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

MULTIFAMILY RESIDENTIAL
PLAN REVIEW LIST

GENERAL PROJECT INFORMATION

PLAN CHECK NO. _____ DISTRICT NO _____ INITIAL VALUATION _____
JOB ADDRESS _____ CITY _____ ZIP _____
OWNER _____ TELEPHONE ( ) _____
ARCHITECT _____ TELEPHONE ( ) _____
ENGINEER _____ TELEPHONE ( ) _____
APPLICANT _____ TELEPHONE ( ) _____
ADDRESS _____ CITY _____ ZIP _____

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:		

FIRE SPRINKLER AND CONSTRUCTION INFORMATION

SPRINKLER USED FOR HEIGHT INCREASE? ☐YES ☐NO
SPRINKLER USED IN LIEU OF ONE-HOUR CONSTRUCTION? ☐YES ☐NO
SPRINKLER USED FOR AREA INCREASE? ☐YES ☐NO
BUILDING FRONTAGE USED FOR AREA INCREASE? ☐YES ☐NO

PLAN CHECK ENGINEER AND CORRECTION INFROMATION

REVIEWED BY _____ DATE _____ TELEPHONE _____
RECHECKED BY _____ DATE _____ TELEPHONE _____
RECHECKED BY _____ DATE _____ TELEPHONE _____
APPROVED BY _____ DATE _____ TELEPHONE _____

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 2026 edition of the County of Los Angeles Building Code (LACBC), Table (T), Existing Building Code (E), Plumbing Code (PC), Mechanical Code (MC), Electrical Code (EC), Fire Code (FC), or Building Code Manual (B.C.M.), 2024 National Design Specifications (NDS), 2022 AWC Special Design Provisions for Wind and Seismic (SDPWS), 2022 Minimum Design Loads and Associated Criteria for Buildings and Other Structures including Supplement No. 1 (ASCE 7), Building Code Requirements and Specification for Masonry Structures (TMS 402-19/TMS 602-22), Building Code Requirements for Structural Concrete (ACI 318-25).
For County of Los Angeles Building Code Amendments and B.C.M.s, visit https://pw.lacounty.gov/building-and-safety/.

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 are made. 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.
- The plan check engineer will be available for conference and telephone calls between the hours of _____and _____on the following days: _____. **Appointments are recommended**.
- Incorporate all comments as marked on checked set of plans and calculations and these correction sheets.

GENERAL REQUIREMENTS

APPLICATION AND PERMIT

1. Application will expire on _____/_____/_____. Permit needs to be obtained prior to expiration date. (106.4.1.1)
2. Valuation is low. It should be $_____. Pay a supplemental plan check fee of $_____ at **the time of re-submittal**. (107.2)
3. A separate application and permit(s) is/are required (106.1)
   a. Demolition work
   b. Grading
   c. Shoring
   d. Retaining walls greater than four 4 feet in height measured from the bottom of the footing to the top of the wall OR supporting a surcharge.
   e. Each separate structure
   f. Fences greater than six (6) feet high.
   g. Concrete or masonry fences of any height that are set back from public ways a distance less than the fence height.
   h. Swimming Pool(s)
   i. Signs
   j. Fire sprinkler system
   k. Bridge
   l. Electrical work
   m. Mechanical work
   n. Plumbing work
   o. Storage Racks
   p. Mechanical Hood
   q. _____
4. Indicate on the plans if the proposed multifamily dwelling is privately funded or public funded.
5. Plans/calculations shall be wet signed and stamped by the licensed engineer or architect-on record (106.4.3)
6. Documents for deferred submittal shall be completely listed on the front page of the submittal package. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by Building and Safety. (107.3.4.1)
7. Provide the following additional plan(s) at the time of re-submittal:
   a. Floor Plan(s)
   b. Framing Plan(s)
   c. Elevation(s)
   d. Structural Detail(s): _____
   e. Section(s): _____
   f. Grading Information
   g. Foundation Plan(s)
   h. Other: _____
8. The permit application must be signed by the property owner, or licensed contractor, or authorized agent at the time the permit is to be issued:
   a. For owner-builder permits: Owners' signature must be verified by notarization or personal identification.
   b. For contractor building permits: Prior to the issuance of a building permit, the contractor shall have the following:
      i. A certificate of workers Compensation Insurance made out to the Contractors State License Board.
      ii. Notarized letter of authorization for agents.
      iii. Copy of Contractors State License or pocket ID.

REFERRALS

ALL AGENCY APPROVALS are required prior to permit issuance. Please see the Agency referral sheet for details. It is necessary to apply immediately for the signoff as it can take months for some agencies to review the project. Comply with all the conditions given by each agency as part of their approval prior to permit issuance.

9. Submit a geology report and soils report to Building and Safety for review. (1803.2)
10. (Soil)(Foundation)(Geology) report(s) must be approved by the Geotechnical & Materials Engineering Division. Provide a copy of approved report and Department approval letter.
11. A Grading Permit may be / is required, and a separate grading permit application may need to be processed. Contact Drainage & Grading Section of Building and Safety Division to determine if a grading permit is required. (Appendix J103)

    A grading permit is required for the following:
    a. All excavations equal to and exceeding 2-ft. in depth (except for footings, basements and retaining walls). Note: the placement of excess material from such excavations may require a grading permit.
    b. All fills:
       i. Intended to support structures.
       ii. That obstructs or diverts a drainage course.
       iii. One foot or more in depth placed on natural slopes steeper than 5 units horizontal to 1 unit vertical.
       iv. 3-ft. or more in depth at its deepest point and greater than 50 cubic yards.
       v. 5-ft. or more in depth at its deepest point and greater than 20 cubic yards.
    c. The grading of access roads or pads for exploratory excavations.
12. Rough grading approval is required before a building permit can be issued. (Appendix J105.7)

SUPPLEMENTAL PLAN REVIEW COMMENTS/SHEETS

13. Refer to the attached sheets for supplemental plan review comments:
    a. 2026 Energy Standards Correction Sheet
    b. Very High Fire Hazard Severity Zone Requirements
    c. Hillside Structures Plan Review (slope > 33.3%)

d. Steel Moment Frame Plan Review
e. Solid Waste Disposal
f. Residential Green Building Standards Code Review
g. Non-residential Plan Review
h. Accessibility Requirements:
    i. General Accessibility
    ii. Multi-Family Residential Accessibility
    iii. Accessible Plumbing Fixtures and Facilities
    iv. Public Housing Residential Facilities
    v. Transient Lodging Guest Rooms
    vi. Elevators and Platforms Lifts

14. Photocopy/blueprint the following on the plans: (Do NOT staple to the plans)
    a. Best Management Practices Construction Activity (Attachment A) Requirements
    b. Security Requirements
    c. Structural Observation Program

ZONING

15. Submit a copy of the approved Conditional Use Permit (CUP) or Department of Regional Planning approved plot plan to Building and Safety Division. Show compliance with all applicable conditions on the approved zoning plans.
16. Clearly show on the plot plan a paved parking area and driveway of 3-1/2 in. of concrete or 1-1/2 in. of asphalt on a 4" decomposed granite base minimum.
17. Private multifamily development projects with 30 units or more of any type, or with a building valuation of greater than $903,902, are required to fund one percent of the total building valuation towards public art, except for:
    a. Repair intended to upgrade an existing multifamily building or structure that does not change the use or type of such building or structure and does not alter the size or occupancy load of the building or structure.
    b. Repair or alterations of an existing multifamily building, including replacement of on-site Public Art, that has been partially or destroyed by a fire or natural disaster up to the original building valuation.

    (Section 22.246.090 Title 22)

SITE PLAN

18. The address of the building, and the name and address of the owner(s), and person(s) preparing the plans are required on the first sheet of the plans. (106.4.3)
19. Provide a fully dimensioned site plan showing:
    a. Legal descriptions; property line boundaries; lot dimensions; setbacks; location of all easements; street names, width, and centerline; highway dedication lines; alley locations/sizes; city/county boundary line, zoning boundaries; centerlines; construction work areas; north arrow; and scale.
    b. Location and distance of active, abandoned, and/or idle oil or gas wells with respect to the building perimeter. Any wells within 300-ft. of the structure must have a report and plans prepared by a registered design professional approved by County of Los Angeles Department of Public Works Environmental Program Division. (110.4)
    c. Location of tanks and sewers, existing cesspools, septic tanks, and sewage disposal systems. 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 T-H1.7)
    d. Proposed and/or existing building(s) complete with their: areas, occupancy group(s), use(s), type(s) of construction, proposed number of stories, fire zone or fire sprinklers, distance(s) between buildings, occupancy separation, occupancy separation wall(s) or fire walls(s), area justification, building/house number(s), parking layouts(s), primary entrance(s); and path-of-travel from accessible parking areas, or public right-of-way, parking areas and/or new/existing accessible parking areas or electric vehicle charge stations;
    e. Fire separation distance to the interior lot line, centerline of the street, or to an imaginary line between two buildings on the property (Fire separation distance shall be measured at right angles from the face of the wall.).
    f. Storm drains, underground utilities, oak trees, other landscapes, and overhead power lines or canopies, or other existing conditions, in the way of, or limits, construction.
    g. Natural and finish grade elevations around the perimeter of the building. (106.4.3)
20. Show on site plans for the finish floor, finish surface, top of wall, and grade elevations, including contours and general drainage patterns. (106.4.3, 1804.4)
21. Add note: *Construction in the Public Right of Way and projection beyond the property lines or into the alleys shall comply with County of Los Angeles Building Code Chapter 32.*
22. Buildings adjacent to ascending or descending slopes shall maintain setbacks according to the requirements of Section 1808.7.
23. Provide temporary shoring plans for excavations that remove the lateral support from a public way or an existing building structure. Excavations adjacent to a public way require Public Works approval prior to issuance of a building permit. (3307)
24. Submit complete shoring plans for subterranean excavations or provide a plan view and sections views showing temporary excavation slopes. (3304)
25. This site appears to contain high ground water, which must be lowered prior to construction. Provide plans showing the location of the proposed dewatering wells. (3303.5)

26. Adjoining public and private property shall be protected from damage during construction, remodeling, and demolition work. When there is an excavation of a greater depth than are the walls or foundation of an adjoining building or structure and located closer to the property line than the depth of the excavation, the owner shall provide the building inspector and adjoining property owner a 30-day written notice of such intent to make an excavation. This notice shall state the depth of such excavation and when it will commence. Provisions shall be made to control water runoff and erosion during construction or demolition activities. (CA Civil Code Section 832, 3307.1)
27. Add the following circled items as notes on the plans:
    a. *Pedestrians shall be protected during construction, remodeling and demolition activities as required by County of Los Angeles Building Code Chapter 33.* (3306)
    b. *The construction shall not restrict a five-foot clear and unobstructed access to any water or power distribution facilities (power poles, pull-boxes, transformers, vaults, pumps, valves, meters, appurtenances, etc.) or to location of the hook-up. The construction shall not be within ten feet of any power lines whether or not, the lines are located on the property. Failure to comply may cause construction delays and/or additional expenses.*
    c. *Provide ultra-low flush water closets for all new construction.*
    d. *A copy of the evaluation report and/or existing conditions shall be made available at the job site.*

CHAPTER 3 USE AND OCCUPANCY

USE AND OCCUPANCY

28. Specify area size/dimensions, number of stories, occupancy type, maximum occupancy number per area, fire separation walls, demolished or newly constructed, work site boundaries, and/or use of all rooms/areas on the proposed floor plan(s). Note that vent shafts and courts do not count as areas. Mezzanine floor area must be included in the story in which it is located. A single basement that is not a story above grade plane need not be included in the total allowable area provided such basement does not exceed the area permitted for a building with no more than one story above grade plane. Provide an area breakdown by level/stories.
29. The occupancy group specified for one or more areas within the building is incorrect. See plan check comment on sheet(s) _____. .
30. One or more occupancies have been incorrectly categorized. Change occupancy designation as identified below:
    a. Group A-1 - Theaters and assembly spaces for viewing performances.
    b. Group A-2 - Restaurants, bars, eating and drinking establishments with ≥ 50 occupants.
    c. Group A-3 - Halls or rooms used for worship or recreation.
    d. Group A-4 - Spaces intended for viewing indoor sporting events and activities.
    e. Group A-5 - Spaces used for participation or viewing outdoor activities.
    f. Group B - Business type uses, assembly areas with < 50 occupants, outpatient clinics not classified as Group I-2.1
    g. Group E – Areas used for childcare if more than six children ages 36 months or more, or those used for educational purposes through 12th grade.
    h. Group I – Areas that provide custodial care and supervision to persons who are incapable of self-preservation without physical assistance such as day care facilities for non-ambulatory persons.
    i. Group M – Mercantile/retail
    j. Group R-1 – Boarding houses, congregate housing with more than 10 occupants, Hotels, and motels (transient) with < 30 days stay, permanent support housing.
    k. Group R-2 - Apartments, dormitories, boarding houses (non-transient), extended-stay hotels with ≥ 30 day stay.
    l. Group R-3 - for townhouses not more than 3 stories above grade in height with a separate means of egress for each unit
    m. Group R-4 Space for more than six ambulatory patients but no more than 16 persons, excluding staff, who reside on a 24-hour basis such as assisted living facilities, halfway homes, and community treatment programs.
    n. Group S-1 - Moderate hazard storage
    o. Group S-2 - Low hazard storage and parking garages
    p. Group U - Utility and miscellaneous structures such as bars, carports, private garage

CHAPTER 4
SPECIAL DETAILED REQUIREMENTS

GROUP R USES

31. This structure has an Atrium(s). Show that the requirements of Section 404 are satisfied. (404.1- 12)
32. An automatic sprinkler system shall be provided in accordance with Section 903.2.8. (420.4)
33. Group R-1 and R-2 dwelling requirements shall comply with Section 420:
    a. Vertical assemblies separating dwelling units in the same building, sleeping units in the same building, and vertical assemblies separating dwelling or sleeping units from other occupancies in the same building shall be 1- hr. rated fire partitions, except for corridor walls permitted to have a ½-hr fire resistance rating by Table 1020.2, and fully sprinklered Type IIB, IIIB or VB buildings which may be reduced to 1/2-hr. fire partitions equipped throughout with an automatic sprinkler system per Section 903.3.1.1. (708.3)

b. Horizontal assemblies separating dwelling units in the same building, sleeping units in the same building, and horizontal assemblies separating dwelling or sleeping units from other occupancies in the same building shall be 1-hr. rated horizontal assemblies, except for fully sprinklered Type IIB, IIIB, or VB buildings which may be reduced to 1/2-hr. horizontal assemblies. (711.2.4.3)

34. Show location(s) of interconnected hard-wired smoke alarms with battery backup in the following: (907.2.11)
    a. Group R-1:
        i. In sleeping areas.
        ii. In every room in the path of egress from the sleeping area to the door leading from the sleeping unit.
        iii. In each story within the sleeping unit, including basements.
    b. Groups R-2, R-2.1 R-3, R-3.1 and R-4:
        i. Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
        ii. In each room used for sleeping purposes.
        iii. In each story within a dwelling unit, including basements.
    c. In Group R-3.1, in addition to the above, throughout the habitable areas of the dwelling unit except kitchens.
    d. Provide a note: “Smoke alarm shall be interconnected hard-wired with battery backup and shall be installed in accordance with NFPA 72.”
35. For buildings with fuel-burning appliances and/or attached garages, provide an approved carbon monoxide alarm at: (915.2)
    a. Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
    b. On every level of a dwelling unit including basements.
    c. In Group R-1, in addition to the above, on the ceiling of sleeping units or other locations within the sleeping unit in compliance with the manufacturer’s installation instructions.
    d. Provide a note: “CARBON MONOXIDE ALARM shall be interconnected hard-wired with battery backup. Unit shall be SFM-approved.”
    e. Battery carbon monoxide alarms are permitted in existing dwelling units where no construction is taking place.
    f. In covered multifamily dwellings as defined in Chapter 11A, all required carbon monoxide alarms shall be capable of supporting visible alarm notification appliances per NFPA 720.

A-3 Occupancy

36. A manual fire alarm system shall be installed in Group A occupancies having an occupant load of 300 or more. *See exceptions.* (907.2.1)
37. Provide illumination in accordance with Section 1204.
38. The common path of egress travel for a room or space used for assembly purposes having fixed seating shall not exceed 30-ft. from any seat to a point where an occupant has a choice of two paths of egress travel to two exits. *Exception:* 1) For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet. 2) For smoke-protected open-air assembly seating, the common path of egress travel shall not exceed 50 feet. (1030.8)
39. Provide two (2) exits from assembly rooms separated by (1/2) / (1/3 – for fire sprinklered) the overall diagonal distance when the occupant load exceeds 49. (1007.1.1, T-1006.3.4(2))
40. Three exits or exit access doorways shall be provided from any space with an occupant load of 501-1,000. Four exits or exit access doorways shall be provided from any space with an occupancy load greater than 1,000. (T-1006.3.3)
41. Show that the exit hardware in the doors from the room and building satisfy Section 1010.2.2 to 1010.2.4.
42. Provide automatic sprinkler system where any of the following occur: (903.2.1.3)
    a. The fire area exceeds 12,000 sq. ft.
    b. The occupant load exceeds 300 or more.
    c. The fire area is located on a floor other than the level of exit discharge serving such occupancies.
    d. The structure exceeds 12,000 square feet, contains more than one fire area containing exhibition and display rooms, and is separated into two or more buildings by fire walls of not less than 4-hour fire-resistance ratings without openings.

OTHER USES AND OCCUPANCIES

43. Group U occupancies storing private or pleasure-type motor vehicles shall not exceed 1000 sq. ft. or one-story in height. Multiple private garages are permitted in a building where each private garage is separated from the other private garage by 1-hour fire barriers in accordance with Section 707, or 1-hour assemblies in accordance with Section 711 or both. (406.3.1)
44. Carports with habitable space above and attached garages, accessory to Group R-3 occupancies, shall be protected by residential fire sprinklers. Fire sprinklers shall comply Section R313 of the California Residential Code or with NFPD 13D. Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have automatic fire sprinklers. (903.2.18)
45. For Group S-2 occupancy, the wall fire-resistance rating shall be _____hr. and opening protection shall be (3/4-hr.) / (1-1/2-hr.) based on fire separation distance of _____ft. (T-601, T-716.1(2))

46. Group S-2 occupancy shall be separated from _____ occupancy(s) with a separation of _____hr., fire doors of _____hr., and glazing of _____hr. Separation shall be fire barriers and/or horizontal assemblies. Provide construction details. (508.4, T-508.4)
47. For Group S-2 occupancies, a mechanical ventilation system shall be provided in accordance with the County of Los Angeles Mechanical Code. Where a mechanical system is used, provide plans, and show how and where it exhausts outside. Submit to the Mechanical Section for plan check. Approval is required prior to permit issuance. (406.6.2)
48. In Group S-2 parking garages with an area used for charging electric vehicles, ventilation shall be provided in accordance with County of Los Angeles Electrical and Mechanical Code. Please submit it to the Electrical and Mechanical Section for compliance. (406.9.3)
49. This occupancy requires an automatic fire sprinkler system when the following condition exists:
    a. The fire area exceeds 12,000 sq. ft.
    b. The enclosed parking garage area is located beneath other group, except for enclosed parking garages beneath R-3 occupancies.
    c. Fire area of the open parking garage exceeds 48,000 square feet. (903.2.10)
50. Motor-vehicle-related occupancies shall comply with Section 406. Provide/show the following:
    a. Minimum headroom of 7-ft. 0-in., except as required per accessible requirements. (406.2.2)
    b. Guards in accordance with Section 1015, where the vertical distance to the ground or surface directly below exceeds 30-in. (406.4.2)
    c. 2-ft. 9-in high vehicle barriers designed in accordance with Section 1607.11 where the difference in adjacent floor elevation is greater than 1-ft. (406.4.2)
    d. Vehicle ramps may not serve as exits. (406.4.3)
    e. Vehicle ramps as well as parking shall not exceed a slope of 1:15 (6.67%). (406.4.3)
    f. Open parking garages shall meet means of egress requirements of Chapter 10. Where only parking attendants are permitted, there shall not be fewer than two exit stairways. Each exit stairway shall be not less than 36 inches in width. Lifts shall be permitted for us of employees only, provided that they are completely enclosed with noncombustible materials. (406.5.7)
    g. Parking surfaces shall be of concrete or similar noncombustible and non-absorbent materials. Asphalt is only permitted at ground level. (406.2.4)
    h. A floor system adequate to support a wheel load of 3,000 lbs. or greater. (T-1607.1 & 1607.7)
51. Underground buildings having a floor level used for human occupancy more than 30-ft. below the lowest level of exit discharge shall comply with Section 405. *Except*: 1) Parking garages provided with automatic sprinklers in compliance with Section 405.3, and 2) where the lowest story is the only story that would qualify the building as an underground building and has an area of not greater than 1,500 square feet and has an occupant load of less than 10. 3) Pumping stations or other similar mechanical stations intended only for limited periodic use by service or maintenance personnel.

CHAPTER 5
GENERAL BUILDING HEIGHTS AND AREAS

HEIGHTS AND AREAS

52. Show maximum height of the structure on all elevation views and cross sections. (T-504.4)
53. Clearly show if the lower level is a basement as defined in 202 or a story above grade plane as defined in 202.
54. Identify “Grade Plane” elevation for this project. Show the grade plane reference datum on all elevation and section drawings.
55. Revise allowable area calculations to comply with Section 506 for:
    a. Allowable area for a single-occupancy building (506.2.1)
    b. Allowable area for a mixed occupancy building (506.2.2)
    c. Clearly identify whether accessories, separated, or nonseparated methods are used per Section 508.
56. Occupied roof is permitted provided that the occupancy of the roof follows Table 504.4 for the story immediately below the roof except for buildings equipped with fire sprinklers per 903.3.1.1 or 903.3.1.2 or occupancy notification per 907.5.2.1 and 907.5.2.3 or open parking space of Type I or II construction. Enclosure over occupied roof areas shall not extend to more than 48-inches except for penthouses, tower, domes, spires, and cupolas and elements or structures enclosing occupiable roof areas where the deck is located more than 75 feet above the lowest level of fire department vehicle access. (503.1.4)
57. Two or more buildings on the same lot shall be regulated as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of buildings are within the limitations of Table 503 as modified by Sections 504 and 506. (503.1.2)
58. Where a building has more than 25% of its perimeter on a public way or open space having a minimum width of 20-ft., the frontage increase shall be determined in accordance with Section 506.3. Complete and return the attached yard letter as part of the area modification if needed. (506.3.1)

59. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.3.1.3, the area limitation shall be determined by Table 506.2. (506.2)

60. For high-rise buildings, Group A, E, H, I, L, and R occupancies, the allowable area increase due to the installation of an automatic sprinkler system is NOT allowed in addition to the height and story increases allowed per Table 506.2, footnote j. (T-506.2)

61. The area factor increases based on the frontage shall be determined in accordance with Table 506.3.3. Where a building meeting requirement of Section 507, as applicable, except for compliance with the minimum 60-foot (18, 288 mm) public way or yard requirement, the area of factor increase based on the frontage shall be determined in accordance with Table 506.3.3.1. The frontage increase shall be based on the smallest public way or open space that is 30 feet (9144 mm) or greater, and the percentage of building perimeter having a minimum of 30 feet (9144 mm) public way or open space. (506.3.31 Section 507 buildings)

62. For Group R-2 buildings of Type VA construction, the sprinklered building height increase for height shall not exceed 4 stories or 60-ft. These increases are permitted in addition to the area increase per Section 506.3. (T504.3, Footnote O)

63. The yard at _____ is not accessible. It may not be used when calculating the area increase factor due to frontage. (506.3.2)

MIXED OCCUPANCY

64. The building as shown is a mixed-occupancy building. The building or portion thereof shall comply with Sections 508.2 for accessory occupancies, 508.3 for nonseparated occupancies, or 508.4 for separated occupancies or a combination of these sections. (508)

65. Justify the allowable area per story, total building area, and height for mixed occupancies separated in accordance with Section 508.4. (506.2.2)
    a. In each story, the sum of the ratios of the actual area for each separated occupancy divided by the allowable area per story for each occupancy must not exceed one. (508.4.2)
    b. For buildings with more than two stories above the grade of plane, the total building area shall be the aggregate the sum of the ratios of the actual area of such stories, as determined by *Equation 5-3* based on the applicable provisions of Section 508.1 (Mixed Use and Occupancy), shall not exceed three, provided the aggregate sum of the ratios for portions of mixed-occupancy multistory buildings containing A, E, I, L and R occupancies, high-rise, and other applications as listed in Section 1.11 regulated by the Office of the State Fire Marshall, including any other associated non-separated occupancies, shall not exceed two. (506.2.2)

66. For mixed occupancies separated in accordance with 508.4, a complete separation is required between Group _____ and Group _____ Occupancies. Separation shall be fire barriers and/or horizontal assemblies, to separate the occupancies. Provide construction details. (508.4.4.1, T-508.4)

67. Incidental accessory occupancies shall be separated or equipped with an automatic sprinkler system, or both, in accordance with Table 509.1. Separation shall be fire barriers and/or horizontal assemblies, to separate the occupancies. Provide construction details. Exception: The thermal barrier shall not be required on top of horizontal assemblies serving as incidental use separations for Type IV-B and Type IV-C construction. (509.4, T-509.1)

CHAPTER 6
TYPES OF CONSTRUCTION

68. This structure is of Type (_____) construction. Show on the plans the required: (T601)
    a. (_____) rated roof.
    b. (_____) rated exterior wall construction.
    c. (_____) structural frame protection, and
    d. (_____) floor construction.

69. Exterior ___ (bearing) ____ (nonbearing) must be (____) hour rated construction. (T601)

70. Exterior walls shall have a fire-resistance rating not less than that specified in Table 601 and 602. Provide details of its construction. (602.1, 705.5)

71. This building is of Type IA construction and requires special fire and life safety features. Provide complete plans and specs. (602-603)

CHAPTER 7 FIRE-RESISTANCE-RATED CONSTRUCTION

EXTERIOR WALLS

72. For the purpose of determining the required wall and opening protection and roof covering requirements, buildings on the same lot shall be assumed to have an imaginary line between them. The imaginary line must be shown clearly on the plot plan. (705.3)

73. Projections beyond the exterior wall shall not extend any closer to the line used to determine the fire separation distance than shown in T-705.2. (Clearly show on elevations/cross section.) (705.2)

74. No openings are permitted in any exterior wall located within _____ feet of the property line. (T-705.9)

75. The maximum area of unprotected, or protected, opening permitted in an exterior wall in any story shall not exceed the values set forth in Table 705.9. Where both unprotected and protected openings are permitted, the total area shall be determined by Equation 7-2. (705.9.4, T-705.9)

76. Openings in fire rated exterior walls are required to have fire protection ratings of (3/4) / (1-1/2) hr. assemblies. (705.9.2, T-716.1 (2)). Exception: Opening protectives are not required when the building is equipped with an automatic sprinkler system and/or water curtain for automatic sprinkler system in accordance with Section 903.3.1.1.

77. Provide minimum 30-in. high parapet at _____ wall(s). (705.12)

78. Openings in a fire barrier shall be protected in accordance with Section 716, limited to a maximum aggregate width of 25% and no opening shall exceed 156 sq. ft. Openings in enclosure for shafts, interior exit stairways and ramps, and exit passageways shall also comply with Section 713.7, 1019, 1023.4, and 1024.5, respectively. See *Exceptions*. (707.6)

INTERIOR WALLS

79. Provide a wall schedule and differentiate between fire walls / fire barriers / fire partitions / party walls / fire areas / smoke barriers / smoke partitions. Provide complete legends and details. Fire rated assemblies shall be per Table 721.1(1), generic assemblies of Gypsum Handbook, or have LARR approval or ICC approval. (Ch. 7)

80. Each portion of a building separated by fire walls that comply with Section 706 may be considered a separate building. Fire walls should not be considered to create separate buildings for the purpose of automatic fire sprinkler system requirements as set forth in Chapter 9. Fire walls are designed and in accordance with NFPA 221. The required fire-resistance rating shall be determined by Section 706.4. (706.1)

81. Provide details to show that Fire Wall complies with Section 706 including but not limited to:
    a. Detail how the firewall(s) has(have) sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall. (706.2)
    b. Extend vertically from the foundation to a point 30 inches above both adjacent roofs. *See exceptions.* (706.6)
    c. Fire walls to be continuous from exterior wall to exterior wall, plus at least 18-in. beyond exterior surface of exterior walls. *See exceptions.* (706.5)
    d. Total width of all openings is limited to 25% of the wall length in each story. (706.8)
    e. Each opening through a firewall shall be protected in accordance with Section 716.5 and shall not exceed 156 sq. ft. The aggregate width of openings at any floor level shall not exceed 25 percent of the length of the wall. *See exceptions.* (706.8)
    f. Combustible framing in fire walls shall be clearly detailed and meet the requirements of Section 706.7.
    g. Ducts and air transfer openings shall not penetrate fire walls. *See exceptions.* (706.11)

82. A complete (____)-hour separation is required between Group (___) and Group (___) Occupancies. Separation walls must provide fire barriers complying with Section 707. Horizontal assemblies shall comply with Section 711. Openings in the separation wall shall have (___) hour fire assemblies. (508.4.4, T 508.4, 707, 711)

83. Fire barrier at vertical occupancy separations must have continuity and must extend through underfloor area, attic areas, and suspended ceiling areas. Joints and voids at intersections shall comply with Section 707.8 and 707.9. *See exceptions.* (707.5)

84. The building as shown contains party walls. A party wall shall be constructed as a fire wall in accordance with Section 706 without opening. (706.1.1)

85. Note on plans: Fire blocking must be provided in accordance with Section 718.2 at the following locations:
    a. In concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor levels.
    b. In concealed spaces of stud walls and partitions, including furred spaces, at 10-foot intervals along the length of the wall.
    c. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings.
    d. In concealed spaces between stair stringers at the top and bottom of the run and between studs along and in line with the run of stairs if the wall under the stairs is unfinished.
    e. In openings around vents, pipes, ducts, chimneys, fireplaces, and similar openings which afford a passage for fire at ceiling and floor levels, with noncombustible materials.

86. Show draft stop location on plans. Also, provide these notes on the plans:
    a. In buildings used for other than residential occupancies, draft stops must be installed in wood frame floor construction containing concealed space. Such draft stops must be installed so that the area of the concealed space does not exceed 1,000 square feet. (718.3)
    b. In buildings used for other than residential occupancies, draft stops must be installed in the attic (mansards) (overhangs) (false fronts set out from walls) (similar concealed spaces) formed by combustible construction. Such draft stops must be installed so that the area of the concealed space does not exceed 3000 square feet. (718.4)
    c. Draft-stopping materials must not be less than 1/2-inch gypsum board, 3/8-inch plywood, 3/8-inch particle board or other materials approved by the building department. Draft-stopping must be adequately supported. (718.3.1)
    d. Openings in the partitions shall be protected by self-closing doors with automatic latches constructed as required for the partitions. (718.4.1.1)

87. Envelope ceilings cannot be used to provide fire protection for members of the primary structural frame supporting more than two floors or one floor and roof or supporting a load-bearing wall or a nonbearing wall more than two stories high. (704.3)

88. Columns must be individually fire protected. (704.2)

89. Where the fire protective covering of a structural member is subject to impact damage from moving vehicles, the handling of merchandise or other activity, the fire protective covering shall be protected by corner guards or by a substantial jacket of metal or other noncombustible material to a height adequate to provide full protection, but not less than 5-ft. from the finished floor. (704.9)

90. Combustible members framed into hollow fire- walls or fire walls of hollow units, hollow spaces shall be solidly filled for the full thickness of the wall and for a distance not less than 4-in. above, below and between the structural members, with noncombustible materials approved for fireblocking. (706.7)

91. Penetrations in fire-resistance-rated walls shall comply with Section 714.4.1 through 714.4.3. Through penetrations shall comply with Section 714.4.1.1 or 714.4.1.2, or as noted below:

    a. Steel, ferrous or copper pipes may penetrate fire-resistance-rated walls, provided the opening is protected as follows: (714.4.1 Exceptions)

        i. Items penetrating concrete or masonry walls are a maximum 6-in. nominal diameter and the area of the opening through the wall does not exceed 144 sq. in., concrete, grout, or mortar is permitted where the full thickness of the wall, or the thickness required to maintain the fire-resistance rating; or

        ii. When the annular space is protected with material that meets ASTM E119 or UL 263.

    b. Penetrations shall be fire-stopped by a system installed as tested in accordance with ASTM E814 or UL 1479 and shall have an F rating of not less than the required fire-resistance-rating of the wall penetrated. (714.4.1.2)

    c. Membrane penetrations of maximum two-hour fire-resistance-rated walls by steel electrical boxes are permitted, if each does not exceed 16 sq. in. in area and the total area of such openings does not exceed 100 sq. in. for any 100 sq. ft. of wall area, and the space between the wall membrane and the box does not exceed 1/8-in. Additionally, outlet boxes on opposite sides of the wall shall be separated by a horizontal distance of not less than 24-in. (714.4.2 Ex. 1)

    d. Membrane penetrations by listed electrical boxes of any material are permitted provided such boxes have been tested for use in fire-resistance-rated assemblies, and the space between the wall membrane and the box does not exceed 1/8-in. unless listed otherwise. Additionally, outlet boxes on opposite sides of the wall shall be separated by the horizontal distance specified in the listing of the boxes. (714.4.2 Ex. 2)

    e. A fire sprinkler shall be permitted to be unprotected provided such space is covered by a metal escutcheon plate. (714.4.2 Ex. 5)

    f. Where walls are penetrated by other materials or openings larger than those mentioned above, they must be qualified by tests in accordance with Section 703.2.

92. Note on the plans. *Materials exposed within ducts or plenums shall be noncombustible or shall have a flame spread index not to exceed 25, and a smoke developed index not to exceed 50.* (MC 602.2)

93. Concealed building spaces or independent construction within buildings shall be permitted to be used as duct or plenums. Gypsum boards shall not be used for positive pressure ducts. In health care facilities, concealed spaces shall not be permitted as ducts or plenums. (MC 602.1)

94. No mechanical duct penetrations are permitted (except for those independent systems serving the interior exit stairway or ramp) through walls or ceilings.

95. Fire dampers are required at duct and air transfer openings that penetrate fire walls, fire barriers, fire partitions, shaft enclosures, corridors. Show all dampers and their required ratings on the mechanical plan. (714.3) (T-717.3.2.1, 717.5)

96. Smoke dampers to be installed at penetrations in the following locations: (717.5)

    a. Corridors.
    b. Smoke barriers.
    c. Fire walls or fire barriers serving as a horizontal exit.
    d. Smoke partition.

97. Fire dampers to be installed at penetrations in the following locations: (717.5)

    a. Fire walls.
    b. Fire barriers in other than high-rise buildings, Group A, E, H, I, L and R occupancies.
    c. Fire partitions.
    d. Exterior walls require protected openings.

98. Combination fire and smoke dampers to be installed at penetrations in the following locations: (717.5)

    a. Fire barriers in high-rise buildings, Group A, E, H, I, L and R occupancies.
    b. Shaft enclosures.

99. Provide wall construction and opening protection details for shaft enclosures showing appropriate fire-resistive ratings. (713.1,713.4, T-716.1(1), T-716.1(2))

CHAPTER 8
INTERIOR FINISHES

INTERIOR FINISHES

100. Indicate on plans that interior finish materials applied to walls and ceilings shall be tested as specified in Section 803.1.3. Specify the classification per Table 803.13 and Section 803.3. In addition, provide details showing application in accordance with Section 803.1 and Table 803.13. Clearly indicate on the plans.
101. The flame-spread rating of paneling materials on the walls of the corridor, lobby, and exit enclosure must be identified on the plans (T-803.13)
102. Provide a door and window schedule. Show each type and size.
103. Detail on the plans the suspended ceiling system that conforms to the requirements of the attached sheet.
104. If existing restroom(s) are accessible, specify on the plan. If not, provide complete details on how to comply with accessibility requirements. (11B-202.2,11B-202.3)
105. All shower compartments, regardless of shape, shall have a minimum finished interior area of not less than 1024 sq. in. and shall be capable of encompassing a 30-in. circle. The minimum area and dimensions shall be maintained to a point 70-in. above the shower drain outlet. Shower doors shall open to maintain a minimum 22-in. unobstructed opening for egress. (PC 408.5, PC 408.6)

CHAPTER 9
FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM

106. Fire barriers used to create separate fire areas shall have a fire-resistance rating in accordance with Section 707.3.10. (901.7)
107. An automatic sprinkler system is required throughout all buildings with a Group R fire area. Note on plans: "This building must be equipped with an automatic fire extinguishing system complying with (NFPA 13) / (NFPA 13R) / (NFPA 13D). The sprinkler system shall be approved prior to installation." (903.2.8, 903.3.1)
108. Note on plans: "*This building must be equipped with an automatic fire extinguishing system."* (903.1.1)
109. An approved automatic sprinkler system is required throughout the (entire building) / (fire area) where the (building) / (fire area) contains any of the following: (903.2):
    a. Group ____occupancy.
    b. The fire area exceeds _____sq. ft.
    c. The fire area has an occupant load of _____
    d. _____
110. An automatic sprinkler system shall be installed in all stories, including basements, where the floor area exceeds 1,500 sq. ft. and where exterior wall openings in accordance with Section 903.2.11.1 is not provided on at least one side.
111. Sprinkler heads are required in rubbish and linen chutes and in their terminal room. Chute sprinklers shall be accessible for servicing. Provide a section view through the shaft. (903.2.11.2)
112. Each building shall be provided with sanitary facilities. The required number of fixtures shall comply with Table 422.1 of the Plumbing Code. See BCM.
113. Show the locations on the plans of Class I, II, or III standpipe (dry, wet, combination) where required in this building. (905)
114. Specify total occupant load on plans as determined by Table 422.1 of the Plumbing Code. The number of plumbing fixtures provided is insufficient. Per Table 422.1, provide min. _____wc's, lavatories and urinals for men, and _____wc's and lavatories for women, and _____drinking fountains. (PC 422.0)

CHAPTER 10 MEANS OF EGRESS

EXITS

115. Provide a floor plan of the entire work area that shows the exiting pattern. Clearly label the required egress with all required egress features such as but not limited to, common path of egress travel, required number of exits, occupant load, required width, continuity, and travel distance. (1001.1)
116. Altering a building or structure in a manner that will reduce the number of exits or the minimum width or required capacity of the means of egress to less than required by this code in not allowable. (1001.2)
117. The gross/net floor area is to be used in the occupant load calculation per Table 1004.5. Tabulate the occupancy group(s) and load(s) for area(s) under consideration on the front sheet of the plans.
118. Where the path of egress travel includes intervening rooms, areas, or spaces, occupant loads shall be determined in accordance with Section 1004.2. The design of the egress path capacity for spaces with intervening, accessory areas, or adjacent mezzanine levels, shall be the combined occupant loads of all rooms and spaces along the path of travel. Other than egress designed for convergence per Section 1005.6, occupant load for separate stories shall not be combined. (1004.2)
119. The occupant load for an area with multiple functions shall be calculated per floor area of each function. A building with multiple occupancies shall have means of egress requirements apply to each portion of the building based on occupancy. Whereas multiple occupancies that utilize the same means of egress, the most stringent requirements shall apply. (1004.3, 1004.4)

120. The means of egress shall have a ceiling height of not less than 7-ft. 6-in. Protruding objects may not reduce the headroom below 80-in. above any walking surface and no more than 50% of the ceiling area of a means of egress may be reduced. (1003.3, 1003.3.1)

121. Structural elements, fixtures, or furnishings shall not project horizontally from either side, more than 4-in. over any walking surface between the heights of 27-in. and 80-in above the walking surface. *Exception:* Handrails serving stairs and ramps are permitted to protrude 4.5-in. from the wall. (1003.3.3)

122. Where elevation changes of less than 12-in. occur along the means of egress, sloped surfaces shall be used. Where the slope is greater than 1:20 (5%), ramps complying with Section 1010 shall be used. Where the difference in elevation is 6-in. or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finishes. See exceptions. (1003.5)

123. The path of egress travel along a means of egress shall not be interrupted by any building element other than a means of egress component as specified in Chapter 10. The required capacity of a means of egress system shall not be diminished along the path of egress travel. (1003.6)

124. Elevators, escalators, and moving walks shall not be used as a required means of egress component. (1003.7)

125. For areas having fixed seats and aisles, the occupant load shall be determined by the number of fixed seats installed therein. The occupant load for areas in which fixed seating is not installed, such as waiting spaces and wheelchair spaces, shall be determined in accordance with Section 1004.5 and added to the number of fixed seats. (1004.6)

126. For areas having fixed seating without dividing arms, the occupant load shall not be less than one person for each 18-in. of seating length. The occupant load of seating booths shall be based on one person for each 24-in of booth seat length measured at the backrest of the seating booth. (1004.6)

127. Yards, patios, courts, and similar outdoor areas accessible to and useable by the building occupants shall be provided with means of egress as required by Chapter 10. Where outdoor areas are used by people in addition to the occupants of the building, and the path of egress travel from the outdoor areas passes through the building, the means of egress requirements for the building shall be based on the sum of the occupant loads of the building plus the outdoor areas. *See exceptions.* (1004.7)

128. Every room or space which is used for assembly, classroom, dining, drinking, or similar purposes having an occupant load of 50 or more shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or authorized agent. (1004.9)

129. The total width of means of egress in inches shall not be less than the total occupant load served by the means of egress multiplied by 0.3 inches per occupant for stairways and by 0.2 inches per occupant for other egress components. The width shall not be less than specified elsewhere in this code. Multiple means of egress shall be sized such that the loss of any means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. (1005.3.1,1005.3.2, & 1005.5)

130. Where means of egress from an upper floor and a lower floor converge at an intermediate floor, the width of the exit from the intermediate floor shall be based on the sum of the occupant loads of such upper and lower floors. (1005.6)

131. Two exits are required from each space or story. (T-1006.2.1,1006.2.2, T-1006.3.3(1), T-1006.3.4(1), T-1006.3.4(2), T-1017.2)
    a. Occupant load > 49, (A, B, E, F, M, U)
    b. Occupant load > 10, (R)
    c. Occupant load > 29, (S)
    d. Common path of egress > 75 ft.
    e. Common path of egress > 100 ft. (B, F, S) sprinklered building
    f. Areas specified by Section 1006.2.2.1, 1006.2.2.2, and/or 1006.2.2.3.
    g. Stories exceeding the values specified in T-1006.3.4(1) and T-1006.3.4(2).
    h. Building with occupancy type and exit travel distance exceeding the maximums in T-1017.2.

132. Based on the occupant load, travel distance, use, and/or number of stories provide _____ exits from _____ room located on the _____ floor. (T-1006.3.3, T-1006.3.4(1), T-1006.3.4(2))

133. Where two or more exits or exit-access doorways are required, at least two must have a minimum separation of one-half of the overall maximum diagonal dimension of the building or area served measured in a straight line between the exit doors or exit access doorways. Interlocking or scissor stairways shall be counted as one exit stairway. Two exits separated by ____ feet at the floor and/or roof are required. (1007.1.1)

134. Where two exit access stairways or ramps provide the required means of egress to exits at another story, the required separation distance as required by Section 1007.1.1 shall be maintained for all portions of such exit access stairways or ramps. (1007.1.3)

135. This structure has ramps. Provide enough detail to show that the width, slope, landings, and handrails satisfy the requirements of Section 1012. Ramps required for the physically disabled must be min. 4-ft. wide. (1012,11B-405)

136. Egress shall not pass through kitchens, storage rooms, closets, and similar spaces. (1016.2)

137. Egress from a room or space shall not pass through adjoining or intervening rooms or areas which are not accessory to the area served or which are high-hazard occupancy areas. (1016.2)

138. Plans as shown exceed allowable travel distance per Table 1017.2. Justify and detail per Section 1017.

139. The number of exits required from any story, basement, or individual space shall be maintained until arrival at grade or the public way. (1023.3)

CORRIDORS

140. Corridors shall be fire-resistance rated as required by Table 1020.1. Provide referenced sections and details at all corridors. (1020.2)

141. Corridor width shall not be as required by Table 1020.3.

142. Dead end corridors and egress balconies are limited to 20-ft. in length where more than one exit or exit access doorway is required. (1020.5, 1021.1)

143. Fire-resistance rated corridors shall be continuous from the point of entry to an exit and shall not be interrupted by intervening rooms. (1020.7)

DOORS

144. Doors shall swing in the direction of egress travel serving an occupant load of 50 or more persons or a Group H occupancy. (1010.1.2.1)

145. Egress doors or gates shall be openable from the egress side without the use of a key, special knowledge, or effort. Door handles, pulls, latches, locks, and other operating devices shall be installed 34 to 48 inches above the finished floor. Manually operated flush bolts or surface bolts are not permitted. The unlatching of any door or leaf shall not require more than one operation. (1010.2)

146. Where key-operated locking devices are used, post a sign on or adjacent to the required main exit door with 1-in. lettering stating: “THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED.” (1010.2.4)

147. The gate located at _____ is a component in a means of egress system. Show compliance with Section 1010. (1010.4)

148. Plans must indicate / detail the floor or landing on each side of doors is not more than 1/2-in. lower than the threshold of the doorway. Raised thresholds and floor level changes greater than 1/4-in. at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50% slope). (1010.1.6)

149. Landings shall be provided on each side of doors, and such landings shall be at the same elevation on each side of the door. Landings shall have a width not less than the width of the door and a length measured in the direction of travel of not less than 44-in. (1010.1.5, 1010.1.6)

150. Doors shall not project more than 7-in. into the required landing dimensions when fully opened, or more than one half into the required landing width when open in any position if the landing serves 50 or more occupants. Provide details showing compliance. (1010.1.6)

151. Space between two doors in a series shall be 48-in. minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors. (1010.1.7)

152. All means of egress doors shall comply with the requirements of Section 1010.1.
    a. Means of egress doors shall be readily distinguishable from the adjacent construction and finish with no mirrors, curtains, drapes, decorations, or similar materials.
    b. Required exit doors shall not have less than 32-in. clear width, 80-in. clear height, and shall be capable of opening 90 degrees. The maximum swing door leaf width is 48-in. nominal.
    c. Egress doors shall be of the pivoted or side-hinged swinging type.
    d. The force for pushing or pulling open interior swinging egress doors, other than fire doors, shall not exceed 5 pounds. For other swinging doors, as well as sliding and folding doors, the door latch shall be released when subjected to a 15-pound force. The door shall be set in motion when subjected to a 30-pound force. The door shall swing to a full-open position when subjected to a 15-pound force.
    e. Revolving and sliding doors may be used in other than Group H occupancies as egress doors only if all the requirements of Section 1010.3.1 and Section 1010.3.2, respectively, are met.

153. Should panic and fire exit hardware be installed, the following requirements shall be satisfied:
    a. Panic hardware is listed in accordance with UL 305.
    b. Fire exit hardware is listed in accordance with UL 10C and UL 305.
    c. The actuating portion of the releasing device shall extend at least one-half of the door leaf width.
    d. The maximum unlatching force does not exceed 15 pounds.
    e. Pivoted or balanced doors shall be of the push- pad type where panic hardware is required, and the pad shall not extend across more than one- half of the door width, measured from the latch side. (1010.2.8.3)

STAIRWAYS

154. Detail all stairways to comply with Section 1011.
    a. Rise: 7" max. Run (tread): 11” min. (1011.5)
    b. Headroom clearance: 6'-8." (1011.3)
    c. Width: ___ (44”) ____ (36”) [48” between handrails for accessible stairs]. (1011.2)
    d. Landing width: Same as stairway served. (1011.6)
    e. Landing length: Same as width, max. 48” (1011.6)

f. Provide landings at every 12 ft. of vertical rise at stairways. (1011.8)

155. This structure contains interior exit stairways or interior exit ramps. Show compliance with the following: (1023)
    a. Exit enclosures shall NOT be used for any purpose other than means of egress.
    b. Openings are limited to those necessary for egress from normally occupied spaces, only.
    c. Provide 1-hr. / 2-hr. construction details.
    d. Exit enclosure opening protection shall be in accordance with the requirements of Section 716.
    e. Penetration into and openings through an exit enclosure are prohibited except for required exit doors, equipment, and ductwork necessary for independent ventilation or pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication systems, and electrical raceway serving the exit enclosure and terminating at a steel box not exceeding 16 sq. in. Such penetrations shall be protected in accordance with Section 714.
156. Spiral stairways shall meet the following: (1011.10)
    a. May not serve as the required exit for an area exceeding 250 sq. ft. or more than five occupants.
    b. Drawings submitted showing compliance with Section 1011.10.
    c. Details clearly showing column top and base connection / footing.
157. Exterior exit balconies, stairways, and ramps shall be located at least 10-ft. from adjacent lot lines and from other buildings on the same lot unless the adjacent building exterior walls and openings are protected in accordance with Section 705 based on fire separation distance. (705.2)
158. Exterior exit ramps and stairways shall be open at a minimum of 35 sq. ft. on at least one side. The open area shall be located not less than 42-in. above the adjacent floor or landing level. (1027.3)
159. Glass handrails and guardrails shall comply with Section 2407.
160. Note on the plans: “Any time a building or a portion of a building is occupied, the means of egress serving the occupied portion shall be illuminated at an intensity of not less than 1-footcandle (11 lux) at the walking surface level. Along exit access stairways, exit stairways and at their required landings, the illumination level shall not be less than 10-foot candles (108 lux) at the walking surface when the stairway is in use”. (1008.2.1)

OTHER COMPONENTS

161. Detail guards when located along open-sided walking surfaces, mezzanines, equipment platforms, stairways, ramps, and landings that are located more than 30-in. above the floor or grade below. Have a minimum height of 42-in. (1015.2, 1015.3)
    a. Openings between intermediate rails or an ornamental pattern such that a 4-in. diameter sphere cannot pass through. (1015.4)
    b. Shall be designed for 50-plf applied in any direction at the top and to transfer the load through the support of the structure. (1607.9.1.1)
    c. Shall be designed for a 200 lb. concentrated load applied in any direction at any point along the top. (1607.9.1)
    d. Glass handrails and panel guards shall be designed per Section 1607.9 with calculated stresses less than or equal to 3,000 psi (20.7 MPa) for heat strengthened glass and less than or equal to 6,000 psi (41.1 MPa) for fully tempered. Specify approval number and manufacturer of glass panel guard on plans and provide details. (2407.1.1)
162. Provide emergency escape and rescue openings from basements and every sleeping room below the fourth story. Such openings shall open directly into Windows must meet all the following: (1031.3)
    a. A clear net opening area of not less than 5.7 sq. ft.
    b. A minimum clear height of 24-in.
    c. A minimum clear width of 20-in.
    d. The bottom of the clear opening is not greater than 44-in. measured from the floor.
163. Exit signs shall be internally or externally illuminated. Internally illuminated exit signs shall be listed and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer’s instructions and Chapter 27. Externally illuminated exits signs shall comply with the graphics and power source requirements in Sections 1013.6.1 and 1013.6.3, respectively. When the face of an exit sign is illuminated from an external source, it shall have an intensity of not less than 5-footcandles (54 Lux). (1013.5 & 1013.6)
164. Aisles must meet Section 1018 and be clearly detailed.
165. The power supply for means of egress illumination shall be provided by the premise’s electrical supply. In the event of power supply failure, illumination shall be automatically provided by an emergency system for the following areas: (1008.3)
    a. Aisles, corridors, and exit access stairways and ramps in rooms and spaces that require two or more means of egress.
    b. Interior exit stairways and ramps, interior and exterior exit stairway and ramps, exit passageways in buildings required to have two or more exits.
    c. Vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.2 in buildings required to have two or more exits.
    d. Exterior landings, as required by Section 1010.1.6, for exit discharge doorways in buildings required to have two or more exits.
    e. In electrical, generator, fire pump, or public restroom rooms.

166. The emergency power system shall also be connected to an emergency electrical system which is to provide continued illumination for a duration of not less than 90 minutes in case of primary power loss. Continued illumination is to be provided from storage batteries, unit equipment, or an on-site generator and the installation of the emergency power system shall be installed in accordance with Chapter 2702. (1008.3.1)
167. Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1-footcandle (11 lux) and a minimum at any point of 0.1-footcandle (1 lux) measured along the path of egress at floor level. A maximum-to-minimum illumination ratio of 40 to 1 shall not be exceeded. (1008.3.2)
168. Provide tactile exit signs that comply with Section 11B-216.4. Tactile exit signs shall be required at the following locations: (1013.4)
    a. Each grade-level exterior exit door shall be identified by “EXIT.”
    b. Each exit door that leads directly to a grade-level exterior exit by means of a stairway or ramp with the following words as appropriate:
        i. “EXIT STAIR DOWN”
        ii. “EXIT RAMP DOWN”
        iii. “EXIT STAIR UP”
        iv. “EXIT RAMP UP”
    c. Each exit door that leads to an exit enclosure or an exit passageway identified by “EXIT ROUTE.”
    d. Each exit access door from an interior room or area that is required to have a visual exit sign, shall be identified by “EXIT ROUTE.”
    e. Each exit door through a horizontal exit shall be identified by “TO EXIT.”
169. A barrier in the exit enclosure is required to prevent accidental entry into the levels below the level of exit discharge. (1023.8)
170. In buildings located four or more stories above the height above grade plane, one stairway shall extend to the roof surface, unless the roof has a slope steeper than 4 units vertical in 12 units horizontal (33-%).

    (1011.12)
171. Buildings four or more stories in height shall be provided with approved roof hatches openable to the exterior having an area of not less than 16 sq. ft. and a minimum dimension of 2-ft. (1011.12.2)
172. Exterior exit balconies, stairways and ramps shall be located at least 10-ft. from adjacent lot lines, other portions of the building, and from other buildings on the same lot unless the adjacent building exterior walls and openings are protected in accordance with Section 705 based on fire separation distance. (1021.4 & 1027.5)
173. The exit passageway must meet the following requirements: (1024)
    a. Exit passageway shall NOT be used for any purpose other than means of egress.
    b. Openings are limited to those necessary for egress from normally occupied spaces.
    c. Provide 1-hr. / 2-hr. construction details. Exit passageways shall be constructed as fire barriers in accordance with Section 707.
    d. Exit passageway opening protection shall be in accordance with the requirements of Section 716.
    e. Penetration into and openings through an exit passageway are prohibited except for required exit doors, equipment, and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication systems, and electrical raceway serving the exit enclosure and terminating at a steel box not exceeding 16 sq. in. Such penetrations shall be protected in accordance with Section 714.
174. Area of refuge cannot project into egress path of travel. Hatch/label and dimension all areas of the refuge. (1026.4)

CHAPTER 12 INTERIOR ENVIRONMENT

INTERIOR ROOM, LIGHT AND VENTILATION

175. Show the following on plans:
    a. At least one habitable room shall have a minimum net area of 120 sq. ft. (1208.4)
    b. Other habitable rooms shall have a minimum net area of 70 sq. ft. (1208.4)
    c. Habitable spaces shall not be less than 7-ft. in any plan dimension, except kitchens. (1208.1)
    d. Occupiable spaces, habitable spaces, hallways and corridors shall have a ceiling height of no less than 7-ft. 6-in. (1208.2)
    e. Bathrooms, toilet rooms, kitchens, storage rooms, and laundry rooms shall have a ceiling height of no less than 7-ft. (1208.2)
    f. Kitchen shall have a clear passageway of not less than 3-ft. (1208.1)
    g. A minimum 30-in. clear width for water closets and 24-in. clearance in front of water closet for _____ bathroom (PC 411)
176. The minimum openable area of habitable rooms must be 4% of the floor area. This is deficient in _____ (1202.5.1)
177. Interior spaces intended for human occupancy shall be provided with active or passive space heating systems capable of maintaining an indoor temperature of not less than 68°F (20°C) at a point 3 feet (914 mm) above the floor on the design heating day except interior spaces not for human comfort or Group F, H, S, or U occupancies. Submit to the Mechanical Section for plan check. Approval required prior to permit issuance. (1203.1)
178. Rooms containing bathtubs, showers, spas, and similar bathing fixtures shall be provided with an exhaust fan with a minimum capacity of 50 CFM. Ductless fans are not acceptable. (1202.5.2.1, MC T 403.7)

179. The aggregate glazing area of habitable rooms must be minimum 8% of the room floor area. This is deficient in _____. (1204.2)

180. 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 sq. ft., whichever is greater. Show that the common wall between _____and _____ complied. (1204.2.1)

181. Openings required for natural light and ventilation shall be permitted to open into a thermally isolated sunroom or patio cover provided that:
    a. For natural light a glazed area of not less than 1/10 of the floor area of the interior room or 20 sq. ft., whichever is greater. (1204.2.1 Ex.)
    b. For natural ventilation an openable area of not less than 8% of the floor area of the interior room or space, but not less than 25 sq. ft. (1202.5.1.1 Ex.)

182. Where openings below grade provide required natural ventilation, the outside horizontal clear space measured perpendicular to the opening shall be 1-1/2 times the depth of the opening measured from adjoining ground level to the bottom of the opening. (1202.5.1.2)

183. To provide natural light or ventilation at exterior openings of buildings, yards shall not be less than 3-ft. in width for buildings two stories or less. For buildings more than two stories, the minimum width of the yard shall be increased by 1 foot for each additional story. (1205.2)

184. Porch over required windows at _____ must have a minimum clear height of 6 feet 8 inches with longer side at least 65% open and unobstructed (Appendix I 1103.1)

185. In addition to dwelling units, toilet and bathing room floor shall have a smooth, hard non-absorbent surface such as Portland cement, ceramic tile or other approved material that extends upward onto the walls at least 4-inch. (1210.2.1)

186. Shower compartments and walls above bathtubs with installed shower heads shall be finished with a smooth, nonabsorbent surface to a height not less than 72-in. above the drain inlet. (1210.2.4)

187. Occupancies and operations involving flammable or combustible hazards or other contaminant sources shall be ventilated in accordance with the Mechanical Code. (1202.6)

188. Provide a note on plans: “All stairways shall have an illumination level on tread runs of not less than 1 foot-candle (11 lux). (1204.4)

189. Attic vents shall meet the following: (1202.2)
    a. Show ventilation type, size, and location on the plans.
    b. The net free ventilating area shall not be less than:
        i. 1/150 of the attic space OR
        ii. 1/300 provided at Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling in Climate Zones 14 and 16
        iii. 1/300 provided at least 40% and not more than 50% of the required ventilation area is located within 3-ft below the ridge or highest point of the space, with the balance of the required ventilation provided by eave or cornice vents.
    c. Openings shall have corrosion-resistant wire mesh or other approved material with 1/16-in. minimum and 1/4-in. maximum opening.
    d. A minimum of 1-in. airspace shall be provided between insulation and roof sheathing.

190. Show location of 20-in. x 30-in. attic access with 30-in. minimum headroom. (1209.2)

191. Under-floor vents shall meet the following requirements: (1202.4)

192. Show location of 18-in. x 24-in. minimum under-floor access opening. (1209.1)

193. Access to mechanical appliances in under-floor areas, in attic spaces, and on roofs or elevated structures shall be in accordance with the County of Los Angeles Mechanical Code. (1209.3, MC 906.9)

SOUND TRANSMISSION

194. Identify all airborne sound insulated wall assemblies and all airborne and impact sound insulated floor-ceiling assemblies on the floor plans.

195. Wall and floor-ceiling assemblies separating dwelling units or guest rooms from each other and from public areas such as interior corridors, garages and mechanical areas shall provide airborne sound insulation for walls, and both airborne and impact sound insulation for floor-ceiling assemblies.

196. Provide construction details of airborne sound insulated wall assemblies between_____ and _____. A sound transmission class (STC) rating of 50 is required. (1206.2)

197. Provide construction details of airborne sound and impact sound insulated floor-ceiling assemblies between _____and _____. A sound transmission class (STC) rating of 50 and impact insulation class (IIC) of 50 is required. (1206.2, 1206.3)

198. The entrance doors to residential units from interior corridors shall have a minimum STC rating of 30. Solid-core 1-3/8-in. thick wood doors with acoustic seals all around perimeter including thresholds will meet this requirement. (1206)

199. Sound transmission control between adjacent dwelling units and between dwelling units and adjacent public or service areas is required. Provide details and notes on the plans as prescribed in. (1206)

200. Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. Provide construction details and notes on the plans as prescribed in BCM 1207 A2 and BCM 1207 A3. (1206.4)

COURTS, SHAFTS, MEZZANINES AND ELEVATORS

201. This plan contains _____ courts. Provide details of the proposed wall construction, opening protection and stair protection. (202,1027.6,1203.5.3,1205.3)
202. The width of courts shall meet the following: (1205.3)
    a. Not less than 3-ft in width
    b. Not less than 6-ft in width where openings occur on opposite sides.
203. Courts shall not be less than 10-ft in length unless bounded on one end by a public way or yard. (1205.3)
204. Courts located in buildings more than 2-stories in height shall be increased: (1205.3)
    a. 1-ft in width for each additional story
    b. 2-ft in length for each additional story
205. Access shall be provided at the bottom of the courts for cleaning purposes. (1205.3.1) (1206.3.1)
206. Courts more than 2-stories shall be provided with horizontal air intake at the bottom not less than 10 sq. ft. in area and leading to the exterior of the building. (1205.3.2)
207. Courts shall be properly graded and drained to a public sewer or an approved disposal system. (1205.3.3)
208. Refuse and/or linen chutes, termination rooms and openings shall be separated from the remainder of the building as per shaft requirements. (713.13.4)
209. Openings into refuse and/or linen chutes shall not be in corridors. Refuse and/or linen chutes shall not terminate in an incinerator room. (713.13.1,713.13.4)
210. Provide an elevator lobby on each floor. The lobby shall be constructed as a fire partition equal to the fire-resistance rating of corridors and the required opening protection. (713.14,3006.1)
211. Provide notes on Plan Sheet _____ stating all the provisions of Chapter 30 that the elevators in this structure must satisfy. Reference to Code sections alone is not acceptable. (713.14)
212. An independent ventilation system shall be installed in the elevator machine room in accordance with Section 3005.2. (3005.2)
213. Elevator machine rooms shall be enclosed with fire barriers per Section 707 and/or horizontal assemblies per Section 711. (3005.4)
214. The mezzanine(s) on Plan Sheet(s) _____ does not/do not satisfy the definition given in Section 505. This is a story.
    a. Mezzanines within a room shall not exceed one-third of the floor area of that room or space in which they are located. (505.2.1)
    b. The area of the mezzanine shall be included in determining the fire area defined in Section 902. (5
    c. A mezzanine shall be open and unobstructed to the room in which such mezzanine is located, except for walls not more than 42 inches in height, columns, and posts. (505.2.3)
215. This plan contains a pedestrian walkway and tunnels. Clearly identify on the plans. Show rated or non-rated wall construction between the building and the walkway.

(3104)

CHAPTER 14 EXTERIOR WALLS

216. Provide veneer details showing method of anchorage, size and spacing of anchors. Comply with the prescriptive requirements in Section 1404.4.3 or provide calculations for anchorage.

CHAPTER 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

217. The minimum roof coverings installed on buildings shall comply with T-1505.1 based on the type of construction of the building. (1505.1)
218. Identify on the plans the fire-retardant roof classification, manufacturer's name, and ICC/UL report number.
219. Show roof slope(s), drain(s), and secondary roof drain(s)/scupper(s) on the roof plan. Roof drainage system shall comply with the following requirements:
    a. System shall comply with Chapter 11 of the Plumbing Code.
    b. System shall be sized for minimum rain intensity of 3 inches per hour.
    c. Secondary roof drains having the same size as the primary roof drains shall be installed with the inlet flow line located a minimum of 2 inches above the low point of the roof.
    d. Scuppers through parapet walls adjacent to the low point of the roof may be used as secondary roof drainage. Scupper openings shall be a minimum of 4 inches high and have a width equal to the circumference of the roof drain required for the area served.
220. Clay and concrete tile attachment shall comply with Table 1507.3.7. Note and/or show compliance on plans. (T-1507.3.7, 1507.3.7)
221. Roof slope is not adequate for the type of roof covering specified. The minimum roof slope for _____ roof is _____. (1507)
222. Show that the penthouse and/or roof structures satisfy the requirements of Section 1511.

CHAPTER 24 GLASS AND GLAZING

223. Each pane of safety glazing installed in hazardous locations shall be identified by a manufacturer's designation specifying who applied the designation, the manufacturer or installer and the safety-glazing standard. The following shall be considered specific hazardous locations for the purpose of safety glazing. (2406.4)
    a. Swing doors.
    b. Fixed and sliding panels of sliding door assemblies and panels in sliding and bi-fold closet door assemblies.
    c. Storm doors.
    d. Unframed swinging doors.
    e. Doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs, and showers.
    f. Fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within 24-in. 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-in. above the walking surface.
    g. Fixed or operable panel, other than described in items e and f, which meets all the following conditions:
        i. Exposed area of an individual pane greater than 9 sq. ft.
        ii. Exposed bottom edge of less than 18-in. above the floor.
        iii. Exposed top edge greater than 36-in above the floor.
        iv. One or more walking surfaces within 36-in horizontally of the plane of the glazing.
    h. Guards and railings regardless of area or height above a walking surface. Included are structural baluster panels and nonstructural in-fill panels.
    i. Walls and fences enclosing indoor and outdoor swimming pools and spas where all the following conditions are present:
        i. The bottom edge of the glazing is less than 60-in. above a walking surface on the pool or spa side of the glazing.
        ii. The glazing is within 60-in of a swimming pool or spa water's edge.
    j. Adjacent to stairways, landings, and ramps within 36-in horizontally of a walking surface, when the exposed surface of the glass is less than 60-in. above the plane of the adjacent walking surface.
    k. Adjacent to stairways within a 60-in. horizontal arc that is less than 180 degrees from the bottom tread of a stairway when the exposed surface of the glass is less than 60-in above the nose of the tread.
    l. Fire department glass access panels.
224. Specify the approval number, manufacturer, and model number for skylights and indicate on the plans if they are glass or plastic Glass skylights shall comply with 2405. Plastic skylights shall comply with 2610.

CHAPTER 25 GYPSUM BOARD AND PLASTER

225. Provide a minimum 26-gage corrosion-resistant weep screed for stucco at the foundation plate line a minimum of 4-in. above the earth or 2-in. above paved areas. (2512.1.2)
226. Cement, fiber-cement, or glass mat gypsum backers in compliance with ASTM C1178, C1288 or C1325 shall be used as a base for wall tile in tub and shower areas and wall and ceiling panels in shower areas. Water-resistance gypsum backing board shall be used as a base for tile in water closet compartment walls when installed in accordance with GA-216 or ASTM C840. Regular gypsum wallboards are permitted under tiles or wall panels in other wall and ceiling areas when installed in accordance with GA-216 or ASTM C840. Water-resistant gypsum boards shall not be used in the following locations: (2509.2)
    a. Over a vapor retarder.
    b. In areas subject to continuous high humidity, such as saunas, steam rooms or gang shower rooms.
    c. On ceilings where frame spacing exceeds 12" O.C. for 1/2" thick and more than 16" O.C. for 5/8" thick.

SOLID WASTE DISPOSAL

227. Provide Solid Waste Disposal per the attached sheet or obtain approval from Environmental Programs Division.
    a. On site plan, show location and size of solid waste storage enclosure.
    b. Show dimensioned layout, including clear width and depth.
228. Provide details for the wall and roof construction by enclosing the bin. See BCM.
229. Commercial dumpsters and containers with an individual capacity > 1.5 cubic yards shall not be stored or placed within 5-ft. of combustible walls, openings, or combustible roof eave lines unless the trash area is protected by an approval automatic sprinkler system. (F.C. 304.3.3))

STRUCTURAL REQUIREMENTS

230. Allowable values for structural design shall be per the 2026 County of Los Angeles Building Code, including all call outs and references.
231. Specify the roof and floor live loads, roof snow loads, wind design data including wind speed and exposure, and earthquake design data including Seismic Design Category and wall bracing method. Include references to design factors and span tables. (1603)
232. The lateral design shall be based on the most restrictive of either the wind or seismic forces per Los Angeles County Building Code Section 1609 and 1613
233. The required ground snow load for this area is _____ psf. The tributary live load reduction in section 1607.13 is not permitted.

234. For the design wind load in this area, use basic wind speed of _____ mph(1609, ASCE7-22 Ch. 26).

235. Cross-reference all calculations for columns, beams, shear walls, etc., from the calculations to the plans.

236. Delete notes and details on sheets _____ that do not apply to this project. (106.4.3)

237. Key or identify all sections and details as to their location on the plan or elevation views. (106.4.3)

238. Structures and all portions thereof shall resist the most critical effects from the basic load combinations specified in Section 1605 of the Building Code.

239. Indicate the grade and species of framing lumber, treated mudsills, strength of concrete, mix of mortar and grout, grade and weight of masonry units, grades of reinforcing steel, pipes, tubes and framing steel, design soil pressures, and _____ _____.

240. NOTE ON THE PLANS: “The use of rolled steel sections and/or bolts manufactured outside the United States will require verification that the products comply with applicable ASTM Standards. Mill certificates will be required for all steel. Steel grades other than ASTM A36 will require testing by an approved laboratory. All foreign bolts must be approved by County of Los Angeles Building and Safety prior to their use.”

241. 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 A153. Field-cut ends, notches and drilled holes of preservative-treated wood shall be field-treated per AWPA M4.” (2304.10.6)

242. Submit design and details of trussed rafters with a layout plan, complete calculations, and connector plate design. Submit attached “Certificate of Approval” to building inspector prior to framing inspection. (2303.4)

243. Engineer or Architect of Record shall review, approve and stamp truss design for loads, location and suitability for intended use. (106.4.3) (2303.4)

244. Wood structural panel roof sheathing shall be of type manufactured with exterior glue (Exterior I or Exterior). (2304.8.2)

245. For wood structural panel roofs and floors, specify panel index no._____, panel thickness, grades, nailing schedule and panel layout pattern. Note on the plans "Roof diaphragm nailing to be inspected before covering". Face grain of plywood shall be perpendicular to supports. Floors shall have tongue and groove or blocked panel edges. Wood structural panel spans shall conform to T-2304.8(3) & T-2304.8(5).

246. Studs in bearing walls are limited to 10-ft. in height unless an approved design is submitted. (T-2308.9.1).

247. Provide details for the header support at the corner window(s) at _____ (106.4.3)

248. Studs supporting two floors, roof, and ceiling, must be 3x4 or 2x6 studs at 16-in. O.C. max (T-2308.9.1). Submit calculations showing that the allowable stress in compression perpendicular to grain is not exceeded in the plates at the proposed stud spacing.

249. Provide details of the lateral support for the top and bottom of the interior non-bearing walls. (1607.16)

250. Clearly indicate on the plans all wood structural panel and drywall shear walls. All shear panels shall conform to the height to width aspect ratio h/b_s per SDPWS T-4.3.3. Provide a complete nailing schedule for each, including connectors.

251. Provide shear transfer connection details, properly referenced at the top and bottom of all shear walls.

252. Note the following on the plans:

    a. Hold down connectors shall be tightened to finger tight plus one-half wrench turn just prior to covering the wall framing. (2305.4)

    b. Connector bolts into wood framing shall require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.229”x3”x3”. (2305.4)

    c. Hold-down hardware must be secured in place prior to foundation inspection. (108.4)

253. Where allowable shear values exceed 350 pounds per foot, foundation sill plates and all framing members receiving edge nailing from abutting panels shall be not less than a single 3-in. nominal or larger member. (SDPWS 4.3.7.1)

254. Wood frame shear walls shall be designed and constructed in accordance with AWC SDPWS. For wood-based panels, *nominal* unit shear capacities shall be in accordance with Table 4.3A. Application of Table 4.3B is not allowed for structures assigned to SDC D, E, F. (2306.3, SDPWS 4.3.7)

255. The ASD *allowable* unit shear capacities for diaphragms and shear walls in SDPWS shall be determined by dividing the tabulated *nominal* unit shear capacities by the ASD reduction factor of 2.8. LRFD factored shear resistance shall be determined by multiplying the nominal shear capacities by a resistance factor φ of 0.50. (SDPWS 4.1.4 & 4.3.5)

256. The maximum *nominal* unit shear capacity for 3/8” wood structural panels resisting seismic forces for structures assigned to SDC D, E, F is 560 plf. (2306.3)

257. Portland cement plaster (stucco), gypsum lath and gypsum wallboard shear walls in accordance with SDPWS Table 4.3C are not permitted below the top level in a multi-level building for structures assigned to Seismic Design Category D, E, F (2306.3.)

258. Pre-engineered narrow shear panels, not meeting the height to width aspect ratio of SDPWS T-4.3.3, shall be provided with ICC-ESR approval and meet the following criteria:

a. All installations shall use the respective manufacturer's anchor bolt template and otherwise be installed per the manufacturer's installation instructions and specifications.
b. The use of narrow shear panels in line with other types or widths of panels requires justification by a rigorous engineering analysis. The analysis must account for the nonlinear force displacement behavior of each panel assembly, and the distribution of the lateral forces shall be in accordance with the relative rigidities of the panels at the design load.
c. The listed values of the panels shall be based on tests conducted in accordance with ICC Acceptance Criteria AC120.

259. Provide referenced calculations showing the over-turning moments in all shear wall segments. (SDPWS 4.3.6.4.2)

260. Show size, location, and embedment length of hold-down (HD) anchors on the foundation plan. Provide HD anchor schedule. Show details of HD and bolts into new concrete, and/or drill and approved epoxy details of HD and bolts into existing concrete foundations. (108.4)

261. The capacity of hold-down connectors that do not consider cyclic loading of the product shall be reduced to 75% of the allowable earthquake load values. (2305.4)

262. Provide details showing positive connection between beam ends, walls and supporting posts. (106.4.3)

263. In cold-formed steel light-framed construction assigned to SDC D, E, F, the seismic force-resisting system shall be designed and detailed in accordance with AISI S400. (2206.1.1.2)

264. Horizontal diaphragms with wood structural panels (blocked) shall not exceed a span to width aspect ratio of 4 to 1. (SDPWS T-4.2.2)

265. Provide a diaphragm analysis to show diaphragm adequacy. Specify if diaphragms are to be blocked or unblocked per SDPWS T-4.2A, T-4.2B & 4.2C. (2306.2)

266. Masonry veneer details, anchors, backing, footings, and support over openings are required. Masonry veneer shall comply with the provisions of Section 2101.2, TMS 402.

267. This structure has exterior veneer on wood studs. Provide details complying with Chapter 13, TMS 402.

268. Provide a vertical and longitudinal section through each glass block wall showing how it is supported at each edge and reinforced in each direction. Submit lateral calculations and show compliance with 2110.1, Chapter 13 of TMS 402. (2110.1)

269. Precast panels, exterior non-bearing, non-shear wall panels, or elements that are attached to or enclose the exterior shall be designed to resist the forces and connections shall follow ASCE7 Section 12.11.

270. Provide details, properly referenced, of the anchorage system between the wood roof and floor diaphragms and the concrete or masonry walls. The connections shall resist the horizontal anchorage forces $F_p = 0.4S_{DS}k_aI_eW_p$ in accordance with ASCE7 Eq 12.11-1. Minimum design force F_p shall be at least $0.2k_aI_eW_p$. (1604.8.2, ASCE7 12.11)

271. Provide calculations and details on the plans for the sub-diaphragm and continuous cross tie system required for all wood diaphragms providing lateral support to masonry or concrete walls. (1604.8.2)

a. The wall anchorage shall provide a positive direction connection between the wall and floor or roof construction capable of resisting a horizontal force specified in Section 1604.8.2 & ASCE7 12.11.2.1. In addition, a diaphragm to wall anchorage using embedded straps shall have the straps attached to or hooked around the reinforcing steel or otherwise terminated to effectively transfer forces to the reinforcing steel.
b. Elements of the wall anchorage system shall be designed for the forces specified in Section ASCE7 12.11.2.1. The value of F_p used for the design of the elements of the wall anchorage system shall not be less than $0.2k_aI_eW_p$.
c. When elements of the wall anchorage system are not loaded concentrically or are not perpendicular to the wall, the system shall be designed to resist all components of the forces induced by the eccentricity. (ASCE7 12.11.2.2.6)
d. When pilasters are present in the wall, the anchorage force at the pilasters shall be calculated considering the additional load transferred from the wall panels to the pilasters. However, the minimum anchorage force $0.2k_aI_eW_p$ at a floor or roof shall not be reduced. (ASCE7 12.11.2.2.7)
e. The strength design forces for steel elements of the structural wall anchorage system, except for anchor bolts and reinforcing steel, shall be 1.4 times the forces otherwise required above. (ASCE7 12.11.2.2.2)
f. Floor and roof diaphragms shall be designed to resist the forces per ASCE7 Section 12.10.1.
g. The maximum diaphragm shears used to determine the depth of the sub-diaphragm shall not exceed 75 % of the maximum diaphragm shear. (1613.5.2)
h. The maximum length-to-width ratio of the wood structural sub-diaphragm shall be 2.5:1 per ASCE7 Section 12.11.2.2.1.
i. The anchorage of concrete or masonry structural walls to wood diaphragms shall be in accordance with SDPWS 4.1.5.1 and LACBC Section 1613.5.2. Required continuous ties shall be in addition to the diaphragm sheathing. The wall anchorage shall not be accomplished by use of toenails or nails subject to withdrawal, wood ledgers or framing shall not be used in cross-grain bending or cross-grain tension. (ASCE7 12.11.2.2.3)
j. Connections of a diaphragm to the vertical elements in structures having horizontal & vertical irregularities of ASCE7 Table 12.3-1 & 12.3-2 shall be designed per ASCE7 12.3.3.4.

k. The structures having a horizontal structural irregularity of Type 2 in ASCE7 Table 12.3-1, diaphragm chords and drag members shall be designed considering independent movement of the projecting wings of the structure. Each of these diaphragm elements shall be designed for the more severe of the following two assumptions:
   i. Motion of the projecting wings in the same direction.
   ii. Motion of the projecting wings in opposing directions.

l. When designing the diaphragm to comply with the requirements stated above, the return walls, and fins/canopies at entrances shall be considered. Seismic compatibility with the diaphragm by either seismically isolating the element or by attaching the element and integrating its load into the diaphragm.

272. Special reinforced masonry shear walls designed per ASD method shall consider 1.5 times the required in-plane seismic force for Seismic Design Categories D, E, & F, and comply with the requirements of 2106.1, TMS 402 Section 7.3.2.6.1.2. (2106.1)

273. Provide an analysis of all tilt up panels with openings. Show that the reinforcing in the panels, on each side of the openings, is adequate. (106.4.3)

274. For each of the metal decks provide the manufacturer and designation, height, complete welding information, reinforcing and thickness and type of fill. (106.4.3)

275. Bracing members and connections in steel braced frames for structures in SDC D, E, F shall be designed per AISC 341-16 Seismic Provisions for Structural Steel Buildings.

276. Concrete shear walls must be designed based on the requirements of Section 1905 and ACI 318 Section 18.10.

277. Concrete shear wall reinforcement shall be terminated with required development length per ACI 318 § 18.10 beyond the boundary reinforcing at the vertical and horizontal end faces of wall sections.

278. Where special inspections or tests are required by Section 1705, a detailed statement of special inspections shall be prepared by the registered design professional in responsible charge as required by Section 1704.2.3 as a condition of permit issuance. The statement shall be in accordance with Section 1704.3 and shall be shown on the plans. (1704.3)

279. Provide details of the proposed stepped footings on the plans. (1809.3)

280. Calculations are required for retaining walls over 4-ft. in height, measured from the bottom of the footing to the top of the wall, including walls less than 4-ft. high supporting a surcharge or sloping earth, or impounding Class I, II, or III-A liquids. (106.3)

281. Provide seismic ties to interconnect individual pile caps and caissons. Seismic ties shall comply with the provisions of ACI 318. (1810.3.13, ACI 18.13.4)

282. Anchoring to concrete in structures assigned to SDC C, D, E, or F shall be in accordance with ACI 318 Section 17.2.3 with modifications per Building Code Section 1905.1.8. (1905.1.8, ACI 17.2.3 and 18.2.3)

283. For masonry or concrete walls below grade designed as restrained at the top. NOTE ON THE PLANS: “The perimeter walls are not to be backfilled until the floor slabs are poured and cured."

284. Foundation walls enclosing a usable space below finished grade shall be waterproofed or damp-proofed in accordance with Section 1805.

285. Structural observation per Section 1704.6 is required for this project. The engineer of record shall prepare an inspection program, including the name(s) of the individuals or firms who will perform the work. The inspection program shall be shown on the first sheet of the structural drawings. Print the Structural Observation Form on the plans.

286. Note on the plans: “Compaction report shall be submitted to the Building Inspector prior to footing inspection.”

287. Specify on the plans the allowable soil bearing pressure value used in the structural calculations for the foundation design. Submit copy of soils report to justify. (T-1806.2, 106.4.3)

288. Structures assigned to Seismic Design Category C, D, E, or F shall not have elements of structural plain concrete, except when permitted in Section 1905.1.7.

289. Masonry walls or elements that are part of the seismic force resisting system shall be designed and specified with Type S or Type M mortar. Type N mortars shall not be used. (TMS 402 Section 7.4.4.2.2)

290. The Architect or Engineer of record shall specify the seismic design parameters S_s, S_1, S_{MS}, S_{M1}, S_{DS}, S_{D1} for use in lateral analysis. (1603.1.5)

291. The values of C_s and E_v are permitted to be calculated using a value of S_{DS} equal to 1.0, but not less than 70% of S_{DS}, as defined in Section 11.4.5, if all the criteria of ASCE7 Section 12.8.1.3 are met.

292. Structural elements (i.e., beams, columns, trusses, slabs, and walls) supporting discontinuous walls or frames of structures that have horizontal irregularity Type 4 of ASCE7 Table 12.3-1 or vertical irregularity Type 4 of ASCE7 Table 12.3-2 shall be designed to resist seismic load effects, including overstrength of Section 12.4.3. (ASCE7 12.3.3.3)

293. Calculate the story drift with C_d and I factor based on deflections of each level. Strength level forces shall be used in accordance with ASCE7 Section 12.8.6.

294. Cantilevered column systems resisting seismic forces shall be designed with an R and C_d factor per ASCE7 T-12.2-1. Foundation and other elements used to provide overturning resistance at the base of cantilever column elements shall be designed with the appropriate over strength factor set forth in Section 12.4.3. (ASCE7 12.2.5.2)

295. Specify the header size at door, window, and other openings in bearing walls. (2304.3.2)

296. Suspended ceilings shall be designed per ASCE7 Section 13.5.6. Alternatively, provide the ICC-ESR approval per the 2024 IBC. Provide details and specify the ICC research number on the plans.
297. Detail the shear transfer connections which transfer lateral forces from horizontal diaphragms through intermediate elements and shear walls to the foundation. (106.4.3)
298. Where applicable, provide pre-engineered wall manufacturer's detail sheets on the plan.
299. Have the consulting soils/geotechnical engineer review and approve the foundation plans and details for final approval. (106.4.3)
300. Cross-reference all calculations for columns, beams, shear walls, etc., from the calculations to the plans. (106.4.3)
301. Alteration, repair, addition, and change of occupancy of existing structures shall comply with the provisions of the 2026 L.A. County Existing Building Code.
302. All markings on the plans are part of the corrections. Please see additional comments on the plans and calculations.

ADDITIONAL COMMENTS