Supplemental Plan Check Correction Sheet for Structural Design - General			
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City of Los Angeles – Department of Building & Safety

Supplemental Plan Check Correction Sheet for Structural Design - General (2026 LABC)

Plan Check No.:	
PCIS No.:	
Job Address:	
P.C. Engineer:	Email:
Phone:	Review Date:

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If you have any questions or need clarification on any plan check matters, please contact your plan check engineer and/or his or her supervisor.

I. Information Bulletins

Review the following checked information bulletins. Revise plans to show compliance with documents below. Copies can be obtained at: https://dbs.lacity.gov/forms-and-publications

- ☐ Concrete Shear Wall
- ☐ Concrete Special Moment Resisting Frame
- ☐ Concrete Tilt Up Retrofit (Chapter 91)
- ☐ Curtain Walls
- ☐ Hillside Construction on Slopes Greater than 33%
- ☐ Masonry Shear Walls
- ☐ Mass Timber and Heavy Timber
- ☐ Prestressed Concrete
- ☐ Reinforced Concrete and Frame with Masonry Infills – Chapter 95
- ☐ Rigid Wall Flexible Diaphragm
- ☐ Steel Braced Frame Design
- ☐ Steel Moment Frame Design
- ☐ Storage Racks
- ☐ Two Way Concrete Slab
- ☐ URM Retrofit

Review the following checked information bulletins. Revise plans to show compliance with documents below. Copies can be obtained at: https://dbs.lacity.gov/forms-and-publications

- ☐ P/GI 2026-018 Computer Software Program Solutions
- ☐ P/BC 2026-002 Retaining Wall (4'-0" High or Less)
- ☐ P/BC 2026-007 Cutting, Notching and Boring of Wood Members
- ☐ P/BC 2026-010 Lumber Species and Grade in Wood Shear Walls
- ☐ P/BC 2026-015 Power Driven Steel Studs in Concrete
- ☐ P/BC 2026-024 Structural Observation
- ☐ P/BC 2026-030 Interconnection Ties for Pile Caps and Caissons
- ☐ P/BC 2026-031 Concrete Proportioning & Admixture Qualification
- ☐ P/BC 2026-032 Fabricators of High Strength Structural Steel
- ☐ P/BC 2026-034 Registered Deputy Inspector
- ☐ P/BC 2026-036 Fabrication Tolerances for Built-Up Steel
- ☐ P/BC 2026-046 Composite Steel Concrete Construction
- ☐ P/BC 2026-048 Strong Motion Accelerographs Requirements
- ☐ P/BC 2026-051 Wet Mix Shotcrete
- ☐ P/BC 2026-071 Wall Anchors to Flexible Diaphragms Design Criteria
- ☐ P/BC 2026-083 Retaining Wall Design
- ☐ P/BC 2026-098 Steel Moment Frame Connections
- ☐ P/BC 2026-100 Use of Slab on Grade as Foundations
- ☐ P/BC 2026-113 Reports for Submittal to Grading Division
- ☐ P/BC 2026-116 Footing Design for Expansive Soils

II. Structural Requirements

A. GENERAL PLANS

1. All sheets of structural plans and cover sheet of calculations must be signed and stamped by a civil or structural engineer, or architect, licensed by the State of California.
2. A supplemental plan check and permit with the applicable fees are required for deferred items. Allow time for a normal plan check process. The engineer of record shall review the design of the deferred item(s) and verify conformance with the intent of the original design.
   a. Anchorage of non-structural components
   b. Curtain Walls
   c. Glass Guardrail Systems
   d. Prefabricated Roof and Floor Trusses
   e. Prefabricated Stairs Including Handrails
   f. Storage Racks
   g. Tie down Systems
   h. Other: _____
3. Identify and reference all sections and details as to their location on the plan and elevation views.
4. Cross reference all calculations for joists, beams, shear walls, etc, to framing/floor plans.
5. Submit structural calculations/design details for _____.
6. Provide plans for temporary shoring of excavations that remove the lateral support from a public way or an existing building. Excavations adjacent to a public way require Public Works approval prior to issuance of building permit.

B. MATERIAL SPECIFICATION & INSPECTIONS

1. Specify the following items on plans:
   a. Type of soil and bearing value per CBC Table 1806.2 or per approved soils report. *CBC 1603.1.6*
   b. 2,500 psi min f'_c for concrete foundations for Group R or U of light-frame construction, two stories or less in height in SDC D, E, or F *CBC T1808.8.1*
   c. 3,000 psi min f'_c for concrete foundations in SDC D, E, or F other than listed above. *CBC T1808.8.1*
   d. 4,000 psi min f'_c for precast non-prestressed driven piles, socketed drilled shafts, and micropiles. *CBC T1808.8.1*
   e. 5,000 psi min f'_c for precast prestressed driven piles. *CBC T1808.8.1*
   f. Type and f'_c of elevated concrete slabs and walls. *CBC 1901.5*
   g. Type and f'_m of masonry units. Proportions of mortar and grout mixes.
   h. Type of Structural Steel, Structural Pipe, Tubing, Reinforcing bars.
   i. Grade, species, and moisture content of all lumber. Type and grade of plywood sheathing.
2. For metal deck, specify manufacturer, product name, and evaluation report number from a nationally recognized testing agency on plans: Specify on plans and calculations the deck designation of which tables were used to determine the allowable loads. Provide complete welding information on plans.
3. Structural Observation per LABC 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 plans.
4. ☐ (Continuous Special Inspection) ☐ (Periodic Special Inspection) is required for (_____) per LABC Sec 1705 and quality assurance program of AISC 360 and 341 (steel), SDI QA/QC (Cold-formed steel deck), Tables 1705.2.3 (open-web steel joist and joist girders), 1705.3 (concrete), 1705.5.3 (Mass Timber), TMS 402-22 and TMS 602-22 Ch. 3 (masonry), Tables 1705.6 (soils), 1705.7 (driven deep foundations), and 1705.8 (cast-in place deep foundations).

5. Where special inspection or testing is required, the registered design professional in responsible charge shall include a Statement of Special Inspections on the plans which include materials, systems, components and work required to have special inspections or tests, the type and extent of each special inspection and test, and whether it will be continuous or periodic. *LABC 1704.2.3, 1704.3*

6. The following structural products shall comply with an evaluation report from a nationally recognized testing agency with a LABC or LARC Supplement. A copy of the evaluation report and/or conditions of listing shall be made available at the job site.

☐ Hold-downs
☐ Expansion/Adhesive anchor bolts
☐ Sill Plate Connectors
☐ Prefab Shear Wall Panels
☐ Straps
☐ Others such as _____

Add notes on plans:

1. Contractors responsible for the construction of a wind or seismic force resisting system/component listed in the Statement of Special Inspection shall submit a written statement of responsibility to the LADBS Inspectors and the owner prior to the commencement of work on such system or component. *LABC 1704.4*

2. Continuous Special Inspection by a registered deputy inspector is required for field welding, post-installed adhesive anchors installed horizontally or upwardly inclined to resist sustained tension loads, shotcrete placement, concrete strength f'_c > 2,500 psi, sprayed-on fireproofing, engineered masonry, high-lift grouting, high load diaphragms and special moment-resisting concrete frames, and helical pile foundations. *LABC 1705 & Chapters 19, 21, and 22*

3. Periodic Special Inspection is required for wood shear walls, shear panels, and diaphragms, including nailing, bolting, anchoring, and other fastening to components of the seismic force resisting system. Special inspection by a deputy inspector is required where the fastener spacing of the sheathing is 4 inches on center or less. *LABC 1705.12.2*

4. Special activity inspection is required for ☐ (buildings over 5 stories or 60' in height) ☐ (buildings over 50,000 sq. ft. of ground floor area) ☐ (buildings over 200,000 sq. ft. of total floor area) *LABC 1705.1.6*

5. Field Welding to be done by welders certified by the LADBS for ☐ (structural steel) ☐ (reinforcing steel) ☐ (light gauge steel). Continuous inspection by a deputy inspector is required.

6. Shop welds must be performed in a LADBS licensed fabricator's shop. *LABC 2201.4*

7. LADBS licensed fabricator is required for ☐ (Trusses), ☐ (Structural Steel), ☐ _____.

8. Glued-laminated timbers must be fabricated in a LADBS licensed shop. Identify grade symbol and lamination species per 2024 NDS Supplement Table 5A.

C. FOUNDATION AND GRADING

1. For projects in the "Hillside Grading Area", add details to show compliance with all corrections on the Grading Pre-inspection (GPI) Report and see supplemental grading correction sheet for additional comments. Incorporate GPI report into plans. *LABC 107.3.2*

2. All foundations shall be designed for ☐ expansive soil conditions with maximum 1,500 psf bearing capacity or ☐ a soils report approved by LADBS Grading Division (see Information Bulletins for additional information). Provide details on foundation plans to comply with the requirements.

3. A geotechnical report shall be required in any of the following conditions, including but not limited to:
   a. Where shallow foundations bear on compacted fill material more than 12 inches in depth, i.e. removal and recompaction (R&R). *CBC 1803.5.8*
   b. Earthquake Induced Liquefaction/Landslide Area: A geotechnical report is required to evaluate the potential for soil liquefaction and soil strength loss during an earthquake. *CBC 1803.5.11*
   c. Where foundation walls or retaining walls are supporting more than 6 ft of backfill, a geotechnical report shall determine the seismic lateral earth pressures on the foundation walls or retaining walls due to earthquake ground motions. *CBC 1803.5.12*

4. **Add note on plans:** If adverse soil conditions are encountered, a soils investigation report may be required. *CBC 1803.5.2*

5. Detail a footing setback of the smaller of H/3 or 40′ to the face of the descending slope or as required by the approved soils report. *CBC 1808.7.2; Fig 1808.7.1*

6. Provide an ascending slope clearance to building of H/2 or 15' max or as required by the approved soils report. *CBC 1808.7.1, Fig 1808.7.1*

7. Detail (and reference location on foundation plan) typical foundation sections for: perimeter walls, interior bearing walls, depressed slabs, foundations common to dwelling and garage, garage entrance, spread and/or post footings.

8. Call out minimum thickness of 3-½ inch concrete slab on grade, No. 4 steel reinforcing bars at 16″ o.c. each way, and 6-mil moisture barrier on foundation plan for expansive soils. *CBC 1907.1, P/BC 2026-116*

9. Foundations with stem walls shall be reinforced with a minimum of two No. 4 bars at the top of the wall and two No. 4 bars at the bottom of the footing. *CBC 1905.1.7, IB P/BC 2026-116*

10. Slabs-on-grade with turn-down footings shall be reinforced with a minimum of one No. 4 bar at the top and one No. 4 bar at the bottom. *CBC 1905.1.7, IB P/BC 2026-116*

11. Provide details for stepped footings when slope of top and/or bottom of footing exceeds 1:10. Top surface of the stepped footing shall be level. *LABC 1809.3*

12. In SDC D, E or F, Site Class E or F, individual spread footings and in SDC D, E or F, individual pile caps and caissons subject to seismic forces shall be interconnected by ties in two directions. Ties shall be capable of resisting, in tension or compression, a force equal to the lesser of the product of the larger footing design gravity load times S_{DS}, divided by 10% and 25% of smaller footing design gravity load. *CBC 1809.13, 1810.3.13*

13. Concrete grade beams that are part of a Special Moment Frame shall use A706 reinforcing steel. Transverse reinforcement shall be provided over a length equal to twice the member depth measured from the face of the supporting member. The spacing of such reinforcement shall not exceed: (a) d/4, (b) 6 times the diameter of the smallest primary flexural rebars excluding longitudinal skin rebars, or (c) 6 inches. The first hoop shall be located not more than 2 in. from the face of the column. The remainder of the grade beam shall have stirrups with seismic hooks at both ends spaced not more than d/2. *ACI 318-19 Sec. 18.13.3.3, 18.6.4*
    a. Concrete grade beams shall be constructed with minimum f'_c = 3,000 psi.

14. Socketed drilled shafts depth shall be sufficient to develop the full load bearing capacity with a min. factor safety of two. Where a structural steel core is used, the cross-sectional area of the core shall not exceed 25% of the gross area for the drilled shaft. *CBC 1810.3.9.6*

15. Deep foundations shall be designed on the basis of a geotechnical report. In seismic design category D, E and F, deep foundation reinforcement shall meet the minimum requirements. *CBC 1803.5.5, 1810.1.1, 1810.3*

16. Embedded posts and poles shall be designed to resist lateral loads at a minimum depth calculated with the following conditions as applicable: *CBC 1807.3.2*
    a. Nonconstrained condition where lateral constraint is not provided by a rigid floor or rigid ground surface pavement in accordance with CBC Section 1807.3.2.1 and Eq. 18-1.
    b. Constrained condition where lateral constraint is provided by the ground surface such as by a rigid floor or slab-on-ground in accordance with CBC Section 1807.3.2.2 and Eq. 18-2 or Eq. 18-3.

D. VERTICAL LOADS

1. Justify dead loads used in calculations, provide breakdown of weight of building materials used to determine dead load.
    a. The weight of photovoltaic panel systems, their support system, and ballast shall be considered as dead load. Dead loads of rooftop-mounted photovoltaic systems, including rack support systems, shall be indicated on the plans and calculations. *CBC 1603.1.8.1, 1606.4*

2. The weight of all landscaping materials shall be considered as dead load and shall be computed on the basis of saturation of the soil as determined in ASTM E2397. *CBC 1606.5*

3. The live loads used in the design of buildings and other structures shall be the maximum loads expected by the intended use or occupancy but shall in no case be less than the minimum uniformly distributed unit loads required by CBC Table 1607.1. Revise live loads applied in calculations to (_____) psf for (_____) use.
4. Ceiling joists shall be designed for (____) psf live load per CBC Table 1607.1. Uninhabitable attic without storage and less than 42 inches of headroom may be designed for 10 psf live load. *CBC T1607.1*
5. The uniform design live load for unoccupied landscaped areas on roofs shall be 20 psf. The uniform design live load for occupied landscaped areas on roofs shall be per CBC Table 1607.1, (_____) psf. *CBC T1607.1*
6. Corridors, stairs and exits must be designed for (_____) psf live loads per CBC Table 1607.1. *CBC T1607.1*
7. The concentrated live loads must be applied in accordance with LABC Table 1607.1, include concentrated live load of (_____) lbs for (_____) use. The concentrated load shall be assumed to be uniformly distributed over an area of 2.5 ft by 2.5 ft and shall be located so as to produce the maximum load effects in the structural members per CBC 1607.4.
8. Floors supporting vehicles not exceeding 9 passengers shall be designed for both a live load of 40 psf or a 3,000 lb concentrated load acting on a 4.5 inch by 4.5 inch area, whichever produces the greater load effect per CBC Table 1607.1, footnote c and Section 1607.7. *CBC T1607.1, 1607.7*
9. In office buildings and other buildings where partition locations are subject to change, add a 15 psf floor live load in addition to other live loads, unless the specified live load is 80 psf or greater. *CBC 1607.5*
10. Suspended ceilings in exit facilities serving more than 30 occupants shall be designed per LABC Section 1613.12.1.3 - Provide details. *LABC 1613.12.1.3*
11. Roof surfaces covered by photovoltaic panel systems shall be designed for the roof live load L_r in addition to the panel loading unless the area covered by each solar photovoltaic panel or module has a clear space of maximum 24 inches between the panels and the roof-top, in which case only the panel loading need be considered. *CBC 1607.22*
12. Ballasted photovoltaic panel systems shall be designed and analyzed per CBC Sections 1604.4, 1604.3.6, 1604.5.2, 1611 for ponding, 1613.4, and 1607.22.5. *CBC 1607.22.5*
13. Submit structural calculations and plans including truss profiles, member sizes and connection details for all roof and floor trusses prior to issuance of the building permit. Provide evaluation report # for _____.
14. The Engineer or Architect of record, shall review and approve truss design for loads, location, and suitability for intended use.

E. LATERAL LOADS

1. Provide analysis and design for wind loads per CBC 1609. The following information shall be shown on plans per CBC Section 1603.1.4:
   a. Basic wind speed, V, mph and allowable stress design wind speed, V_{asd}, as determined in accordance with Section 1609.3.1
   b. Risk category
   c. Wind exposure
   d. Applicable internal pressure coefficients
   e. Components and cladding design wind pressure in terms of psf
2. Provide design response spectrum from the USGS Seismic Design Geodatabase for the applicable site class for the multi-period design response spectrum in accordance with ASCE 7-22 Section 11.4.5 & 11.4.5.1. Provide a copy of the report from USGS in calculations. A two period design response spectrum in accordance with Section 11.4.5.2 shall be permitted only when values of the multi-period 5%-damped MCE_R are not available from the USGS Seismic Design Geodatabase. *ASCE 7-22 Sec. 11.4.5*
   https://www.usgs.gov/programs/earthquake-hazards/design-ground-motions

3. Earthquake design data - The following information related to seismic loads shall be provided on the plans per CBC Section 1603.1.5:
   a. Risk category
   b. Seismic importance factor, I_e
   c. Spectral response acceleration parameters, S_s and S_1
   d. Site class
   e. Design spectral response acceleration parameters, S_{DS} and S_{D1}
   f. Seismic design category
   g. Basic seismic-force-resisting system(s)
   h. Design base shear. Total weight of building.
   i. Seismic response coefficient(s), C_s
   j. Response modification factor(s), R
   k. Analysis procedure used
   l. Redundancy factor used
4. Provide site specific ground motion procedures in accordance with ASCE 7-22 Section 21.1 for structures located on Site Class F sites as required by ASCE 7-22 Section 11.4.7. *ASCE 7-22 Sec. 21.1*
5. Additions, alterations, or changes in occupancy or use that result in a building being assigned to a higher risk category, due to the occupant load or use, shall provide structural analysis for the entire structure for increased lateral loads using increased importance factor, I_e. *LABC T1604.5, ASCE 7-22 T1.5-1 & T1.5-2, CEBC 502.1.1, 1101.3, LAEBC 506.5.3, 1006.3*
6. The effective seismic weight, W, of a structure shall include the dead load, minimum 25% of the storage area floor live load, partition weight or a minimum of 10 psf whichever is greater, permanent mechanical equipment, weight of saturated and dry landscaping, and weight of fluids and bulk material expected to present during normal use. *ASCE 7-22 Sec. 12.7.2*
7. The proposed SFRS, (_____), is ☐ not permitted in SDC (_____) or ☐ limited to a structural height, h_n, of (_____) ft in SDC (_____). *ASCE 7-22 Table 12.2-1*
8. For vertical combinations in the same direction, the value of the response modification coefficient, R, used for design at any story shall not exceed the lowest value of R that is used at any story above that story. Forces transferred from the upper system to the lower system shall be increased by the ratio of the higher R value to the lower R value. *ASCE 7-22 Sec. 12.2.3.1*
9. Provide a two-stage analysis for vertical combinations of structures having a flexible portion and rigid lower portion in accordance with ASCE 7-22 Section 12.2.3.2: *ASCE 7-22 Sec. 12.2.3.2*
   a. The stiffness of the lower portion shall be at least 10 times the stiffness of the upper portion.
   b. The period of the entire structure shall not exceed 1.1 times the period of the upper portion considered as a separate structure supported at the transition from the upper portion to the lower portion.
   c. The upper portion shall be designed as a separate structure using the appropriate values of R and ρ.
   d. The lower portion shall be designed as a separate structure using the appropriate values of R and ρ and the requirements of Section 12.2.3.1.
   e. The upper portion shall be analyzed with the equivalent lateral force procedure or modal response spectrum procedure, and the lower portion shall be analyzed with the equivalent lateral force procedure.
   f. The structural height, h_n, of the upper portion shall not exceed the height limits of Table 12.2-1 where the height is measured from the base of the upper portion.
   g. Where an out-of-plane offset horizontal irregularity or in-plane discontinuity vertical irregularity exist at the transition from upper to lower portion, the reactions from the upper portion to the lower portion shall be amplified by Sections 12.3.3.4, 12.10.1.1, and 12.10.3.3 in addition to the amplification required by Section 12.2.3.1
10. For horizontal combinations in the same direction, the value of R used for design in that direction shall not be greater than the least value of R for any of the systems utilized in that direction. *ASCE 7-22 Sec. 12.2.3.3*

11. Structural elements supporting discontinuous walls or frames of structures having out-of-plan offset horizontal irregularity or in-plane discontinuity in LFRS irregularity shall be designed to resist the seismic load effects including Ω_0. *ASCE 7-22 Sec. 12.3.3.4*

12. All members of the structure, including those not part of the seismic force-resisting system, shall be designed using the vertical seismic load effect $E_v = 0.2S_{DS}D$. *ASCE 7-22 Sec. 12.4.2*

13. The redundancy factor applied to the LFRS in each of the two orthogonal directions shall be taken as ρ=1.3 except for the conditions listed in ASCE 7-22 Section 12.3.4.1 where the redundancy factor may be used as ρ=1.0. Provide justification for structures in SDC D, E, F demonstrating one of the conditions specified in Section 12.3.4.2 is met if using ρ=1.0. *ASCE 7-22 Sec. 12.3.4*

14. Design shall account for the most critical load effects due to direction of loading using the independent directional procedure or orthogonal directional combination procedure. For non-parallel LFRS elements, structures with torsional irregularity, or where any column or wall that forms part of two or more intersecting seismic force-resisting systems and is subjected to axial load due to seismic forces greater than or equal to 20% of the axial design strength of the column or wall, the structure shall be analyzed for 100% of the forces for one direction plus 30% of the forces for the perpendicular direction. *ASCE 7-22 Sec. 12.5*

15. Calculate seismic drift based on deflections of each level with C_d and I_e factors using strength level forces in accordance with ASCE 7-22 Sec.12.8.6.3. *ASCE 7-22 Sec.12.8.6.3*

16. Provide seismic separation from the property line per ASCE 7-22 Section 12.12.2 and Eq. 12.8-16 or provide seismic separation from adjacent structure(s) on the same property per Eq. 12.12-2 and Sec. 12.12.3. Compare the calculated seismic drift with the allowable story drift per Sec. 12.12.1. *ASCE 7-22 Sec. 12.12*

17. Cantilever columns used as part of the seismic-force resisting system, shall comply with the following:
    a. Maximum axial stress of 15% of allowable. *ASCE 7-22 Sec. 12.2.5.2, AISC 341-22 Sec. E5, E6*
    b. Columns designed as ordinary cantilevered columns and special cantilevered columns shall use R, C_d and Ω_o factors as per Section G of ASCE 7-22 Table 12.2-1. All limitations contained in the table shall be complied with except that ordinary cantilevered columns may be used in SDC D, E or F subject to the limitations in footnote l.
    c. The lowest R value shall be used in the same direction unless the building is a Risk Category I or II building that does not exceed 2 stories in height and light frame construction or flexible diaphragms are used. *ASCE 7-22 Sec. 12.2.3.3*
    d. Columns designed as special cantilevered columns shall comply with the requirements of Table D1.1 of AISC 341-22.

18. Foundations designed to support steel cantilevered columns used as part of the SFRS shall comply with the following:
    a. Foundations shall have the strength to resist load combinations with overstrength factor, Ω_0, per ASCE 7-22 Section 12.4.3.1.
    b. Grade beams shall be designed in accordance with the following requirements of ACI 318-19:
        i. Section 13.3.2 and 18.3.2 for OMF
        ii. Section 18.4.2 for IMF
        iii. Section 18.6 for SMF

19. Provide justification that the proposed cantilever column/grade beam connection detail is fixed as assumed in the design.

20. Provide seismic anchorage calculations for non-structural components per ASCE 7-22 Chapter 13 including components in or supported by a structure, components that are outside of the structure and permanently connected to mechanical or electrical systems, and components that are part of the egress system.

21. Sprinkler systems shall be provided with anchorage in accordance with CBC Section 1613.6. *CBC 1613.6*

22. Submit structural calculations and connection details for the structural members that provide support for the seismic forces generated by elevators. The seismic forces must be determined in accordance with ASCE 7-22 Sec. 13.3. The calculations and details provided must show the complete load path from the rail supports to the building's lateral-force-resisting system. *ASCE 7-22 Sec. 13.6.11, LABC 1607.11.1*

23. Egress stairs and ramps not part of the seismic-force resisting system shall be detailed to accommodate the seismic relative displacements, D_{pl}, as defined in ASCE 7-22 Section 13.3.2. The elements shall be supported by means of positive and direct structural supports or by mechanical connections and fasteners. *ASCE 7-22 Sec. 13.5.10*

24. Provide seismic design for unoccupied nonbuilding structures and buildings whose primary purpose is to enclose equipment or machinery in accordance with ASCE 7-22 Chapter 15.

F. HORIZONTAL DIAPHRAGM

1. Diaphragms shall be idealized as flexible or rigid in accordance with ASCE 7-22 Section 12.3.1.
   a. Diaphragms constructed of untopped steel decking or wood structural panels shall be idealized as flexible if meeting one of the conditions in Section 12.3.1.1. Diaphragms not meeting conditions of Sections 12.3.1.1 or 12.3.1.2 are permitted to be idealized as flexible if meeting the conditions of Section 12.3.1.3 and Eq. 12.3-1. *ASCE 7-22 Sec. 12.3.1.1, 12.3.1.3*
   b. Diaphragms of concrete slabs or concrete-filled metal decks with span-to-depth ratios of 3 or less in structures that do not have a Type 2, 3, 4, or 5 horizontal structural irregularity shall be idealized as rigid. *ASCE 7-22 Sec. 12.3.1.2*
   c. Diaphragms in hillside light frame construction shall be modeled as rigid or semi-rigid when they are seismically braced on one or more sides by directly by the foundation or foundation stem wall or by a framed wall with a clear height of 2 ft or less, and are also seismically braced on other sides by framed walls with any wall having a clear height of more than 7 ft. Other diaphragms shall be idealized as flexible or rigid in accordance with Sections 12.3.1.1, 12.3.1.2, or 12.3.1.3, or shall be modeled as semi-rigid. *ASCE 7-22 Sec. 12.3.1.4*
      i. If slope exceeds 33%, see supplemental correction sheet for Hillside Construction on Slopes Greater than 33% for additional corrections.

2. Provide a diaphragm analysis to show floor and roof diaphragms are adequate to resist in-plane seismic forces determined in accordance with ASCE 7-22 Sec. 12.10. *ASCE 7-22 Sec. 12.10*

3. Provide calculations and details to show that collector elements, splices, and connections to resisting elements have the strength to resist the combined loads resulting from the load combinations with overstrength factor per ASCE 7-22 Sec. 12.10.2.1 and 12.14.7.3 except in buildings or portions thereof braced entirely by wood light-frame shear walls.

4. 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. The spacing of continuous ties shall not exceed 40 ft per LABC Section 1613.11.3.

5. Provide details, properly referenced, of the anchorage system between the wood roof and floor diaphragms and the concrete or masonry walls. See LABC 1613.11.3 and ASCE 7-22 Sec. 12.11.

G. CONCRETE AND MASONRY

1. 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. *TMS 402-22 Sec. 14.3*
   a. The maximum area of each individual glass-block standard unit panels in exterior walls shall be based on the design wind pressure, in accordance with Figure 14.2. The maximum panel dimension between supports shall be 25-ft horizontally and 20-ft vertically for standard units, 15-ft horizontally and 10-ft vertically for thin units. *TMS 402-22 Sec. 14.2.1*
   b. Every glass-block panel shall be provided with min. ⅜-inch expansion joints at the side and top. Expansion joints shall be entirely free of mortar or other debris and shall be filled with resilient material. Provide a detail on the plans. *TMS 402-22 Sec. 14.4*
   c. Lateral support shall be provided by panel anchors along the top and sides spaced not more than 16" o.c. with 12" embedment or by channel-type restraints. *TMS 402-22 Sec. 14.3.3.1*

2. The deflection of lateral support of veneer, including wood studs, shall be no greater than h/500. Anchored masonry veneer, stone veneer, and adhered masonry veneer shall also be designed in accordance with LABC 1404.7, 1404.8 and 1404.11 respectively. *LABC 1402.3.2*

3. The masonry or concrete walls below grade may be designed to span simply supported between slabs. **NOTE ON THE PLANS:** "The perimeter walls are not to be backfilled until the floor slabs are poured and cured."
4. For concrete cast-in-place beams and columns that are not part of the lateral-force-resisting system, provide transverse reinforcement in accordance with ACI 318-19 Sec. 18.14.3.2 and 18.14.3.3.
5. Consequences of failure of structural and nonstructural members that are not a part of the seismic-force-resisting system shall be considered. *ACI 318-19 Sec. 18.2.2.2*

H. WOOD DESIGN

1. Structural framing not using Conventional Light-Frame Construction Provisions of CBC Sec. 2308 requires the plans and calculations to be signed and sealed by an architect or civil/structural engineer licensed in the State of California. *CBC 2308.3*
2. Engineered design shall be required in hillside light frame construction accordance with *CBC Section 2308.2.7* when all of the following apply. *CBC 2308.2.7*
   a. Grade slope exceeds 1:5 (20%) where averaged across the full length of the building.
   b. The tallest cripple wall clear height exceeds 7 ft or where a post and beam system's tallest post clear height exceeds 7 ft.
   c. Where less than 50% of occupiable space, open or enclosed has interior wall finishes consisting of wood paneling or gypsum finishes.
3. Cross reference all calculations for joists, beams, shear walls, etc, to framing / floor plans.
4. Show the size, spacing and direction for the ☐ (rafters) ☐ (ceiling joists) ☐ (floor joists) on plans.
5. Provide designed ridge beams (4x min.) for open beam vaulted ceilings when ceiling joists or rafter ties are not provided.
6. Use full height studs (balloon frame) on exterior walls of rooms with vaulted ceiling. Specify size, spacing and maximum allowable span of the full height stud. Studs shall be continuous from support at the sole plate to the top plate to resist lateral loads perpendicular to the wall. The support shall be a foundation or floor, ceiling or roof diaphragm, or designed in accordance with accepted engineering practice. *CBC 2308.9.1*
7. Ridge / hip / valley members shall be designed as beams when roof slope is less than 3:12. Provide calculations. *CBC 2308.11*
8. The size of ridge board, valley or hip members shall not be less than the cut end depth of the rafter. *CBC 2308.11.3*
9. Show blocking at ends of rafters and trusses at exterior walls, and at supports of floor joists. *CBC 2308.8.2.3*
10. The ____ x ____ floor girder / beam under _____ exceeds the allowable stress for grade. *2024 NDS Supplement T-4A*
11. Specify the header size at door, window and other openings over 4 ft. wide in bearing walls.
12. Detail is required for header support at the corner windows (see marked plans).
13. Three- and four-story wood structures require 3x4 or 2x6 studs at 16" o.c. max. in bearing partitions below the top two stories. Submit calculations showing that the allowable stress in compression perpendicular to grain is not exceeded in the sill plates at the proposed stud spacing. *CBC Table 2308.9.1*
14. For plywood roofs and floors, specify panel index no. _____, plywood thickness, grades, nailing schedule, panel layout pattern, and zones.
15. The size and shape of wood panel diaphragms shall be limited to the aspect ratios specified in Table 4.2.2 of 2021 AWC SDPWS. *2021 AWC SDPWS Sec. 4.2*
16. Lumber and structural wood panel diaphragms shall not be considered as transmitting lateral forces by rotation except one story, attached or detached residential garages or similar non-habitable wood structures provided the diaphragm is not constructed of straight sheathing. *2021 AWC SDPWS Sec. 4.2.5*

17. For connections exposed to weather multiply other allowable fasteners loads per NDS T11.3.3:
    a. Bolts x .70
    b. Lateral nails loads x .70
    c. Screw withdrawal loads x .70
18. **Add note on plans**: Roof diaphragm nailing shall be inspected before covering. Face grain of plywood shall be perpendicular to supports. Floor shall have tongue and groove or blocked panel edges. Plywood spans shall conform with CBC Table 2304.8(1).
19. **Add note on plans**: All diaphragm and shear wall nailing shall utilize common nails or galvanized box nails.
20. **Add note on plans**: Fasteners in preservative treated wood or fire-retardant treated wood shall be of hot dipped zinc coated galvanized steel or stainless steel. *CBC 2304.10.5.1*
21. **Add note on plans**: Provide lead hole 40% - 70% of threaded shank diameter and full diameter for smooth shank portion. *2024 NDS Sec. 12.1.4.2*
22. For wood to wood connections, where there are over 2 bolts in a row, reduce the allowable bolt loads per NDS T11.3.6 and Section 11.3.6.
23. If required by structural calculations, show size, location and embedment length of all anchor bolts (including HD bolt anchors) on foundation plan.
24. **Add note on plans**: Foundation sills shall be naturally durable or preservative-treated wood. *CBC 2304.12.1.4*
25. When bolting to an existing footing, provide a copy of the evaluation report for the type of bolt, allowable design loads and required edge distances. Deputy inspection is generally required.
    a. The design tensile strength shall be calculated assuming the concrete is cracked.
    ACI 318-19 Sec. 17.10.5.4
26. Specify the size, evaluation report number from a nationally recognized testing agency and manufacturer of the shot pins. The max. spacing of shot pins in bearing or nonbearing walls is _____ respectively. Indicate on plans.
27. Decks shall be positively anchored to the structure and designed for both vertical and lateral loads. Attachment of deck to the structure shall be without the use of toenails or nails in withdrawal. *CBC 1604.8.3*
28. The number and size of fasteners connecting wood members shall be not less than those set forth in CBC Table 2304.10.2. Provide fastening schedule on plans. *CBC 2304.10.2, T2304.10.2*
29. **Add notes on plans**: All bolt holes shall be drilled 1/32" to 1/16" oversized. *2024 NDS 12.1.3.2*
30. Concrete or masonry veneer shall not extend above a basement in Seismic Design Category D or E.
    a. In Seismic Design Category D, stone or masonry veneer may be used in the first story above grade plane if all of the criteria in the exception in LABC Section 2308.10.10.2 are met. *LABC 2308.10.10.2*

I. SHEAR WALLS

1. Provide a shear wall schedule on the plans and specify the maximum design shear load for each shear wall type. Limit the design shear wall loads to those allowed by Code. Clearly indicate on the plans all plywood and drywall shear walls.
2. Use of gypsum board, gypsum lath, and cement plaster shear walls shall use Response Modification Coefficient, R=2 for bearing wall systems and R=2.5 for building frame systems. *ASCE 7-22 Table 12.2-1*
3. Stucco shear walls shall utilize furring, galvanized nails (having a minimum 11 ga., 1-1/2" long, 7/16" diameter head, and furred out a min. of 1/4") to attach the lath to the studs. Staples shall not be used. *LABC 2306.3*
4. The horizontal distribution of seismic shear to wood structural panel shear walls shall be in accordance to ASCE 7-22 Sec. 12.3.1.1 and 12.8.4.1. Wood diaphragms shall not be designed as rigid. If it is demonstrated that the wood diaphragm is semi-rigid, seismic loads shall be distributed using an envelope of flexible and rigid diaphragm analysis.
5. The _____ is inadequate to resist lateral/uplift forces. Show roof/floor diaphragm nailing, wall bracing, shear connections, tie down hardware and hold-down anchors. Submit lateral design.

6. The height-width ratio of unblocked plywood (wood structural panels) shear walls, perforated shear wall segments, perforated shear walls and shear wall piers shall be limited to a maximum of 2:1, blocked plywood structural panels shall be limited to a maximum height-width ratio of 3.5:1 per 2021 AWC SDPWS T4.3.3. For aspect ratios exceeding 2:1, the nominal shear capacity shall be multiplied by the Aspect Ratio Factor per 2021 AWC SDPWS 4.3.3.2. Provide complete calculations (including deflection) and details for shear wall with openings. *2021 AWC SDPWS 4.3.3*
7. The maximum nominal unit shear capacity for three-ply plywood resisting seismic loads is 400 plf. *LABC 2306.3*
8. The following applies to all shear walls with a shear values using allowable stress design (ASD) exceed 350 plf or load and resistance factor design (LRFD) exceed 500 plf. These walls shall be clearly identified on the plans and provided with the following: *LABC 2306.3*
    a. All framing members receiving edge nailing from abutting panels shall not be less than a single 3x stud or two 2x studs nailed together in accordance with 2024 NDS Section 15.3.
    b. Nails shall be placed not less than ½" edge distance from the panel edges and ⅜" from the edge of the connecting members.
    c. All wood structural panel joint and sill plate nailing shall be staggered at all panel edges.
9. Provide calculations and details for drag strut connections to shear walls. See checked plans.
10. Wood structural panel shear walls shall meet the story drift limitation of ASCE 7-22 Sec. 12.12.1. Conformance shall be determined by testing or calculations. Calculated deflection shall be determined according to EQ. 4.3-1 of AWC SDPWS. *CBC 2305.3*
11. Provide the design for the shear transfer from the roof diaphragm or upper shear wall to the shear wall below the floor or roof. Detail nails, bolts, shear plates, sill plates, and blocking as required by design. Use reduced values for nails with reduced embedment.
12. Provide referenced calculations showing the overturning moments in the shear wall segments.
13. Provide shear connection details, properly referenced, at the top and bottom of all shear walls.
14. Provide an evaluation report number from a nationally recognized testing agency for hold-down connectors. 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. *CBC 2305.5*
15. **Add note on plans**: Hold-down connector bolts into wood framing require approved plate washers. Hold-downs shall be finger tight and 1/2 wrench turn just prior to covering the wall framing. Connector bolts into wood framing require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.299 inch by 3 inches by 3 inches. *CBC 2305.5*
16. **Add note on plans**: Hold-down hardware must be secured in place prior to foundation inspection.
17. Hold-down straps - Include the following in design and detailing between floors:
    a. Design and detail straps installation when used as hold-downs across floor joists. Account for reduced number of nails across the joist.
    b. Determine the allowable load based on the number of nails through the strap into the posts above and below the void space between floors. Specify the number of nails required.
    c. Design and detail straps so that the minimum nail spacing will be provided when the strap nailing is combined with the shear wall edge nailing (i.e. provide 4x member wherever a strap and shear wall edge nailing occurs or detail strap nailed over and through un-nailed plywood and show nailing pattern on plan).
18. The anchor or group of anchors shall be designed for the maximum tension that can be transmitted to the anchor or group of anchors based on the development of a ductile yield mechanism in the attachment in flexure, shear, or bearing, or a combination of those conditions, and considering both material overstrength and strain hardening effects for the attachment. *ACI 318-19 Sec. 17.2*
19. Justify the capacity of tie down bolt in concrete footing/wall/deck per ACI 318-19 Chapter 17 with factored design loads. Apply Ω_0 for discontinuous conditions per ASCE 7-22 Sec. 12.3.3.3. Provide reinforcing details and calculations to show how the forces are transferred and resisted by the diaphragm.

ADDITIONAL CORRECTIONS	CODE SECTION