10. Condition of the Existing Site slopes

Slope Stability

- ☐ No Slope (Flat)
- ☐ Existing Slope, 1 vertical to horizontal
- ☐ Stable
- ☐ Unstable (visible signs of erosion exist)
- ☐ Foundations on or adjacent to slopes LAC Building code Section 1808.7

11. Recommendations and Conclusions

☐No repairs appear to be required.
The foundation is suitable for reuse. _____
☐The repairs and strengthening described below are recommended.
☐ Recommend demolition of existing foundation and construction of a new foundation.

Suggested repairs to foundation (*attach additional sheets if needed*):

_____

_____

_____

_____

_____

_____

_____

12. The following information shall be attached

- ☐ Drawings to scale of existing fire damaged structure plans and sections.
- ☐ Photographs of existing conditions.
- ☐Calculations and drawings to scale of proposed repair of correction details.
- ☐ Test Report (if test is performed)

I, the Registered Architect/Engineer-on-Record, of this project reviewed and completed this report to the very best of my ability to professionally assess and verify proper integration of the existing foundation system into the final structural design. I am responsible for the overall structural safety and integrity of the new building with the re-use of the existing foundation system.

STATE REGISTERED STAMP

_____

REGISTRED ARCHITECT/ENGINEEER-ON-RECORD

_____

DATE

Swimming Pools After a Fire

Take Precautions. Be Safe. Protect Your Health.

The following guidelines are recommended for the maintenance of pools that were impacted by smoke and ash.

Do not use pool until the following steps have been completed:

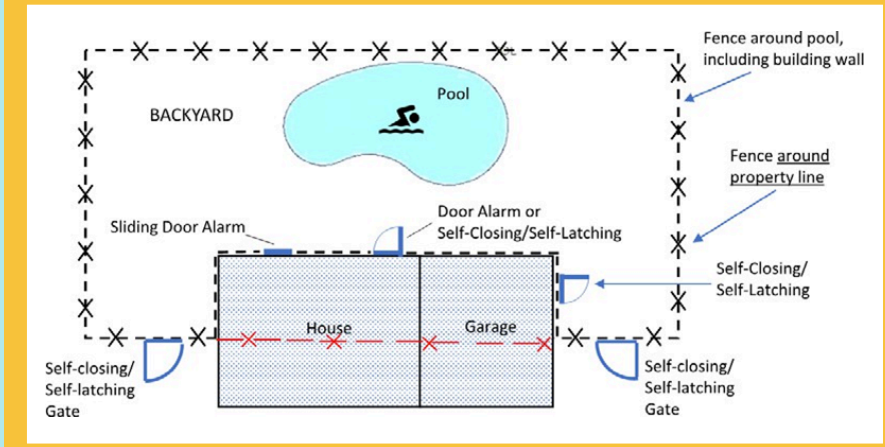
- Clean the skimmer baskets of debris and skim water surface of the pool with a pool net to remove floating debris.
- Brush the sides and the bottom of pool to loosen contaminants, then vacuum pool.
- Backwash and clean the filter(s). Release waste and wastewater into a **municipal sanitary sewer only**. If connected to a septic tank system, release the backwash to a pervious surface like gravel, lawn, or open space to allow for infiltration without erosion.

  Backwashing into the storm drain system (alleys, driveways, streets, storm drains) and creeks is prohibited by law.
- Check pH and adjust level between **7.2** and **8.0**.
- Check free chlorine level and adjust level to a minimum of **2.0 ppm for a pool and 3.0 ppm for a spa**.
- Ensure the recirculation system is operating properly by checking filter pressure and/or the flow meter.
- Reopen pool only when pH levels are between **7.2** to **8.0** and the free chlorine is at a minimum of **2.0 ppm for a pool and 3.0 ppm for a spa**.

Swimming Pool Fencing

Pool and spa enclosures can be damaged by fires. Swimming pools and spas must be enclosed with a protective fence to prevent drowning, injuries, or other risks:

- The enclosure must be **at least 60 inches** in height above grade.
- Gaps should not exceed **4 inches** to prevent access by small children.
- Gates and entrances should be self-closing and self-latching.



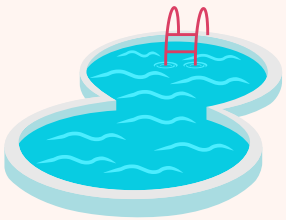
For more information, please contact the Environmental Health Division, **Recreational Waters Program** at **(626) 430-5360** or **rhealth@ph.lacounty.gov**.

County of Los Angeles Public Health

Rebuilding Swimming Pools and Spas

Fire can damage the structure of swimming pools and spas, including the shell, deck, equipment, and enclosure. After a wildfire, please follow the instructions below to repair or rebuild your pool.

Residential Swimming Pools and Spas



The State debris removal program does not remove materials from pool repairs. Pool owners are responsible for permits, demolition material, and demolition.

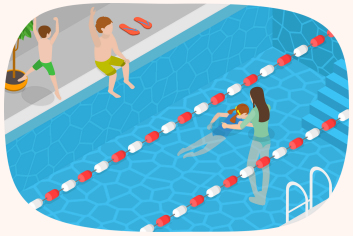
Contact your **local Building and Safety Department** for requirements and instructions regarding pool structure and/or equipment repairs.

For unincorporated areas of LA County, please contact the LA County **Department of Public Works Building and Safety Division at (626) 458-5100**.

Draining Pool

While draining a pool is not recommended, if damage to the pool requires it to be drained, residents in the unincorporated area may do so through an existing 3" p-trap installed with a permit from Building and Safety. Residents of cities should contact their local Building and Safety for requirements to drain a pool. Owners of salt water pools are advised to contact therir city to determine where pool water may be legally discharged.

Public Swimming Pools and Spas



All public swimming pools and spas located at hotels/motels, apartment buildings, condominiums, schools, health clubs, city parks, mobile home parks, resorts, organizations, water theme parks, and medical facilities are permitted by the Environmental Health Division.

Contact the **Recreational Waters Program** for requirements and construction plan submissions regarding any repair of pools and/or equipment.

Deck Cleaning - Clean the pool deck and throw away the debris with the solid waste. Do not hose down the deck or use a leaf blower because debris can go into the storm drains and the air. First, lightly spray the deck with water to minimize the amount of dust and ash that goes into the air. Second, use a stiff brush or broom to sweep and put the debris in a trash bag. A mop and bucket can also be used to clean the deck.

Mosquito Breeding

An unkept pool or spa results in stagnant water, making it a breeding ground for mosquitoes to lay eggs that can produce **thousands of mosquitoes** in just a few weeks. Mosquitoes can spread serious diseases, such as West Nile Virus and Zika Virus.

It is important to prevent mosquito breeding conditions to stop diseases. **Reminder:** Under the California Health and Safety Codes, homeowners are responsible for preventing and eliminating any mosquito breeding on their property.

It is not necessary to empty the pool. Instead, use the following preventive measures to control mosquito breeding in vacant swimming pools or spas:

1. **Mosquito dunks**— a donut shaped solid item put in the swimming pool water to kill mosquito larvae and can be purchased at any hardware or garden shop.
2. **Mosquito fish**— are small fish that eat mosquito larvae. If mosquito fish are used, chemicals (such as chlorine) cannot be in or added to the water.

For mosquito fish, treatment and further assistance, please contact your **local Mosquito Abatement District.**

For more information, please contact the Environmental Health Division, **Recreational Waters Program** at **(626) 430-5360** or **rhealth@ph.lacounty.gov**.

[2/4/25]

County of Los Angeles Public Health

SWIMMING POOLS, SPAS AND HOT TUBS, ENCLOSURES, AND SAFETY DEVICES

The purpose of this policy is to identify the related code requirements for swimming pools, spas and hot tubs, fish ponds, and other bodies of water; describe the pool enclosure requirements; and list exceptions to the requirement for installing a pool enclosure. In addition, this policy clarifies how to handle fence repair for existing pools and pool enclosure; and address maintenance requirements for alterations, additions, and repairs to existing dwelling. This policy shall apply to all one- and two-family dwellings.

1. Identify all the code requirements

   A. LACBC Section 3109.4.4 – Based on State Statutes: AB 3305 (1996), AB 2977 (2006), AB 382 (2007), SB 442 (2017). This section applies to Pools for Single Family Dwellings constructed or altered after January 1, 2007.

   B. LACBC Chapter 31B – Based on Department of Public Health (DPH) requirements. These provisions apply to all Public Pools, including residential (more than 3 dwelling units) pools and all commercial pools.

   C. Chapter 11.50 of the County of Los Angeles Health and Safety Code (HSC) Title 11. These provisions apply to all swimming pools, fish ponds, and other outdoor bodies of water.

   D. Chapter 11.51 HSC. These provisions apply to indoor and outdoor swimming pools, spas, hot tubs and other bodies of water located on the premises of a Single-Family Dwelling.

2. Clarification of terms (Definitions)

   A. **POOL.** Any structure intended for swimming or recreational bathing that contains water over 18 inches deep.

   B. **POOL ENCLOSURE.** Pool enclosure shall encompass all references to fences, barriers, and separation fence.

   C. **TEMPORARY BARRIER.** A temporary pool enclosure, which is used to prevent the public from injuries due to excavations during construction of a pool. The temporary barrier shall be not less than 6 feet high in accordance with LACBC Section 3306.9.

D. **BODY OF WATER.** Any outdoor structure other than a pool, as defined, that contains water over 24 inches deep, such as a water feature or a fish pond.

3. Protection of Excavation During Construction

Every excavation for the construction of a pool located 5 feet or less from the street lot line shall be enclosed with a temporary barrier. Where the excavation is located more than 5 feet from the street lot line, a temporary barrier shall be erected when required by the building official. Temporary barriers shall be maintained until the permanent pool enclosure and safety devices have been installed and approved by the building official.

4. Location of pool enclosure

A. The pool enclosure shall be constructed around the pool, except when approved by Building Official.

B. Stairways, ramps, and landings for slides or similar pool features shall have handrails and/or guardrails when they are 30" above adjacent grade in accordance with LACBC Section 1015.2.

5. Height of pool enclosure and other construction requirements

A. The top of the pool enclosure shall be at least 60 inches above grade. The height shall be measured from the side away from the pool as depicted in LACBC Figure 31B-4 and 31B-5.

B. Maximum vertical clearance between ground and the bottom of the barrier shall be 2 inches above earth.

C. Any decorative design work on the side away from the pool, such as protrusions, indentations, or cutouts, which render the pool enclosure easily climbable, is prohibited.

D. Gaps or voids, if any, shall not allow passage of a 4-inch diameter sphere.

E. Horizontal members that create a "ladder" effect are prohibited unless stated otherwise below.

6. Construction material for the pool enclosure

A. Chain Link

1. The wire for the chain link shall not be less than 11-gauge.

2. The posts shall be galvanized pipe at least 1-1/4 inch in diameter and spaced not more than 10 feet apart.

3. The posts shall be set not less than 12 inches into concrete. The concrete shall be poured into a hole minimum 6 inches in diameter and minimum 18 inches deep.

4. Openings in the chain link shall not be greater than 1-3/4 inches measured horizontally.

B. Solid Wood

1. Redwood or pressure treated posts shall be no less than 3 inches by 3 inches, set no more than 10 feet apart, and embedded at least 18 inches in the ground.

2. The vertical boards at least 1/2-inch thick shall be placed side-by-side without any gaps or spaces.

3. The vertical boards shall be securely fastened to no less than two horizontal rails that are at least 2 inches by 3 inches in cross section.

4. The distance between the tops of the horizontal rails located on the outside of the fence shall not be less than 45 inches apart.

C. Masonry/Concrete

1. Masonry fences shall be supported on a foundation of concrete extending not less than 12 inches below grade, not less than 12 inches in width, and not less than six inches in thickness.

2. Reinforcing steel located in the masonry wall, when required, shall be embedded 16 bar diameters into the footing.

D. Wrought Iron

1. When horizontal members are spaced less than 45 inches apart, the horizontal members shall be placed on the inside face of the fence and vertical members shall be spaced at 1-3/4 inches maximum.

2. When the distance between the tops of horizontal members is 45 inches or more, vertical member spacing may be increased up to 4 inches.

E. Combination of Material

Different materials used in the horizontal direction shall be permitted, provided each portion of the pool enclosure meets the requirements of this section. Different materials used in the vertical direction (one-on-top of another) shall be prohibited, unless approved by the Building Official.

F. Mesh Pool Fencing

Mesh pool fencing that meets ASTM Standard F2286 shall be approved by Research Section. Installation shall comply with all conditions of approval specified in a valid Research Bulletin.

7. Gates

A. Pedestrian walkway access gates when part of the pool enclosure shall meet all the construction requirements of Section 5 and 6.

B. The gate shall be self-closing and self-latching.

C. The gate shall open or swing away from the pool.

D. The release mechanism of the self-latching device shall not be located less than 60 inches from the bottom of the gate.

E. The following doors and gates are prohibited as part of the pool enclosure due to intrinsic problems with self-closing or self-latching devices:

1. Double doors or pairs of gates
2. Doors or gates wider than 4 feet
3. Driveway gates
4. Overhead garage doors

F. Additional locking devices, hooks or bolts may be installed for security of the premises, provided normal satisfactory operation of the required self-closing and self-latching systems is maintained.

8. Exceptions

A. **Buildings may be part of the pool enclosure**

1. Exterior wall of a building in combination with a pool enclosure, which completely surrounds the pool and obstructs access to the pool, shall be permitted.

2. All doors providing direct access from a dwelling unit to the pool shall comply with one of the following:

a. The door shall have an alarm that sound continuously for a minimum of 30 seconds within 7 seconds after the door and its screen, if present, are opened, and shall be capable of providing a sound pressure level of not less than 85 dBA when measured indoors at 10 feet. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as a touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last no longer than 15 seconds. The deactivation switch shall be located at least 54 inches above the threshold of the door, or

b. The door shall have self-closing and self-latching devices with a release mechanism placed no lower than 54 inches above the floor.

3. All doors providing direct access from a garage or accessory structure to the pool shall be self-closing and self-latching with a release mechanism located not less than 54 inches above the floor.

B. **Above-ground swimming pool structure.** Where an above-ground swimming pool structure is used as a barrier or where the barrier is mounted on top of the swimming pool structure, the ladder or steps shall be secured to prevent access, or they shall be surrounded by a barrier. When the barrier is mounted on top of the above-ground pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall not allow the passage of a sphere 4 inches in diameter.

C. **Use of other safety devices.** Lockable spa covers shall comply with ASTM Standard F1346.

9. Drowning Prevention Safety Features

   Effective January 1, 2018, Health and Safety Code Section 115922 (LACBC 3109.4.4.2) requires new swimming pools or spas or remodeled swimming pools or spas at a private single-family home to be equipped with at least 2 drowning prevention safety features. Compliance with the pool enclosure requirements above shall serve as one of the required safety features. A second feature from the list below must be installed:

   A. Removable mesh fencing that meets ASTM Standard F2286.

   B. A pool safety cover that meets ASTM Standard F1346.

   C. A pool alarm that, when placed in the pool, will sound upon detection of entrance into the water. The pool alarm shall meet ASTM Standard F2208.

   D. Other means of protection, if the degree of protection afforded is equivalent to the other devices specified above and has been independently verified by an approved testing laboratory as meeting standards for the device established by ASTM or ASME.

10. Repair or replacement of fencing for existing pools

   A. Replacement of existing pool enclosure shall comply with this policy.

   B. Existing pool enclosures constructed prior to January 1, 2007 shall be maintained in good condition without having to comply with all the above requirements.

   C. Any alteration, addition or repair to an existing pool, spa, hot tub or pool enclosure, shall require the pool enclosure to comply with all the above requirements.

      Exceptions:

      1. Alterations such as re-plastering or changing the decking, tile or coping.
      2. Projects that only require electrical, plumbing or mechanical permits, such as replacing pumps, gas lines or heaters.

   D. Existing homes may install battery-operated alarms when a new pool is built or a pool/spa alteration triggers requirement of Section 8-A-2-a.

11. Alterations, additions, or repairs to an existing dwelling

    A. Alterations or additions to an existing dwelling that create new access points to the pool area shall comply with all the requirements of this policy.

    B. Repairs or replacement of doors in existing dwellings built prior to September 1, 1995 are not required to have an alarm or be self-closing and self-latching if the existing doors being repaired or replaced do not have an alarm or are not self-closing and self-latching.

12. Fence and Gate details

    A. Attachment A, for sample fence and gate construction.

    B. Attachment B, swimming pool drowning prevention safety features.

13. Complaints or code violations

    Complaints regarding missing or damaged pool barriers of occupied buildings shall be referred to the nearest Sheriff's Station (HSC 11.50.130). For vacant buildings, complaints shall be referred to the Property Rehabilitation Section.

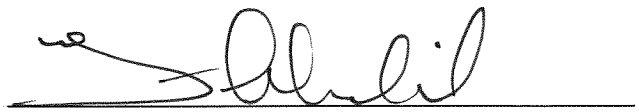
Attachments

Supersedes BCM 3109 Article 1 dated 03-05-18

WRITTEN BY: MIGUEL GARCIA
Supervising Building and Safety
Engineering Specialist

REVIEWED BY: POLICY COMMITTEE

APPROVED BY:

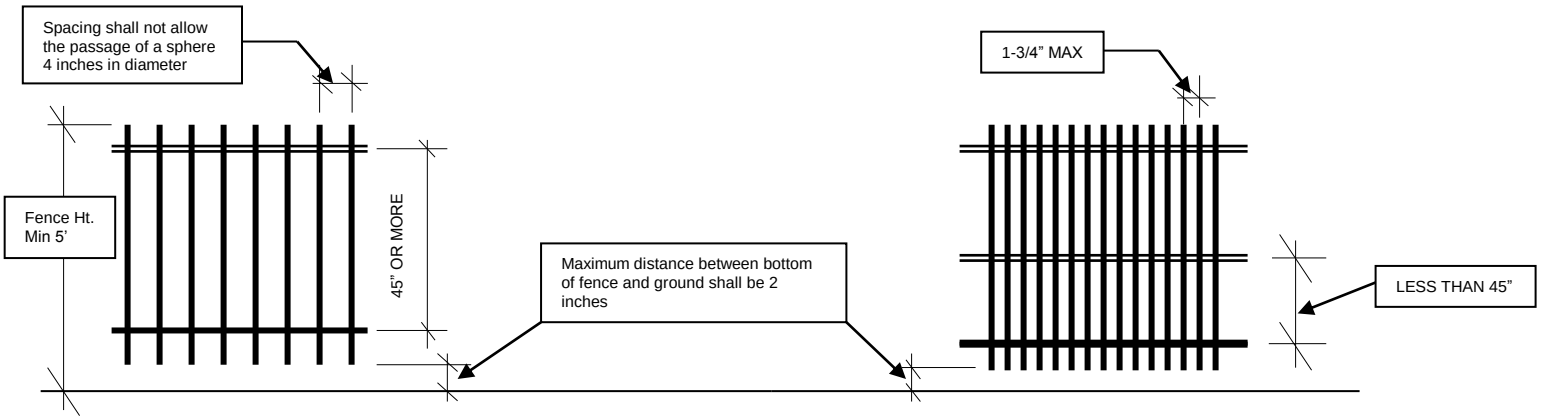


FADY KHALIL
Principal Engineer

Attachment A

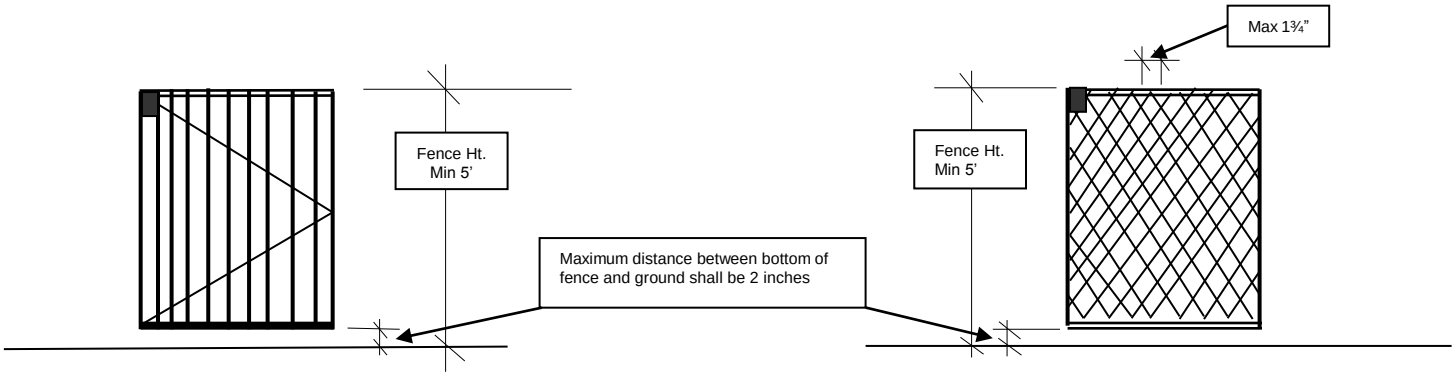
SAMPLE FENCE AND GATE CONSTRUCTION FOR SWIMMING POOLS, SPAS, AND HOT TUBS

ANY STRUCTURE THAT CONTAINS WATER OVER 18 INCHES DEEP



Wrought iron fence with horizontal members at 45" or more apart.

Wrought iron fence with horizontal members less than 45" apart shall be located on the pool side.



Pool gate-release mechanism allowed on either side

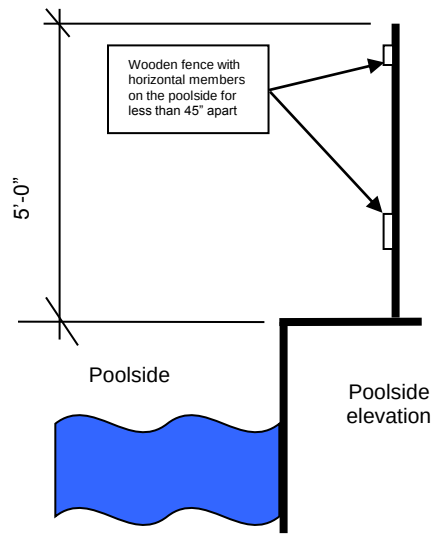
Chain link fence

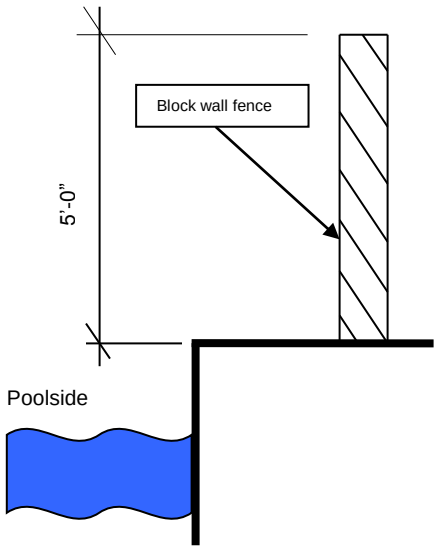
Notes:

1. 11 GA. min.
2. For existing chain link fences meeting height requirements with openings exceeding 1¾", vertical Wood slats or equivalent may be installed to meet code requirements.

Notes:

- All pedestrian gates shall be self-closing and self-latching.
- Any decorative design work on the side away from the pool, such as protrusions, indentations, or cutouts, which render the barrier easily climbable, is prohibited.

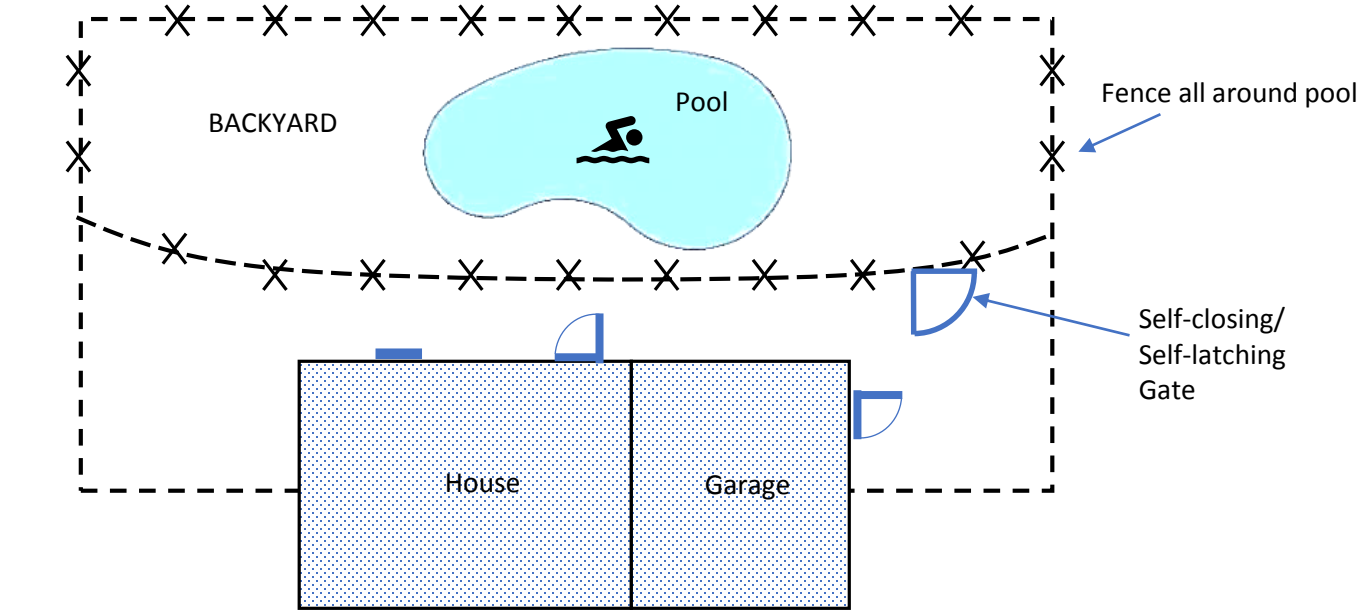




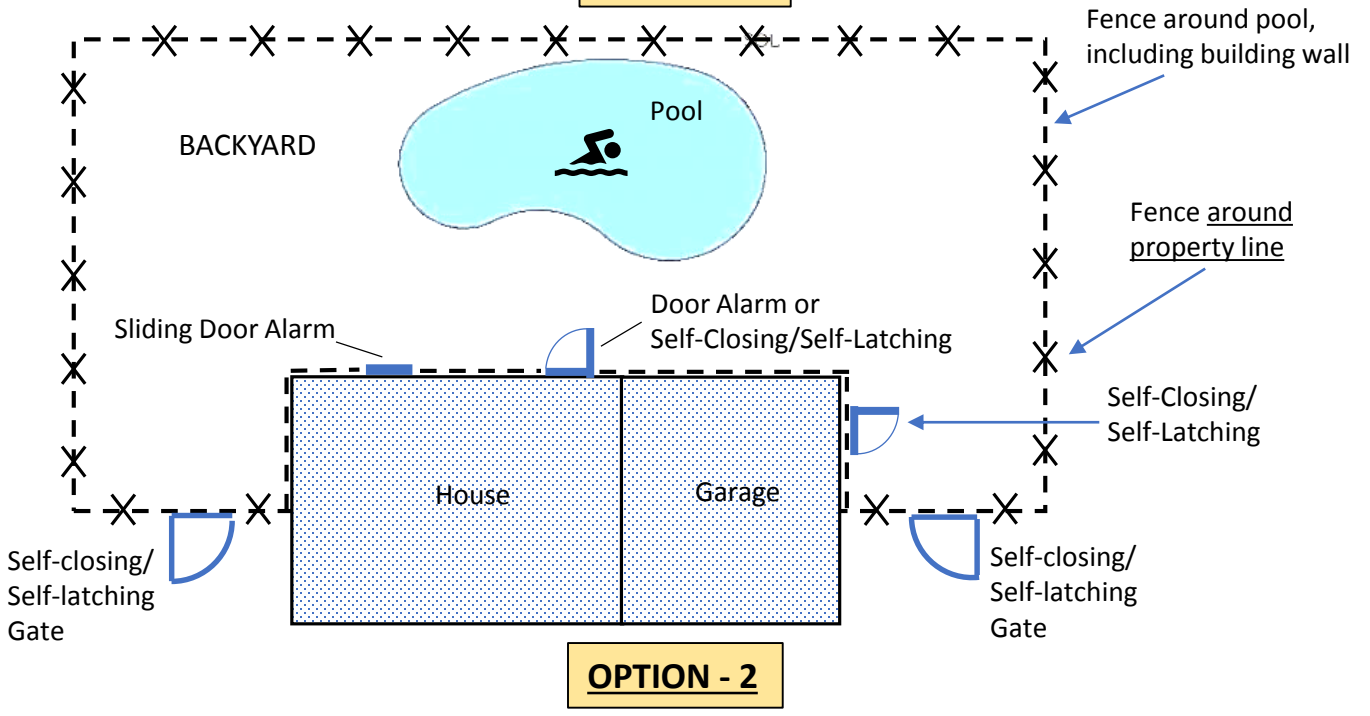
SWIMMING POOL DROWNING PREVENTION SAFETY FEATURES MEASURE

Attachment B

Effective January 1, 2018, Health and Safety Code Section 115922 (Building Code Section 3109.4.4.2) requires new swimming pools or spas or remodeled swimming pools or spas at a private single-family home to be **equipped with at least 2 drowning prevention safety features**. Compliance with the pool enclosure requirements **(see below OPTION 1 & OPTION 2)** serves as one of the required safety features. A second feature from the list below must also be installed.



OPTION - 1



OPTION - 2

DROWNING PREVENTION SAFETY FEATURES (SECOND FEATURE): AT LEAST ONE FEATURE MUST BE CHOSEN

- ☐ **A pool alarm that, when placed in the pool, will sound upon detection of entrance into the water. The pool alarm shall meet ASTM Standard F2208.**
- ☐ **Removable mesh fencing that meets ASTM Standard F2286 – 60" high minimum**
- ☐ **A pool safety cover that meets ASTM Standard F1346**
- ☐ **Other means of protection, if the degree of protection afforded is equivalent to the other devices specified above, and has been independently verified by an approved testing laboratory as meeting standards for the device established by ASTM or ASME.**

Note: Release mechanism for doors with direct access from home or accessory structures shall be placed no lower than 54" above the floor, and for gates through enclosure shall be placed no lower than 60" above the ground.

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION

ONE- & TWO-FAMILY DWELLING

FIRE REBUILD PLAN REVIEW

GENERAL PROJECT INFORMATION

PLAN CHECK NO. _____ DISTRICT NO _____ INITIAL VALUATION _____

JOB ADDRESS _____ CITY _____ ZIP _____

OWNER _____ TELEPHONE ( ) _____

APPLICANT _____ TELEPHONE ( ) _____

PROJECT INFORMATION

USE ZONE _____ CLIMATE ZONE _____ VHFHSZ: ☐YES ☐NO FLOOD ZONE: ☐YES ☐NO

BUILDING ELEMENT	SQ. FT.	NO. OF STORIES	CONSTR. TYPE	OCC. GROUP	$ / SQ. FT.	$ VALUE
				New Valuation:		

PLAN CHECK ENGINEER AND CORRECTION INFORMATION

REVIEWED BY _____ DATE _____ EMAIL _____

RECHECKED BY _____ DATE _____ EMAIL _____

Your application for a permit, together with plans and specifications, has been examined and you are advised that the issuance of a permit is withheld for the reasons hereinafter set forth. The approval of plans and specifications does not permit the violation of any section of the Building Code, or other local ordinance or state law.

NOTE: Numbers in the parenthesis ( ) refer to sections of the 2023 edition of County of Los Angeles Building Code, Existing Building Code (E), Residential Code (R), Table (T), Plumbing Code (PC), Mechanical Code (MC), Electrical Code (EC), Residential Code Manual (RCM), 2018 National Design Specifications (NDS)

For County of Los Angeles Building Code Amendments and BCMs, visit www.dpw.lacounty.gov/bsd/content

INSTRUCTIONS

- Corrections with circled item numbers apply to this plan check.
- In the left-hand margin of the circled corrections, please indicate the sheet number and detail or note number on the plans where the corrections were addressed. Resubmit marked original plans and two corrected sets of plans, calculations, and this plan review list.
- Incomplete, unclear, or faded drawings or calculations will not be accepted.
- Incorporate all comments as marked on checked set of plans and calculations and these correction sheets.

APPLICATIONS AND SUPPLEMENTAL NOTES

1. Applications will expire on _____. Permit must be obtained prior to expiration date; otherwise, the application shall expire. (106.4.1.1)
2. Attach the Standard Construction Notes VERY HIGH FIRE HAZARD SEVERITY ZONE Sheet to the submittal documents. See link: BUILDING NOTES.

DESIGN REQUIREMENTS

3. Provide a complete plot plan showing lot dimensions/building setbacks/street name(s)/north arrow/new and existing building to remain/distance between buildings/location of private sewage disposal system /easements. (106.4.3).
4. Maintain 5-ft. clearance between septic tank(s) and seepage pit(s) and minimum clearances to buildings and property lines of 5-ft. for the septic tank and 8-ft. for the seepage pit. (PC Appendix H T-H1.7)
5. Specify roof slope(s) and minimum Class C rating roofing material on the plan. ICC/UL # is required for shingle/tile roof. (R905)
6. Exterior walls of dwellings and accessory buildings less than 5-ft. (non-Sprinklered)/3-ft. (Sprinklered) to the property line shall be 1-hr fire-resistance-rated construction. (T-R302.1 (1) & (2)).
7. Eave between 2-ft to 5-ft of property line shall be 1-hr. fire-resistant-rated on the underside. (T-R302.1 (1) & (2))
8. Other than foundation vents, no openings are allowed at exterior wall less than 3-ft. to the property line. (T-R302.1 (1) & (2))
9. The area of exterior wall openings of non-Sprinklered dwellings and accessory buildings located ≥ 3-ft. and < 5-ft. to the property line shall be limited to 25% of the wall area. The area of exterior wall openings is unlimited when exterior walls are located ≥ 5-ft for non-

Sprinklered buildings and ≥ 3-ft. for Sprinklered buildings. (T-R302.1 (1) & (2))

10. Habitable rooms other than a kitchen shall not be less than 7-ft in any dimension with minimum floor area of 70-SF. (R304.1, R304.2).
11. Habitable spaces & hallways shall have a ceiling height of no less than 7-ft. Bathrooms, toilet rooms, and laundry rooms shall have ceiling heights of not less than 6-ft. 8-in. (R305.1)
12. Glazing located at all hazardous location shall be tempered. Please see plan for the specific locations. (R308.4)
13. Aggregate glazing area (including skylights) of habitable rooms must be minimum 8% of the room floor area with a minimum 4% openable area. This requirement appears to be deficient in_____ _____. (R303.1)
14. To consider any room as a portion of an adjoining room, at least 1/2 of the common wall area shall be open and unobstructed and shall provide an opening of not less than 1/10 the floor area of the interior room or 25 S.F., whichever is greater. Show that the common wall between _____ and _____ complies with the above requirement. (R303.2)
15. Bathrooms containing a bathtub, shower, or tub/shower shall be mechanically vented for humidity control. (R303.3.1). Bathrooms, water closet compartments and other similar rooms shall be provided with minimum glazing area in windows of 3-SF, one-half of which is openable. The glazed areas are not required where artificial light and a local exhaust system of 50-CFM intermittent or 20-CFM continuous ventilation are provided. (R303.3 Ex.).
16. Dimension on the plans the 30-in. clear width for water closets and 24-in. clearance in front of all water closets. (PC402.5). Show receptable areas shall not be less than 1024 sq. in of the floor area and encompass 30-in. diameter circle. (PC 408.6)
17. In every bedroom, habitable attics, and basement, provide one operable emergency escape and rescue opening with minimum 5.7-S.F., 24-in. clear height, 20-in. clear width, and maximum 44-in. sill height. (R310.2) (R310.2.2)
18. Provide an interconnected hard-wired "SMOKE ALARM" with battery backup in each sleeping room, immediate vicinity of the bedrooms, each additional story of dwelling, and not less than 3-ft from the bathroom that contains bathtub or shower. (R314)
19. Provide an interconnected hard-wired carbon monoxide alarm with battery backup outside of each bedroom, and occupiable level if dwelling unit. (R315)
20. Show location of 22-in x 30-in attic access with 30 in. minimum headroom for attic greater than 30-SF. (R807.1)
21. For duplexes/ two-family dwellings provide a floor or wall separation one-hour fire rated wall or ½-hr fire rated wall if fire sprinklered. The wall shall have transmission sound ratings of STC 50. Wall assemblies shall extend from the foundation to the roof and have draft attic separation between units.
22. Provide full height transverse and longitudinal building cross sections showing framing, plate heights, total heights, insulation, foundation, finish grade, etc. (106.4.3)

EXITS AND STAIRS

23. Provide minimum 36-in landing measured in the direction of travel at all exterior doors. (R311.3)
24. Required egress doors at _____shall not swing over a landing that is more than 1.5-in. in height below the threshold. (R311.3.1
25. The landing on the exterior side shall be not more than 7.75-in below the top of the threshold provided that the door does not swing over the landing. (R311.3.1 EX) (R311.3.2)
26. Stairway shall be minimum 36-in clear width, 6-ft 8-in clear headroom, with 10-in min thread depth and 7.75-in maximum riser height, and continuous Type I or II handrail at 34-in to 38-in above tread nosing. (R311.7)
27. Provide minimum 42-in high guards at the open-sided walking surfaces that are more then 30-in measured vertically to the floor or grade below at any point within 36-in horizontally to the edge of the open side and detail the base connection. (R312.1.1) (R312.1.2)

VENTILATION

28. Provide attic vent calculation and show the type, size, and location on the roof plan. (R806.1) (R806.2)
29. Provide under-floor vent calculation and show type, size, and location on elevation views and foundation plan. (R408)

GARAGE AND CARPORT

30. The following are required for the separation of the private garage from the dwelling unit:
    a. Garages beneath habitable rooms shall be separated by no less than 5/8-in. Type X gypsum board. Provide minimum 1/2 –in. gypsum board on the garage side elsewhere. (T-R302.6)
    b. Provide minimum 1/2-in. gypsum board on the garage side of detached garages less than 3-ft. from a dwelling unit. (T-R302.6)
    c. Doors to the dwelling unit shall be solid wood, solid or honeycomb core steel and not less than 1-3/8-in. thick, or 20-minute rated, unless the dwelling unit and the garage are protected by an automatic fire sprinkler system. Doors shall be self-closing and self-latching. (R302.5.1)
    d. Garage shall not open directly to a bedroom. (R302.5.1)
    e. A garage / carport floor sloped to a drain or toward the main vehicle entry doorway. (R309.1)

VENEER / FIREPLACE

31. Specify and detail the veneer material, thickness, backing, anchorage, footings, and support over the openings in accordance with Section R703.8.3.

32. Wood burning fireplace within South Coast Air Basin is prohibited per AQMD's Rule 445. Any exemption to Rule 445 shall be approved by SCAQMD.
33. For Factory-built steel fireplace specify manufacturer, model, and I.C.C./UL number or other approved agency. (R1004.1).

FOUNDATION

34. Foundation and floor slabs shall conform to the following requirements, unless an approved soils report indicates the soil is not expansive. (RCM 401.4 Art.1)
    a. Continuous 12-in wide footings under exterior walls and interior bearing walls extending below grade 24-in. and 18-in. respectively and below foundation wall crawl hole.
    b. Four continuous #4 bars, two #4 bars 3-in to 4-in. from bottom and two #4 bar 3-in to 4-in. from top of foundation.
    c. Floor slab 4-in. thick over two layers of a 2-in. fill of sand and a moisture barrier membrane (6 mils thick) sandwiched between the two layers of fill. Slab shall be reinforced with #4 bars at 16-in. O.C. each way. Reinforcement to be placed at center of slab.
    d. Provide #4 dowels at 16-in. O.C. bent 2-ft. into slab and 1-ft. into footing. Dowels may be omitted when slab is a monolithic pour. Saturate the soil 18-in. deep before pouring the concrete slab.
35. The foundation bolts shall be 5/8-inch diameter with 0.229-in. x 3-in. x 3-in. plate washers embedded at least 7 inches into the foundation spaced not more than 6 feet apart. (R403.1.6) (R602.11.1)
36. Show minimum 18-in. underfloor clearance from grade to bottom of floor joists and minimum 12-in. clearance to bottom of girders. (R317.1)
37. Wood sill plate shall be minimum 8-in. above adjacent grade. (R317.1)
38. Provide minimum 18-in x 24-in or 16-inch x 24-inch access to under-floor spaces through the floor or perimeter wall respectively. (R408.4)

ROOF/FLOOR/WALL FRAMING

39. Specify the size, spacing and direction of rafters and ceiling joists per T-R802.4.1(1)– (8) and T-R802.5.1(1)–(2), respectively.
40. The size of ridge board, valley, or hip members shall not be less than the cut end depth of the rafter. (R802.3)
41. Provide designed ridge beams (4 x min.) for open beam vaulted ceilings, or when ceiling joists or rafter ties are not provided. **Submit for plan check.**
42. Ridge / hip / valley members shall be designed as vertical load carrying members when the roof slope is less than 3:12. Provide calculations. (R802.4.4)
43. Rafter ties (min. of 2x4) are required immediately above ceiling joists, which are not parallel to the rafters. Connections shall be in accordance with Tables R802.5.2 or designed by an engineer.
44. Provide minimum 15/32" CDX Plywood with 8d common nail at 6"/6"/12" on center for roof diaphragms. (R803)
45. Specify the size, spacing, and direction of the floor joist per T- R502.3.1(1) and T-R502.3.1(2). Floor girders must be sized and spaced per R502.5 and T-R602.7(1) and T-R602.7(2).
46. Provide 5/8" T&G Plywood with 10d common nail at 6"/6"/12" on center for the floor diaphragms (R503).
47. Headers shall be provided over each opening in exterior and interior bearing walls per T-R602.7(1) through T-R602.7(3)
48. Studs in bearing walls are limited to 10-ft height unless an approved design is submitted. (T-R602.3. (5)) Balloon framing shall be specified.

LATERAL DESIGN

49. Provide braced wall lines in accordance with Section R602.10.1. Braced walls to resist wind and seismic forces shall not exceed the following height to width ratios: 2 to 1 for wood structural panels; 1-1/2 to 1 for gypsum wallboard and Portland cement plaster (stucco). (2306.3, SDPWS 4.3.4)
50. Specify on the framing plans the shear wall material and thickness and the size and spacing of fasteners and sole plate nailing. Call out anchor bolt spacing that is compatible with the shear wall capacity. (106.4.3)
51. Columns, beams, trusses, or slabs supporting discontinuous walls or frames of structures having horizontal irregularity Type 4 per ASCE7 T-12.3-1 or vertical irregularity Type 4 per ASCE7 T-12.3-2 shall have the design strength to resist the maximum axial force that can develop in accordance with overstrength factor of ASCE7 12.4.3.2. (ASCE7 12.3.3.3)
52. Detail how the interior shear walls or lateral force resisting elements are connected to the roof / floor diaphragm(s). (106.4.3)
53. Provide a drag strut at _____ _____. Show details of strut and top plate connections. (106.4.3)

MECHANICAL/ELECTRICAL/PLUMBING

54. Specify total load of the new service panel. Show location on site plan and floor plan(s). (ECM 82.8)
55. Show location of F.A.U. / Return Air Grill / Water Heater on floor plan. (106.4.3)
56. Shower doors shall swing out. Net area of shower receptor shall be not less than 1,024 sq. in. of floor area and encompass 30-in. diameter circle. (PC408.6)
57. All showers and tub-showers shall have either a pressure balance or a thermostatic mixing valve. (PC408.3)
58. All new, replacement and existing water heaters shall be strapped to the wall in two places. One in the upper 1/3 of the tank and one in the lower 1/3 of the tank. The lower point shall be a minimum of 4-in. above the controls. (PC507.2)
59. Please see additional comments and corrections on the plans and calculations.